CHARGIN' THUNDER

Super Coupe Club of America

Volume VI ***June 2001***

Dedicated to the preservation and performance of the 1989 – 95 Thunderbird Super Coupe & 1989/90 Cougar XR7

You can't have everything. Where would you put it? Steven Wright
Keep your lives free from the love of money and be content with what you have. Hebrews 13:5

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Changes of Address

Address changes MUST be submitted in writing by the 25th of the month prior to a Chargin' Thunder (CT) printing. The CT is mailed each March, June, September, and December. This will give us time to change it in the computer prior to the next mailing. Address changes are not taken over the phone. They must be in writing via letter, or email (sccoa@usa.net) stating old address and new address. We cannot be responsible for "lost" issues due to late notice of address change. Replacement cost of any lost issue is $5.00.

Mailing of Newsletters

The CT newsletter is mailed out quarterly in the third, sixth, ninth, and twelfth month of the year. All issues are mailed at the same time via Bulk Mail Postage.

Problems & Complaints

Our highest priority is getting the CT newsletter mailed to you on a timely basis. Please let us know if you have ANY problem at all. Call or email us with your questions or concerns.

New Membership & Renewal

Membership and subscription to the CT newsletter is $40 US per year. Dues for those outside the USA and Canada are $50 per year. Each club year begins with the March issue and concludes with the December issue. Renewal slips are placed in each December issue for the upcoming club year. Each January brings a new club year. New members and late renewals receive issues of the CT back to the previous March (which is the month the first CT of the year is mailed) to keep them totally up to date and keep their yearly volume of issues complete.

Classifieds

Any member may place "car" or "used parts" ads for free in the CT. Send your ad to us via email or post card/letter and it will appear in the next issue. Include your member number with your request. Ads must be typed or printed legibly, please.

Businesses wishing to place an advertisement in a CT newsletter should contact Patty or Bill. 513-697-6501

Daily Schedule

Patty is available 10:00 a.m. – 4 p.m. M-F most days for general information. Bill is available from 6 – 9 p.m. EST M-F for technical info. Please be considerate of the time zone differences!
Phone # 513-697-6501.

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June 2001 Chargin' Thunder

Cover: SCs on the track at the World Ford Challenge. Photo compliments of Micah Miller

From The Birds Nest

By Bill Evanoff

The summer show season has started off with a bang! Many SC and XR7 owners attended the two big Spring shows at the World Ford Challenge (WFC) and the Carlisle All-Ford Nationals. Approximately thirty cars were at the WFC and nearly seventy cars were present at Carlisle! I'm always glad to see new faces at these shows along with the old reliable ones that I've been friends with for years.

The summer will be filled with many local shows around the country. I encourage everyone to publicize these local shows on the SCCoA Events BBS. I would like to invite members living within a reasonable driving distance of Cincinnati, Ohio, to the All-Ford show advertised on pages 38 and 39 of this issue. Since many Midwest SCCoA members have attended this show in the past, I have decided to make it more worthwhile this year by having a Super Coupe Performance Open House in conjunction with this show the day before. I encourage everyone looking for a really nice local all-Ford show in late July to make a weekend out it and come on out for the SCP Open House and the Tri-State Mustang and All-Ford show.

National Event

The Super Coupe National Event is definitely a "GO" for the Labor Day weekend in Oklahoma City! Details are being firmed up by the event coordinators and the weekend promises to be full of fun, racing, Super Coupes, XR7s, Super Coupes, and more Super Coupes!

Here are the latest details from Kurt Sunday, who is one of the event coordinators. -- The event will run from Friday August 31, 2001 till Sunday September 2, 2001. We will be staying at the Ramada Inn in Norman, OK and visit the Thunder Valley Raceway Park on Saturday. The track has arranged for the SC's to be our own class. The cost is $15 for racing.

Hotel Info.: Ramada Inn Norman, 1200 24th Avenue SW, I-35 and Lindsey Exit (108B), Norman, OK.
Phone: 405-312-0110 or 1-800-500-9869
The SCCoA rate is $44 per night.

Columbus, OH, Ford Expo

For those who may not be able to make the OKC meet, there is a group going to the Ford Expo in Columbus Ohio over Labor Day too. This event has drawn 20 to 35 cars historically and I'm sure will be an excellent alternative for those living in that part of the country. The place to stay at this show will be the Lenox Inn. Contact them at 800-821-0007 and tell them you are with the Ford Expo group for a discounted room rate.

New SCCoA T-shirts

For 2001 the club has reprinted their "Club Logo" shirts. This year the shirts are a light gray color similar to the old athletic gray shirts that are common in high schools. I think they will be preferred to the white that was printed last year. They will not get dirty as quickly and won't show the ketchup that everyone dribbles down the front of their shirts while eating that big Smokey hot dog at your favorite summer car show.

The shirt pricing is unchanged at $15 for Large and XL. $18 for XXL. We even have a few XXXL for $20. Shipping on one shirt is $4. Shipping for two or more shirts cost $5 shipping. Show your pride in your club, your love for these cars and the fact that you've "GOT BOOST"!

Florida Mini-Meet/Track Day

By Brad Klein
Photos compliments of Dan Holleran

Hello everyone. I would like to thank those who came out to our recent track day. For those who didn't, you missed a great meet, but we are definitely planning on having more.

On Sunday, April 1, 2001 the Super Coupe Club of Florida had our first meet of many at Orlando Speedworld in Orlando, FL. They were having a Funday Sunday which is basically an all day test and tune.

Fred Scadron's '90 Anniversary on left and Frank Carbone's beautiful '93 on right

Pam and I arrived at the track a little late because I forgot to set our clocks ahead. When we entered the track I knew it was going to be a great meet. I could already see 7-8 SC's and a V8 and the weather was beautiful. We got out, met some old friends and got to meet a bunch of new ones. We hung out there so it was easier for other members to see us. We filled out our run cards and got ready to do some racing. At about 12:30 we moved our group closer to the track cause a lot of us were wanting to run. Out of the 18 people that showed, 12 of us were running and thankfully nobody broke, but we did have a little scare when Justin Falla's car wouldn't start in the staging lanes due to a bad alternator. He got it started thanks to Dave Machen. Here is the list of times in order:

Gary Simpson 95 Auto 14.24@94.17
Justin Falla 94 5 speed 14.28@96.6
Brain Kerns 90 5 speed 14.28@95.33
Fred Scadron 90 5 speed Anniversary 14.49@95.39
Brad Klein 95 Auto 14.73@91.32
Adam Mullen 91 Auto/95 Motor 14.7@92
John Machen 90 Auto 15.07@91.17
Kevin Haynes 93 Auto 15.09@90.8
Vance Day 94 5 speed 15.32@90.41
Dave Machen 94 5 speed 16.08@86.02
Justin Haas 90 5 speed 17.xx bad run
A V8 Bird was running, too, but he left early and I never got his name or time.

Dan Holleran, Justin Falla, and Brad Klein

Some of these people were running for the first time ever and did a great job. After the track closed the staging lanes and everyone was done running, it was time for pictures. I never realized how hard it would be to get 14 SC's all in one picture. It must have taken 20 minutes, but they turned out great. On the way out of the track a friend of Vance Day took a video of

all 14 of use leaving in a line. It looked great and hopefully someone can get it and put it on the SCCoA site. We all headed for the Steak'n Shake down the street from the track. After entering and sitting and scaring the staff, some of the members decided they would rather go to the Chili's next door. A sigh of relief came over the Steak'n Shake staff as we all got up to head over to Chilli's. We did a lot of bench racing over dinner and drinks, (the main reason we ended up at Chili's) exchanged information, then went back to the cars.

Brad Klein and Justin Falla line up

We ended the day by taking more pictures and helping Justin Haas fix a flat tire. It was time to call it a day as some of us had a couple hours drive and it was about 8:00. Since we had a SCCoSW member with us, we had to leave the parking lot smoking when we left.

Again I would like to thank everyone for coming out. It was great.
Attendees:
Gary Simpson '95
Justin Falla '94
Brain Kerns '90
Fred & Tony Scadron '90 Ann.
Brad & Pam Klein '95
Adam Mullen '91
Dave & John Machen '94-'90
Kevin Haynes '93
Vance & Lynn Day with their speed shifting son Kyle '94
Justin Haas '90
Steve Eppinger '89
Dan & Terri Holleran '89
Frank Carbone '93
John Stagnittn
JT Powels former SC owner with his Firebird
Richard Jones, former SC owner with his F150

Thank You,
Brad & Pam

Super Coupe Audio Systems

By Jim Mudrick
jimary@en.com

As these cars are starting to get older, radio problems (as well as others) are starting to arise. I will try to give you some tips and advise on how to keep your tunes working. Many of these problems are already known to some, but not others. Some problems may be easy fixes, while others are more complicated.

Most of these MN12s came with Ford's Electronic Premium Cassette known as EPC. This radio was mated with an 80 watt (20 X 4) amplifier mounted in the trunk and 4- 6X8" premium speakers. The next level up, the JBL system had an 80-watt main amplifier with an additional 60-watt sub-woofer amplifier and enclosure holding the sub-woofer speaker. The JBL system also had unique JBL 2-way speakers in place of the standard Ford premium speakers.

For a "no sound" symptom, look in the trunk first. These amplifiers have their own power, ground, and turn-on line. The "turn-on" line is a must-have from the radio. More on this turn-on line later. It would be helpful to have access to Ford shop manuals with wiring diagrams for some of the wiring checks. The amplifiers have power circuits from either the Ignition or a Battery source separate from the radio circuits.
The amplifiers also need that turn-on line to "wake" them up when the radio is turned on.

Regarding the radio's head unit, the biggest problem with the early (1989-90) EPC radio was the failure of the switch array Ford used. These were prone to fail when they were new, causing volume to go high, buttons don't work, cannot change stations, etc. The metallic coating on the mylar domes would start to flake off and fall to the circuit board causing the main micro to lock up. Most owners of these radios are aware of that by now. The Ford fix is a retro-fit kit to change the bezel and front board over to the 1991-93 style "rubber" switch mat.

The latest problem arising is the electrolytic capacitor leakage problem. Again, this is most common in the 89-90 models. Ford changed the vendor of these capacitors in 1991. For those looking inside the radio, the green capacitors are the defective type. Once these caps start to leak, the corrosion starts to damage the board and renders most of the radios to the junk pile. Depending on how soon the leakage is found, some are still repairable. The later 1991-93 model radios Ford switched to a black capacitor. So far they seem to be OK. The usual symptoms for the leaky caps is a "pop" when tuning or seeking stations, low volume on FM, no FM stereo indicator, poor reception, low volume or no volume on one side.

For those that own a car with the optional remote CD, keep your fingers crossed! When Ford first started offering CD as an option, they contracted Sony as their Vendor. Now that these units are all 10+ years old, Sony no longer wishes to support the service on them. Any of this vintage Sony unit sent in for repair comes back as "Parts No Longer Available" from them. If yours is still working well, consider yourself fortunate.

Now I'll try to give you a little good news. For those of you that are not concerned about the radio being politically correct for the year car, you may have a choice. Most later type Ford radios from 1992-97, the PAC (Premium Analog Cassette) or CDR (Compact Disc Radio) family can be used. It is not exactly a "plug-n-play" option, but it is a way to get a working radio. Now, this is where the "turn-on" line comes in again. In 1992 Ford Engineering decided to make the radio "mute" line a 5 volt turn-on instead of the old 10 volt turn-on previously used. See the problem yet? The older Ford amplifiers will not turn-on with the newer 5-volt circuit. A little re-wiring is involved, but the newer type radio can be made to work in the older car applications.

I hope this little bit of Ford Audio information is helpful.

Changes in the average vehicle since 1981: Fuel economy has gone down .4%. Horsepower has gone up 79%. Zero to 60 MPH times have improved 26%. Weight has increased 21%.

Custom Embroidered Auto Apparel

- Your source for custom Thunderbird SC and Cougar XR7 embroidered apparel. http://www.sccoa.com/apparel/

Heavyweight T-Shirts: Gildan Super Heavyweight Tee 100% cotton 6.1 oz preshrunk jersey knit Double needle topstitched neckline Double stitched sleeve and waist hems Seamless collar with taped neck and shoulders Quarter turned to eliminate center crease European straight cut comfortable fit	**Available Colors:** White*, Natural*, Ash*, Black*, Sports Grey*, Maroon, Orange, Forest*, Royal Blue*, Red*, Navy Blue*, Purple, Light Blue, Light Pink, Yellow Haze, Mountain Rose, Stone Blue, Serene Green, Eggplant, Charcoal, Leaf, Cedar, Indigo Blue, Prairie Dust, Tan, Chestnut, Blue Dusk, Olive, Brick, Sand, Mango, Key Lime, Daisy, Bermuda, Azure, and Coral.	**Sizes:** All colors available in: M - L - XL – XXL *** indicates size available in XXXL** Embroidery available in: **White, Khaki, Black or Stainless Steel** **Price: $ 20.00**	
Classic Denim Shirts: Three Rivers Classic Denim Shirt 100% cotton long sleeve denim shirt Button down collar with wood toned buttons. Left chest pocket. Single- button cuff and sleeve placket. Double-needle stitched. Generous cut.	Available Colors: White, Natural, Khaki, Black, or Light Blue Embroidery available in: White, Khaki, Black or Stainless Steel	**Size:** S - M - L – XL	**Price:** **$45.00**
		XXL – XXXL	**$50.00**
		XXXXL - XXXXXL	**$55.00**
		Large-Tall XL-Tall XXL-Tall	**$53.00**
Golf Polo Shirts: Harvard Square 100% Heavy Pique Sportshirt 7.25 oz ring-spun Egyptian cotton 3 wood-tone button placket. Fashion knit collar. Welt cuffs. Side vents with 2.5 inch extended tail.	**Available Colors:** Denim, Yellow, Sports Grey, Sage, Wine, Ash, Fushia, White, Red, Putty, Royal Blue, Natural, Forest, Green, Navy Blue and Black **Sizes:** S - M - L – XL - XXL – XXXL	**Embroidery available in:** White, Khaki, Black or Stainless Steel Price: **$ 40.00**	
Heavyweight Sweatshirts: Fruit of the Loom 12 ounce, 90% cotton/10% polyester blend fleece fabric Shrinkage-controlled fabric Set-in sleeves Cover-stitched armholes, collar and band bottom	**Available Colors:** Black, White, Ash, Dark Gray, Natural Beige, Maroon, Forest Green, Navy, Red, Royal Blue **Sizes:** S-M-L-XL-XXL	**Embroidery available in:** White, Khaki, Black or Stainless Steel Price: **$ 40.00**	

All items come with your choice of two logos, Cougar XR7 or Thunderbird Super Coupe:

All items are guaranteed satisfaction, just mail the item back and I will refund your money or exchange the item.
All shipping and handling is a flat U.S. $5.00, regardless of how many items you order or where in the world the apparel is shipped to. This covers insurance and USPS's Delivery Confirmation Receipt service.

To order, mail your order with check or money order made out to: **Ron DiPaola** to the following address: Ron DiPaola: 206 South Duane Ave. Endicott, New York 13760	For more information, check out the Custom Embroidered Auto Apparel website at: http://www.sccoa.com/apparel or give Ron DiPaola a call at (607) 748-0581.
Order Form: Name: _____ Shipping Address: _____ _____ Phone: ---_____ Email address:_____ Your phone number or email address are very important, as occasionally, I need to get in touch with you to clarify your order.	**Your order:** (be sure to specify the shirt type, shirt color, embroidery color and the size) Write in here or enter on another sheet of paper:

What Savings Account?

By Kurt Sunday

In June of 1997 I owned a white '95 Mustang GT that I had purchased new in November of '94. Although I was annoyed with the increasing amount of white Mustangs I saw on the road daily, that car meant everything to me. In early 1997 I changed jobs and began parking in a downtown parking garage. After the first door dent in the Mustang I decided to buy a beater for work.

Since their introduction, Super Coupes had always interested me, so I began the search for a beater SC. A local used car dealer had a red '92 with 69K miles in the paper for $7999. I must give myself a check minus in self-control. I bought the first SC I test drove. This car was completely beat ... actually, it was FUBAR. It was obvious that this car was a daily driver and the prior owners didn't know what they had. This poor SC had bald tires, a cracked windshield, no air conditioning, a huge dent and rock chips in the hood, giant scrape in the front right of the bumper cover, a burnt out headlight, and ink all over the seats. The Firm Ride light was even blinking. (I thought that was a good thing then!) The dealer didn't even make an effort to even detail this car.

My beautiful wife allowed me to hit our savings account and I ended up paying $6500 that same day. I went straight to the auto parts store and bought oil, coolant and detailing supplies. I spent the weekend cleaning and maintaining my new SC. I was really surprised as I began driving it the next week. I was pretty sure it went for 65 to 110MPH a lot faster than my 5.0 Mustang. I also began to enjoy the extra room and the better ride. I soon replaced the windshield, tires and had the transmission serviced.

About 6 weeks of owning the SC passed and I hated everything about my "precious" Mustang. I couldn't stand the sight of it anymore! I ended up selling it but I was seriously upside down and had to yank another $3100 out of savings just to get the title released from the bank. My goal was to restore my SC to new condition and keep it forever. The SC had won me over and I was kicking myself for buying that Mustang and not a brand new SC.

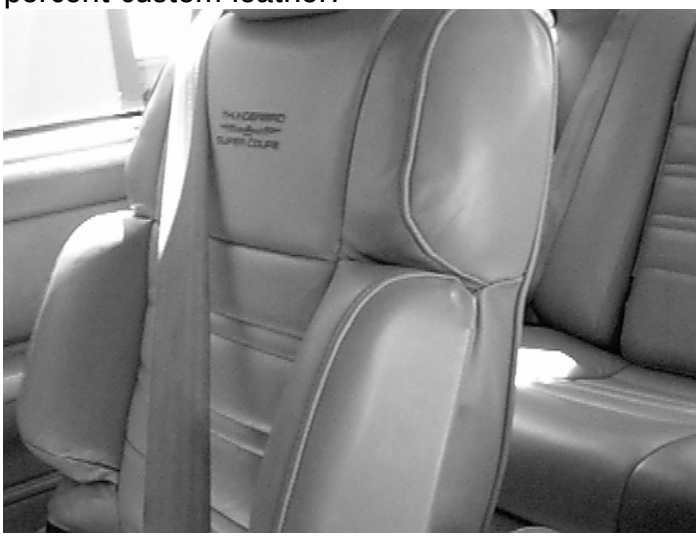
Now that I didn't have the Mustang payment, my plan was to put $400 a month back into savings until the $3100 was at least replaced. That plan worked for one month… then I found the SCCoA web site. I thought I was in heaven and Bill Hull was God. I took a vacation day from work just to stay home and cruise the whole damn site and every single BBS post. I remember the day when my first Chargin Thunder issue showed up. I stayed up half the night reading it over and over.

I started small… K&N filter, IC fan, Magnacore wires, and in a few months I was out of control. My wife hit the roof when an SCP exhaust system showed up. In October of '98 I was a regular on the SCCoA BBS and just couldn't wait to have the money to make my next modification. October was also the month that Major Glenn Hubar and I met and soon thereafter started the SCCoA New Mexico Chapter that grew into the Southwest Chapter.

The SC obsession had hit me hard. Everyday I was on the SCCoA BBS learning everything possible about the car. So far, restoring the interior and having the stock rims chromed had been the most rewarding I thought! Every piece was redone in gray leather, and the center runners were done with dark gray velour. I spent about $1400 on the interior and $750 on the rims. Restoring and modifying my SC was like a drug addiction. There were even a few times I even seriously considered hitting my 401(k) money for a Coy Miller motor.

I have family in Pittsburgh, PA, and have made the drive from New Mexico several times, so driving my SC over two thousand miles to the 1999 All Ford Nationals in Carlisle, PA, wasn't out-of-the-box thinking for me. It's tough to explain how cool it was to meet Bill Hull, Bill Evanoff, Dick Adams, Ron DiPaola, Bill Ball and all of the cool SCer's . Major Glenn even made it there, flying into the area on a plane. I ended up coming home with a new SCP cast raised blower top and a new passion for the Cobra R rims. After seeing SC's at Carlisle with the Cobra R's I had to have a set or I was going to die.

I ordered the Cobra R's as soon as I got home and sold my chrome rims within a few weeks. I also noticed the SC embroidering work that Ron DiPaola was doing on shirts and caps. He ended up putting that logo on some of my extra leather and I had those sewn into the velour center parts of the seats. Now the interior of my SC is 100 percent custom leather.



Kurt's AWSOME custom leather interior.

Going to Carlisle '99 also gave me a new viewpoint of my SC. My car was pretty beat

when I got it, and although I was restoring it like crazy, it would still never be as pristine as some of the SC's I saw in Carlisle. I honestly spent a few months somewhat depressed. I kept thinking about the large amount of money I still needed to spend on restoration and that I should have simply purchased a SC that wasn't so beat up to begin with.

With a few choice bolt ons, this motor has propelled the car into the high 13's.

I've slowed down a lot since the summer of '99, but I'll never stop. I've added an "S" model blower, white face gauges, KVR crossed drilled rotors, ZR intake, 70mm TB, had the AOD rebuilt twice, 1.5" Eibach lowering springs, shift kit, and Tokico shocks, and even bought a '95 motor to start rebuilding. The car currently has about 105,000 miles on it, still runs great, and is fast as hell. It's no longer a daily driver either. I wish I had my '95 Mustang back so I could use it as a beater!

Currently, my SC still has about 3 door dents on each side and the paint on the decklid seems to have little bubbles forming in the clear coat from the killer New Mexico sun. My depression has gone away. The bottom line is that I originally bought that SC as a beater to save my Mustang GT and ended up developing a very deep passion for the Super Coupe.

Today, when someone asks me if I would do it again, my answer is yes. I saved one of the most underestimated automobiles ever built from the demise of the junkyard. I also have met some of the greatest people ever via the SCCoA BBS and the crazy SCCoSW meets.

I sincerely hope that the First National SC Meet in OKC during the Labor Day weekend 2001 draws a lot of people with the deep passion for the SC and the guts to melt their rear tires every chance they get!

SUPER COUPE PERFORMANCE

The 3.8L SC/XR7 Performance Parts Specialists

OPEN HOUSE OPEN HOUSE OPEN HOUSE

Join us at the Super Coupe Performance Open House on July 28, 2001

Everyone is welcome. Our open house is being held in conjunction with the Tri-State All-Ford Show. See details regarding this show on pages 38 and 39. Come to the SCP open house on Saturday and go to the show on Sunday! Please RSVP via email or phone if you will be attending.

Stop by for some great parts deals, enjoy a complimentary lunch, meet other enthusiasts, and go on a terrific cruise around the hills and curves of Cincinnati, OH. Spend the night and enjoy the show on Sunday too.

Our current "SPECIAL" is a High Output 190 LPH fuel pump for $105 to SCCoA Members

- **The exclusive supplier of Kooks Super Coupe Headers**

KOOKS CUSTOM HEADERS

Uncoated SC Headers ... $499! **JetHot Coated SC Headers ... $619**

New **18" and 17" Custom Wheels for the '89 to '97 Tbird/Cougar bolt pattern**

This wheel available in 18 x 8.5" Chrome or 17 x 7.5" Chrome or Silver

This wheel available in 17 x 7.5" Chrome or Silver

Magnecore, BBK, C&L, ProM, Magnuson Products, K&N, Griffin, Ford Racing, More!

See our full line of SC/XR7 products at http://www.supercoupeperformance.com
We accept VISA, Mastercard, Money Orders and Personal Checks

Contact Bill or Patty at .... Email: sccoa@usa.net Phone: 513-697-6501 Fax: 513-697-0580

Super Coupe Fever

By Ken Frazier

It began with my first up-close look at a Super Coupe. There was nothing I didn't like about them. They were the complete package! It would be years before I had one, but in the meantime I just kept looking at those lines.

I needed a new car back in 1994 and my intentions were to only look for a mid-size four door with air conditioning. A Ford dealership salesman escorted me around his lot and showed me several different vehicles that would have fit my needs. My focus, however, was elsewhere. I found myself looking past the salesman to a black SC parked several rows over. He kept talking about the sedans but I obviously wasn't listening as I looked admiringly at the black beauty off into the distance. Finally, he realized I was not part of the conversation and we were soon walking over to the Super Coupe that was standing taller in my eyes than any other car on the lot.

He didn't have to say very much to make the sale that day as I was probably showing severe signs of "Super Coupe Fever". Following the once over and a test ride the car itself made the sale. I picked it up a little later in the day and noticed several people watching me turn the key and drive off. I sensed they, too, were getting a high temperature. I'm driving that '94 Super Coupe still today and feel myself looking and thinking, "This is one sweet ride"!

A couple years ago I realized that once bitten by the SC bug, the effects linger with you. Case in point, during my daily commute, it happened. I had been driving past a red '91 SC for weeks and it was starting to wear me down. I stopped to look it over and my only intentions were to find out the asking price. The owner stated I was the only person in weeks to show some serious interest. The car was slightly snow covered and needed some TLC but all the things considered it was an awesome car. While out with the car on a test drive I promptly pinned myself back hard into the deeply sculptured seat while rowing the 5-speed transmission. I could feel the fever spreading over me again. I came in fairly low with an offer and reluctantly the owner accepted. My son now has that car and plans on keeping and restoring it. When he comes to visit I go out to check out his car and think to myself, "Now that is one nice set of wheels". I'm happy it's still in the family and maybe I'll buy it back from him someday if he'll ever part with it. There's that fever again.

I enjoy the SCCoA web site and on occasion have spent part of my lunch time checking out all the information available. Awhile ago I was looking at the fabulous Members Cars section and have recently become interested in the '90 35th Anniversary Edition. I did not want to buy one, I just wanted to understand what made it unique. Later on I was surfing through the Buy/Sell BBS and came across one for sale in Indiana. I had planned to visit my brother a short time later who happened to live near the seller.

I made an appointment to take a look at his Anniversary Coupe on the way home. My intentions were to just take a look, a drive maybe, and talk the talk and walk about Super Coupes in general. Later that afternoon my son was following me back to the Cincinnati, OH area. I led the way in my new purchase...the Anniversary Coupe! It's a project, but I love the changes that are slowly taking place. A new part here, a recoated wheel there and who knows...it may soon look as good as Chuck Carroll's Anniversary SC in Port Clinton, Ohio. I

encourage everyone to check out Chuck's coupe in the Members Cars section of the SCCoA site. It is fabulous!

I appreciate all the issues of Chargin' Thunder and especially the latest on the Anniversary Edition. I plan on retiring next year and getting my hands dirty keeping these two coupes looking and running good. I look forward to seeing more of the club members at future outings and continuing to learn more about these beautiful cars. It's nice to know I'm not alone in my admiration for them.

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1. Only in America...can a pizza get to your house faster than an ambulance.
2. Only in America...are there handicap-parking places in front of a skating rink.
3. Only in America...do drugstores make the sick walk all the way to the back of the store to get their prescriptions while healthy people can buy cigarettes at the front.
4. Only in America...do people order double cheeseburgers, large fries, and a DIET coke.
5. Only in America...do banks leave both doors open and then chain the pens to the counters.
6. Only in America...do we leave cars worth thousands of dollars in the driveway and put our useless junk in the garage.
7. Only in America...do we use answering machines to screen calls and then have call waiting so we won't miss a call from someone we didn't want to talk to in the first place.
8. Only in America...do we buy hot dogs in packages of ten and buns in packages of eight
9. Only in America...do we use the word 'politics' to describe the process so well: 'Poli' in Latin meaning 'many' and 'tics' meaning "bloodsucking creatures".
10. Only in America...do they have drive-up ATM machines with Braille lettering.

In case you needed further proof that the human race is doomed through stupidity, here are some actual label instructions on consumer goods:

1. On Sears hairdryer: "Do not use while sleeping". [Gee, that's the only time I have to work on my hair]
2. On a bag of Fritos: "You could be winner! No purchase necessary, Details inside". [Evidently, the shoplifter special]
3. On a bar of Dial soap: "Directions: Use like regular soap." [And that would be how...?]
4. On some Swanson frozen dinners: "Serving suggestions: Defrost. [But it's *just* a suggestion]
5. On Tesco's Tiramisu dessert (printed on bottom of box): "Do not turn upside down". [Oops, too late!]
6. On Marks Spencer Bread Pudding: "Product will be hot after heating". [As sure as night follows the day...]
7. On packaging for a Rowenta iron: "Do not iron clothes on body" [But wouldn't this save even more time?]
8. On Boot's Children's Cough Medicine: "Do not drive a car or operate machinery after taking this medication". [We could do a lot to reduce the rate of construction accidents if we could just get those 5-year-olds with head-colds off those forklifts.]
9. On Nytol Sleep Aid: "Warning: May cause drowsiness" [One would hope]
10. On most brands of Christmas lights: "For indoor or outdoor use only". [As opposed to what?]
11. On a Japanese food processor: "Not to be used for the other use". [I gotta admit, I'm curious]
12. On Sainsbury's peanuts: "Warning: Contains nuts". [NEWS FLASH]
13. On an American Airlines packet of nuts: "Instructions: open packet, eat nuts." [Step 3: Fly Delta]
14. On a child's Superman costume: "Wearing of this garment does not enable you to fly". [I don't blame the company. I do blame parents for this one!]

Optimizing Your Cooling System

By Vernon Cradier

Summer is just around the corner and with it come trips, car shows, long days, and higher temperatures. It seems that our cars really feel the heat so now is the best time to examine our cooling systems and get them in top condition so we can enjoy the warm season and avoid roadside headaches. We all know that uneasy feeling of watching the temperature gauge rising higher and higher while images of cracked cylinder heads and blown gaskets fill our thoughts. It's even worse when stuck in traffic with no way to escape.

Our cars have adequate cooling systems at best. It can barely keep up with stock power levels, so once we start increasing power levels we quickly run into its limits. The average engine produces enough heat to keep a five-room house warm in freezing weather. While most is used in power production or blown out with the exhaust, the remainder must be dissipated by the cooling system...quite a job indeed.

In simplest terms, the cooling system utilizes liquid and airflow to remove heat. This doesn't sound complicated but getting it to work properly and effectively can be. In this article I'll cover how to ensure that everything's in working order and things you can do to get the most performance out of it that you can.

What is overheating?

Some think that anything over 200 degrees is too hot. That's overreacting as most new cars operate normally in the 210-220 degree range. Why? The higher temperatures increase engine efficiency in many ways. The higher the oil temperature is, until the point of viscosity breakdown, the lower pumping losses and the better ring seal will be. Lower engine temperatures can actually lower efficiency levels by absorbing too much combustion heat. At the higher temperatures hydrocarbon emissions are reduced and the oil stays cleaner. The R-Code 3.8L is no exception. The factory EEC programming doesn't turn on the fan until the engine temperature is well over 200 degrees. This causes the uninitiated undue stress the first time they roll the windows down and turn off the A/C. The gauge creeps up to the far side of norm leading them to think it's going to overheat. But at the moment of panic the fan comes on and saves the day.

The problem is that these higher temperatures can also hinder performance by increasing the risk of detonation. A general rule is that an engines probability to detonate increases 1 degree of ignition timing with every 10-degree increase in coolant temperature. For normal driving conditions these higher temps are not bad, if the cooling system is not boiling over. But if they do cause boil-over, then follow the suggestions herein to regain your cool.

Build upon a foundation of stone.

Before we can get into modifications to improve cooling ability we should make sure that all the basics are covered. The cooling system should be flushed every two years or sooner. It doesn't wear out but the lubricants and anti-corrosives in it do. Coolant that is old, full of rust or contaminates won't be able to get the job done. Corrosion can destroy parts in no time if the conditions are right. When two different metals are grounded and immersed in an acidic solution, current will flow in that liquid. This is called electrolysis. This current causes particles

of the softer metals like aluminum to transfer to the harder metals. Therefore, aluminum intakes and heads can be eaten away by electrolysis. Use a sensitive voltmeter between your coolant and ground and you'll find up to .6 to .8 volts in bad cases. The cure is to replace the coolant when voltage exceeds half a volt. Flush the coolant and use a cleaner, if there's a lot of contamination. Consider having the radiator checked as the its small passages can easily become plugged.

While on the subject of coolant, there's a myriad of choices nowadays and a little misinformation can be disastrous. It used to be you could just pick up a few jugs at the auto parts store on the way home. But now the parts store has three colors and sometimes, different versions of the same color. So then, which is the best one for us? If you have an all aluminum radiator then you can use the new orange colored Havoline Dex-Cool or Prestone Extended Life. These have a new class of corrosion inhibitors based on organic acids which are good for five years or 150,000 miles. That's the good news. The bad news is that if you have a standard copper and brass radiator, the organic acid (orange) antifreeze may not provide adequate protection for the lead solder in these radiators. If using the standard radiators, then stick to a high quality standard (green) coolant. In either case, never mix different types of coolant together. I personally recommend Peak. It costs a little more and it can be harder to find, but it has a patented formula with superior thermal conductivity. This is a case where you get what you pay for. Maintain a 50/50 water to coolant ratio. Coolant, while having a wider thermal range than water, isn't nearly as good a thermal conductor and can't remove enough heat. And water, while the best coolant, is very corrosive to the metals in the cooling system. Distilled water helps, but you still need pump lubrication and anti-corrosives to maintain system life. Use a hydrometer available at any auto parts to check the ratio. This would be the time to do a cooling system inspection so that all your efforts don't go up in steam.

Spring Tensioner

Prior to draining the system, take a good look around to identify problem areas that need to be addressed, so you can take care of them during the flush. One often overlooked, but very common problem is water pump belt tension. It seems that with auto tensioners, as long as the belt is still there, we forget that it can be worn beyond use. Look on the tensioner assembly. The outer section has a pointer that should be in the small box of indicated range. This is marked with white paint in the photo. If not, the belt should be replaced. Replacing this belt requires lower hose removal, so now it the time to

have it on hand. If you have installed under-drive pulleys as I, and have problems maintaining this critical tension, you can re-drill the spring retention hole on the tensioners backside for more pressure. With the belt removed, the water pump shaft should spin freely without any run-out. Look on the top of the pump for the weep hole. Any coolant here indicates worn seals and mandates its replacement.

Check the A/C condenser coil and radiator face for debris and dust accumulation. Clean them with a fin comb or high-pressure water sprayed from behind. Carefully straighten any bent fins with a comb or a small screwdriver as they block airflow through their area. Examine the radiator core and tanks for leaks, especially at the seams and brazed on connections. A small droplet of coolant here usually indicates a pinhole forming from the inside that will need to be re-soldered. Check out the condition of the radiator cap. A worn or cracked gasket will not hold pressure and allows coolant to leak out and overheating due to low pressure. If the cap is suspect, make sure to replace it with a Motorcraft part, which are well made. Some store brands are so thin that they can't hold their shape under pressure and are useless. Make sure the vacuum return diaphragm is functioning so coolant can return to the radiator on cool down.

While looking at the hoses, check for coolant leaks at the hose ends. The factory pressure clamps are better tossed in favor of the screw type hose clamps. Any hose that is swelling under pressure or feels soft should be replaced immediately as they can fail without warning. Make sure the lower radiator hose is supported from pump to radiator by its internal spring. This spring keeps the hose from collapsing at high speeds from the internal suction. If it has broken or doesn't reach from end to end the suction created at highway speeds can collapse the hose causing an overheating problem that's hard to diagnose. Don't forget about the overflow hose, as a plugged up or leaking one can cause another hard-to-diagnose problem.

Check the edges of all cooling system gaskets (head gaskets, thermostat housing, intake, water pump) for signs of seepage. With the engine warmed up, turn on the heater. If you get strong coolant smell then the heater core should be checked for leaks. Check the freeze plugs on the engine block for signs of coolant seepage. These are the metal plugs along the sides of the block, cylinder head ends, and other places. Finally inspect the airdam's condition. This is a necessary component in the system and if it is missing or damaged you will have problems. Once you've identified and repaired any problems you can flush and refill the system with confidence. When refilling the system, raise the front of the car as high as possible and be sure to open the bleeder valve on the thermostat housing. This helps purge air from the system allowing for faster fill up. Start the engine and allow it to reach operating temperature for a few minutes and then allow it cool. Recheck coolant level and add if necessary.

Identifying Cooling Problems

One often seen problem, when there is a problem, is a bad sending unit. An erroneous gauge reading is as bad or worse than no gauge at all. Considering the low cost to replace it and its importance it should considered at every coolant flush. I have seen a technical service bulletin from Ford describing bad

temperature sending units being one cause of head gasket failure on these cars. The problem is that the gauge shows an acceptable temperature right up to when the head gaskets blow, due to continued operation while overheating. Then on the other side of the coin, if you have bad or non-existent grounds to your engine block or gauge cluster, the gauge can read overheating conditions while the actual temperature is in safe limits. Either way will drive all concerned up the nearest wall until it is found. A mechanical gauge is good insurance, especially if it's a risk you can't afford to take, and these engines can be expensive to replace.

Now that I've covered the problem of a non-existent problem, let's discuss the real ones. Cooling problems can be narrowed down by determining the conditions under which overheating occurs. Overheating at low vehicle speeds is usually caused by insufficient airflow through the radiator, while overheating at high speeds is usually related to coolant flow rate problems. If you have constant overheating, then you could have a mechanical failure, such as a stuck thermostat or your cooling system doesn't have enough capacity for the power being generated during use. As an example, the stock system could work well for a street cruiser or drag car, but quickly overheat during open track racing or with constant high speeds. Sometimes a combination of problems will cause overheating, necessitating more than one area to address.

Air Flow Improvements

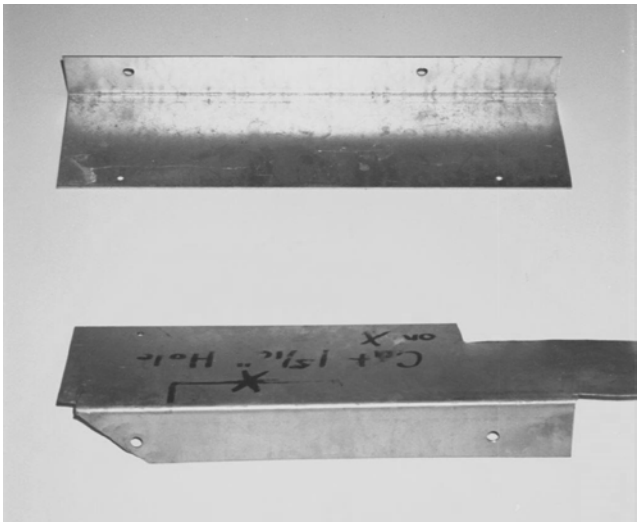
Air entering the grille of the car will take the path of least resistance going through it. The greater we make the pressure differential between the front and back of the radiator the more air will travel through. Most overheating is caused by insufficient airflow through the radiator. To maximize the cooling ability of the radiator, you need to make sure that all air entering the grille area is routed through the radiator and not allowed to leak around the core or core support.

The most effective way to accomplish this is with liquid foam that comes in a can. Used mostly for weather sealing a house, it is available at home improvement centers and hardware stores. With the radiator in position, apply WD-40 or equivalent to the radiator surfaces that you don't want the foam to stick to. Fill in all gaps between the radiator and core support top, bottom and both sides with the foam. Use a little at a time, as this product expands a great deal when curing. Be very careful as it sticks stubbornly to skin or other unwanted places.

Lower radiator support

Upper radiator sealing

These photos show what it looks like after hardening. You can then trim it down and paint it so that it blends in with the radiator or core. The light oil coating allows you to remove the radiator in the future. Next examine the rubber coated felt baffle that attaches to the front of the core support to direct air from the grill area into the radiator. It's obvious that it fights a loosing battle with all the gaps around it. The top section where it crosses the header panel can be sealed with duct tape applied from both sides. This tape can be found in many colors or black so it's not such an eyesore as it sounds. In the photos you can see that I sealed up the area around the hood latch also. As for the vertical sections on each side of the radiator, it is too much to expect tape to hold with so much flexibility and pressure. The sides will require more drastic measures to effectively force the high-pressure air into the radiator. I fabricated two mirror image air baffles out of stiff sheet metal, painted them to match, and screwed them to the core support on each side of the factory baffling to seal the sides and hold the baffling in position.



Radiator Baffles

In the photo you will see two examples. One is the base material I used and the other is one after trimming to fit. Due to the complexities of the shape, they had to be done by hand with the car available for fitting. Be warned, these plates were extremely difficult to install with the bumper cover on the car. Several drill configurations and small hands will be necessary. Have a supply of the plastic push pin retainers on hand. They can be found in the red HELP bubble packs at auto parts. Another area that needed to be addressed was the gap between the new fiberglass cowl hood and the top of the core support. As you can see, the plastic seal strip from the steel hood adapted well to its new home. This strip restricts airflow from going over the top and entering the engine compartment without cooling the radiator. While on the subject of fiberglass hoods, it needs to be noted that they can cause overheating at high speeds by causing high pressure to build in the engine compartment through their openings.

I used a string tied to the registers of this cowl induction hood to observe airflow. It did release heated air at a stop or below 30 MPH. At higher speeds, the flow reversed sharply causing air congestion in the engine compartment slowing airflow though the radiator. Remember the pressure differential is what's important. Notice from the photo that red duct tape was put to good use here also. It's only visible from inside the car and could also be black to match the cowl area. After you have done these things you can increase the amount of air pushed into the radiator.

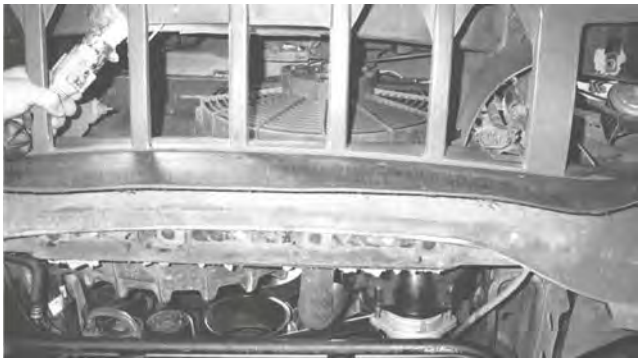
The easiest way is to install a larger air dam. The factory piece is puny and can't be doing much good. While looking for a suitable replacement I examined several different makes and models of vehicles. The one on the '92-'98 Pontiac Grand Am turned out to be a perfect fit. It is GM part #22635885. It lists for $16.50 making it a low buck upgrade. It's 3" deep and slightly wider than the SC part. Best of all, two end bolt holes lined up with existing holes on the SC.

Air Dam Clearance

Double Air Dam

I noticed that there was a substantial gap between the bottom of the core support and the bumper cover. This makes an easy exit for air to go though under the radiator and into the engine compartment. I noticed that with slight trimming, another identical air dam could be inserted into the bumper cover upside down, using the same bolts holding the lower one, thereby, increasing the total air dam height to 6". It bridges the gap perfectly, routing all the air directly into radiator core. The double shear, created by the bumper cover and air dam, sandwich makes it virtually bulletproof. The problem with the small factory piece getting torn off on curbs or the like is history. The only downside is the reduced ground clearance. While improving cooling substantially, it generates more scraping on grades and speed bumps. It doesn't affect operation but takes getting used to. The lower temperatures help to make it acceptable.

The cumbersome and delicate factory baffle that extends from the lower core area to the number one cross member was removed, as it was now a restriction to airflow exiting the radiator. While these methods improve cooling with the car in motion it still leaves the problem of the fan not coming on until high temperature with the A/C off. How I addressed this was with the auxiliary fan placed in front of the condenser, by favoring it to the driver's side it also acts as an intercooler fan. As you can see, the fit was tight, requiring fan disassembly to install, but again the results are worth it. By using a Hayden thermostatically adjustable fan control relay from an auto parts store, I am able to manually set the temperature that activates it.



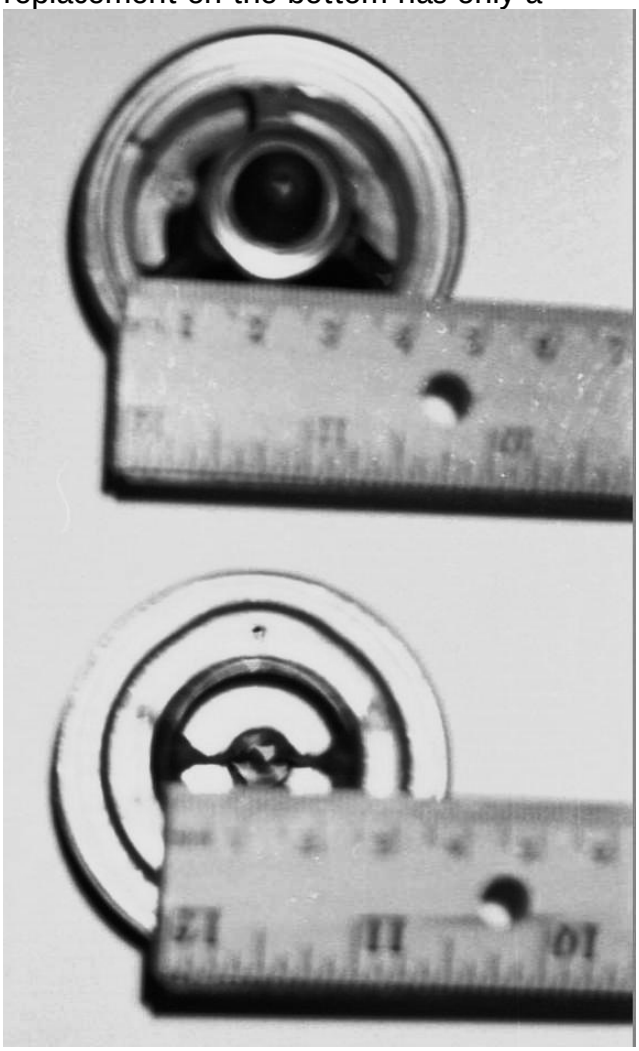
Pusher fan shown in front of radiator

It also has a lead that activates it with the A/C, which is great, as the factory fan doesn't reach to this side of the coil. This brought the A/C temperature down after a Freon conversion had reduced its output. It is shown mounted to the fender before wires were tucked away. To determine how big an electric fan you need, drive the car and note minimum speed required to maintain normal operating temperature without any fan in use. By converting the MPH into feet per minute and multiplying by the radiator's area in square feet, you can determine the cubic feet per minute that will be required to maintain normal coolant temperature. Then you can use this formula: CFM required = 0.61 x (MPH x rad. height [in.] x rad. width [in.]). This requires that the radiator baffling be effective to be accurate. One other and not usually thought of restriction to under hood airflow is the motor-mounts. With collapsed mounts, the oil pan sits very close to the engine cradle, blocking off a significant exit for air coming out of the radiator. Also, air passing over the oil pan removes heat from the oil. There is enough to this, that if your mounts are bad, you can expect lower temps if they are replaced.

Coolant Flow Management

A thermostat only maintains minimum engine temperature. Installing a lower temperature thermostat will not cure an over heating problem and removing it usually makes it worse. Unlike airflow, a higher flow rate for the coolant isn't always better. This is a commonly misunderstood area. Many, in attempts to lower the operating temperature of their engine for increased performance, have installed a lower temperature thermostat only to then overheat. It wasn't the lower temperature that caused overheating, it was the larger opening in the thermostat that increased coolant speed to the point that it traveled though the radiator too fast. There is simply not enough time for the radiator to remove enough heat from the liquid before it is returned to the pump.

Some engines respond to faster coolant flow rates but the Ford 3.8L usually does not. If you examine the thermostat comparison photo you will notice the top unit, a high performance brand, has a 40 mm opening, while the stock type replacement on the bottom has only a



24mm opening. It seems with the V8 sized pump on a V6, and the small down flow radiator, that coolant speed needs to be regulated to perform correctly. If you want to reduce the thermostat

temperature for increased power find one with a smaller opening.

Another consideration is how low you can go. Factory engine controls will view lower coolant temperatures as a warm up condition. Fuel and ignition curves will be too rich and slow for normal operation causing excessive fuel use and poor performance. Never go below a 180 degrees thermostat to avoid this problem. Also make sure the thermostat you choose has some form of gas venting. The Motorcraft, and some aftermarket units, have a ball and socket type one-way check valve, while others utilize a small scallop in the valve to release steam and air pockets. Trapped air pockets can delay thermostat openings by insulating them from the hot coolant. This can cause overheating on startup and during hard usage. Coolant flow is also affected by pump speed and impeller design. A good rule of thumb is that it takes about 0.16 gallons a minute per horsepower, so in theory the stock pump should be able to support more horsepower then we can generate. However, overall engine, head gasket, and cooling system design greatly affect flow requirements.

High Performance Cooling

The stock system is optimized for normal usage and conditions but once we start altering these parameters we need to be prepared to deal with the results. Here are some methods to boost system performance after modifications. By design, under-drive pulleys can cause higher operating temperatures and overheating on cars already running near their limits, but can also be beneficial by preventing captivation in high-speed usage. Loss of coolant flow due to under-driving could be regained by installing a disk to the back of the impeller that increases efficiency. These are available from many performance outlets and install with rivets making them an inexpensive and easy upgrade to the factory pump.

A custom radiator with increased capacity will always make an improvement to an overworked system. Griffin Radiators makes an excellent replacement radiator that has the advantages of aluminum tube construction. By using aluminum tubing, the tube or core sizes can be much larger. This increases the area of fin contact with the tubes making them much more effective. A two-core aluminum radiator is lighter and cools better than a copper and brass with four cores. This piece, though costly, is the biggest improvement you can make to your cooling system.

If you have an automatic transmission you can make a large improvement by installing an auxiliary transmission cooler in line with the radiator mounted factory unit. Not only will this lessen the load on your engine coolant, it can extend the life of the transmission a great deal. If using a higher stall speed torque converter, then it is a necessity. Make sure to install a thermostatic control valve that bypasses the auxiliary cooler until it is necessary. This allows the transmission fluid to reach normal operating temperatures quicker by absorbing heat from the coolant. You see, the engine heats up faster than the transmission, so until it's hotter than the engine, it absorbs heat from the coolant. This is also why you should leave the factory cooler in series with the auxiliary one. Give your A/C a break and locate it behind the condenser coil but in front of the radiator. Don't worry about the cooler adding heat to the radiator as the added surface area lowers overall temperatures.

By the same method, replacing the factory oil cooler, which uses engine coolant, with one that uses airflow you can make the radiators job much easier. Some kits allow you to relocate the oil filter to a more accessible location at the same time.

There are two products, I know of, that if added to the coolant will significantly lower temperatures and reduce the time required to lower them. One is Red-Line Water Wetter and the other is Pro-Chem's 40 Below. I have used 40 Below personally with good results. When added to the coolant my operating temperature dropped by about 20 degrees on average. If the coolant got hotter during hard driving I could actually see the needle on the temperature gauge drop immediately when I returned to normal driving conditions. If you use this product, try 1½ cans of it in a normal size system. I used two per instructions and believe this was too much, as the gasket on my radiator cap softened considerably though it never leaked. Overall I was satisfied with its results and recommend it as a method to tame a hot running car.

Vernon's red SC

A customized oil pan with increased capacity is a sure-fire method to lower oil temperatures among many other benefits. As I mentioned before, airflow over the pan removes heat, and with more oil, it spends more time in the pan cooling off. So far, I don't know of one being produced, so this would have to be a part fabricated by modifying a factory pan. One could find information on this in books about modifying cars for road racing or by contacting a racing oil pan fabrication company.

One fuel related issue with a modified SC is the possibility of increasing airflow beyond fuel capacity. To be able to burn its fuel and air charge properly, an engine needs them in the correct amounts. If you make many modifications that increase the amount of air the engine can use, then you should also increase fuel capacity to keep up. If an engine can't supply enough fuel for the amount of air it is using, then it will run lean at full throttle. This condition generates very high combustion temperatures that will quickly overload the cooling system. Within seconds, the combustion chamber can overheat, inducing detonation or spark knock, but before you hear this, the EEC will reduce timing to eliminate it. This reduced timing, while lowering combustion temperatures,

raises exhaust temperatures enough to overheat the ports.

If you have made several modifications to improve airflow on your engine, but have not addressed the fuel system, you could be experiencing this condition. As a final note on performance cooling, it needs to be mentioned that high amounts of backpressure in the exhaust system generate great amounts of heat. More so with the R-Code than other engines because of the supercharger. The pumping losses, due to high pressures effect the blower much like they do the engine, by making it work harder and build up heat that could be exhaled with a free flow exhaust system. Raising the boost with a stock exhaust is a proven method to blow head gaskets. So if you want to increase performance at all, with reliability, the exhaust system should be your first area of improvement.

I have tried to be thorough, but if you have some questions or need more in-depth advice on SC cooling, there is no better place than the SCCoA's website tech board. Now let's all get ready for the National's meeting in Oklahoma this summer!

Super Dave's Custom Illuminated Ride

By Dave McGlaughlin

SCCoA member #1221 is Dave McGlaughlin. On the BBS EZ Board he is known as DD Iowa, or the technicians at the Ford shop call him "Super Dave". He is a regular there. Dave joined the SCCoA in early 2000, and has owned his 1993 SC since the spring of 1997. He had to drive 250 miles (round trip) to purchase his vehicle. It was the only one in the state that had a decent price, and that his wife could drive if she needed to (auto). On that eventful day, it had 53K on the odometer. Since this is his "daily drive", he has racked up an additional 70K on it.

Check out the custom rear bumper

Prior to his SC, he owned a 1988 T-Bird Turbo Coupe. "I guess I got the T-Bird bug from my dad." He, too, while Dave was growing up, owned a 1968 T-Bird, a 1978 T-Bird, and a 1982 T-Bird.

How Calvin Puts Out Fires!

With his career, volunteer work, and time with the family, he has very little time to "tweak" his SC. He says that he spends more damn time and money keeping the #~!+*:% thing running, than he (or his wife) wishes to discuss. He recently put a rebuilt motor in due to the inevitable head gasket failure. He is now on his second rebuilt motor. The first one had a cracked block – and now the second motor is also leaking oil! He says he has spent *way too much* money for a regular SC engine that still isn't right! Warranty repairs will take care of it ... eventually ... he hopes!

Dave, overall, is a pretty laid back person, with a very *strange* sense of humor. Just ask his wife, Jeanna...she'll attest to it. What spare time he has, he enjoys spending with his wife and 4 children, Sherry, Mike, Morgan and Jared. He currently serves the Eastern Iowa Airport, located in Cedar Rapids, as a Police Officer, ARFF (aircraft rescue fire fighter), and also as an EMT (emergency medical technician). He also is a Lieutenant on the North Liberty Volunteer Fire Department.

With four children, trying to save for a larger house, and keeping the SC running, he hasn't been able to modify the bird as much as he would like to. He currently has:

- Air box removed
- 3:73 rear end
- 245 / 50s
- Upgraded music maker
- Competition LTD harness w/ lights
- Fire/EMS emergency white hide-away & blue aftermarket strobes, that use the fog lamp rocker switch for activation
- And his favorite. He removed the rear bumper, securely mounted a Buick Somerset Regal taillight assembly, and then routed out the "THUNDERBIRD SC".

~ AN ILLUMINATED BUMPER! ~

He has received numerous compliments on the bumper, even from Mustang owners, who are looking into doing the same thing themselves.

"Imitation is the sincerest form of flattery"

The view from the rear at night

Since he plans on keeping his SC for a long time, his future plans for modifications include:

- Replacing parts, pieces, and assemblies as they break off or wear out
- Removing the last child seat…finally
- Rebuilding the auto tranny (not because he wants to) and slipping in a shift kit, along with a different torque converter
- Saying goodbye to the stock resonator, and replacing with a more free flowing aftermarket one
- Possibly a larger MAF intake
- Refinishing the yellowing headlights
- Rear louvers (they were cool in his day) and tinting the side back windows
- Rear spoiler
- A couple more "lighting projects" are currently in the works, and will hopefully be done before the "first ever" National SCCoA meet in September

- Bra (to hide all of the dings/chips)
- Sunshield lettering across top of windshield
- And eventually, a ram air hood, and some "snappy" looking rims
  He estimates by the time all of the modifications are done, he'll probably be close to retirement ... bankruptcy ... or 6 foot under. He must also add, that it is *very helpful* to have an understanding wife!

If you have any comments or questions for Dave, you can reach him either at home ddjmmac@cs.com, or at work dmcglaughlin@cedar-rapids.org.

Happy motoring to your fellow SC owner Dave McGlaughlin!

My '89 BlackBird

By Jeff Bratton

My name is Jeff Bratton from Louisville, Kentucky. I have been a SCCoA member for about a year and a half. I bought an '89 Bird two summers ago with 110,000 miles and it's still running smoothly with over 143K. Thankfully, the previous owner kept the car in the garage so it hardly shows its age or mileage.

I am actually the 3rd owner of this SC, and it has been well taken care of inside and out. Since taking ownership I have removed the factory air intake and silencer. In their place I installed a ZR Fresh Air Intake with a 7" filter cone. That's all the mod's on the business end...so far!

Jeff proudly displays his club decal

White face gauges

As far as the interior goes, I have installed a set of NR "white face" gauge faceplates. (Used the 145 M.P.H. speedometer). Looks cool! I updated the overhead dome light, using one from a '91 model. A JVC detachable CD car stereo handles music duties and more upgrades in this area are sure to come in the future. Finally, I have swapped out the window and door switches with ones from the '94 to 2000 model Mustang. I like the looks of these much better. Overall, the car's interior is in great shape.

The exterior really has not been touched, other than what I have done myself. Red bumper lettering purchased from Racer Walsh was added both front and rear. I placed some new Dunlop 245/45ZR/16 tires all around, too. I've added the "Supercharged" door guard strips to each edge of the fenders off the XR-7, removed the original mufflers and installed a pair of Monza chrome tips (w/baffles). It has its share of minor door dings, but otherwise it's an eye catcher, I believe.

I hope to place it in a show some time soon and I'll likely be adding more horses to the engine in the next few years, too. I would appreciate everyone's comments and/or suggestions on the pictures or mod's/ changes that I have done to my BlackBird. You can Email at: Brattmanjc@aol.com

Special Thanks to Bill and Patty Evanoff for letting me feature my SC in the "CT". THANKS A MILLION!!
Sincerely,
Jeff Bratton, member #1266

IMPORTANT NOTICE

SIA Electronics has recently reduced their pricing on ABS Actuator Assembly remanufacturing. Back in the December '99 CT issue, SIA was first identified as a terrific source for ABS system repair. They have since substantially reduced their prices to only $475 for a complete system reman. job. Don't pay the $1,500 that the dealerships ask.
Contact Bruce Fisher at 1-800-737-0915 x 12 or email him at "bruce@siaelec.com

Synchronizer Replacement in the M5R2

By Mike Puckett

Last year when my 3rd gear synchonizer failed and started to grind really bad, I was able to find a replacement transmission and had it swapped out. But, as I looked at my broken 5 speed sitting on the bench in my garage, I thought that replacing the synchronizers would be a real good project to tackle since it was a job that I had never done before. We will actually replace the synchronizer blocker rings and not necessarily the synchronizers themselves, depending on what the damage is.

We have a choice of either the brass rings or the fiber on metal type. The fiber material is similar to clutch material and may wear faster, but it's designed to give smoother crunch-free shifts. In fact, using the brass blockers may still allow a crunch to occur during speed shifts. They do not allow the synchronizers and gears to slow down sufficiently and the mismatch causes the crunch. During normal shifting everything is fine because everything happens slowly enough to mesh properly. The fiber material cures this problem and that is why it is used. I confirmed this with a Tremec representative at Fun Ford Weekend in April, after receiving the same story from three other experienced mechanics. He showed me on the Tremec where it has 3 blockers per gear, where our M5R2 only has one. This permits them to be speed-shifted very smoothly.

As I removed the top and peered inside I was gripped with fear. "I'll never figure all this out," I thought to myself. So I contacted my good friend Ben Goodspeed to show me how it's done. Ben's rebuilt many a manual transmission and the M5R2 was no exception. He had recently rebuilt another one for a fellow club member from nothing but a pile of gears and bearings. Ben agreed to do mine and I took the ailing tranny over to his garage for surgery.

Before we get started, I'd like to offer some pointers to anyone doing this for the first time. This is not a job for the faint-of-heart or a sloppy mechanic. Get a camera that will allow you to take close-ups. Take photos of subassemblies and the parts' arrangements and how they fit together for future reference during reassembly. When removing subassemblies, lay everything out in an orderly sequence, including clips, sleeves, and bearings. Don't jumble everything up. Do it slowly and carefully and think your way through, referring to your documentation as you go.

Inspect all the parts as you remove them and replace anything damaged. Inspect every part for damage or excessive wear and replace it if necessary. When in doubt, replace it. Especially inspect the tips of all the points on each synchronizer and gear. If they look rounded off, replace them. I found that Southern Gear (770-435-1461) in Smyrna, GA, an Atlanta suburb, carries virtually all of the internal parts. Tools needed will be your metric sockets and rachet, torque wrench, screwdrivers, inside/outside snapringer pliers, chisels, hammer, two-foot long large wooden dowels, and a set of punches. Access to a machine shop for pulling or pressing any parts may also be needed.

I had already drained the fluid so we put the tranny up on a roll-around caddy and removed the two top covers and the shifter, putting it in neutral first. The top plate of the shifter need not be separated from the bottom section which is held by four 10mm bolts. When removing the large main top cover, don't move the shift arms from their

original positions. Turn it upside and set it away in a designated place along with the shifter, the small top plate, and their bolts.

Before we remove the tail housing, we'll need to remove the speedometer sensor and remove the shift selector arms from the shift rod. The arms are removed by knocking the pins out just enough for it to come off the shaft. Now remove the 5th/reverse shift fork from the synchronizer sleeve.

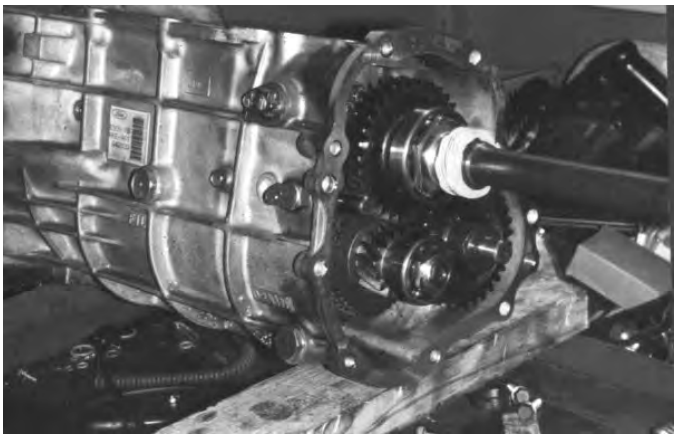
Working on the extension housing

After removing the neutral switch we can remove the tail housing. It may need to be tapped lightly with a hammer and a blunt chisel to loosen it. Once it is loose it will slide off the tail shaft. The reverse and 5th gears and their synchronizers are now visible.

There are three shafts: the main shaft, the counter shaft, and a short idler shaft. Slide the black rubber seal off of the main shaft and then the speedometer drive gear. In mine, this gear is green. Underneath of it is a small steel ball. I removed it by sticking a small rubber hose over it to pick it up and out of its hole.

On the counter shaft and the lower idler shaft there is a nut on the end of the shaft with a locking collar that is indented into a groove in each shaft. Tap this indentation up and out of the groove with an appropriate punch and a hammer. This will allow you remove the nuts with a wrench. Jam the gears with a screwdriver so that the shafts can't turn when each nut is loosened. Discard and replace both of these nuts.

Remove the bearings from the ends of each shaft. At the bottom of the housing next to the idler shaft is a bolt to secure this shaft. Remove it and slide the idler gear assembly out of the housing. Remove the reverse gear from the counter shaft. Remove the sleeve from main shaft. Remove the star head bolt by removing the small retainer bolt next to it and the snap ring from the inside on the end. Do not rotate the star headed bolt in relation to the retainer. Remove the lever, watching for the o'ring. Remove outside bolt holding in 5th/reverse gear shift rod and remove the rod. Remove the 5th/reverse synchronizer from the counter shaft as an assembly. Do not remove the outer synchro sleeve from the inner hub, keep it all together as an assembly. Do this with all of the sychronizer assemblies.

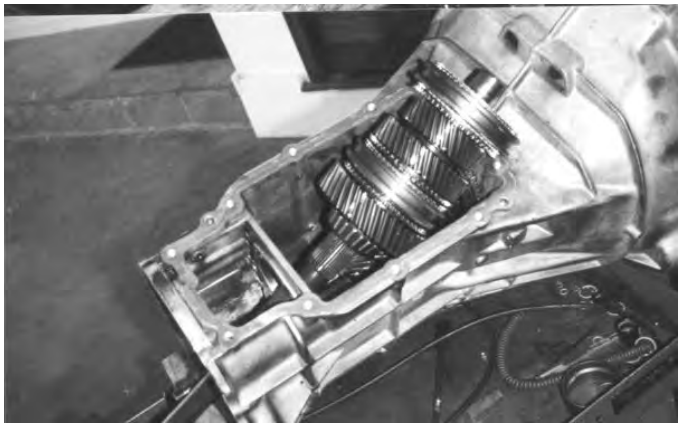


The three rotating shafts are clearly shown here. The white speedometer drive gear is shown on the output shaft

Separate off the blocker rings and match up the new replacements when placing aside. They are different. Remove 5th gear from the countershaft being careful of the inner roller bearing halves and its orientation.

Finally, remove the spacer sleeve from the counter shaft and the tail section is disassembled.

Remember to lay all the parts out in order so there won't be any question as to how they go back together. There are lots of small pieces and all it takes is an incorrectly placed or a left out part to ruin the transmission rebuild. Replace all the blocker rings. Inspect all the gears and synchros and check the tips and edges including the little tooth-like protrusions. Each tooth should be beveled and pointed and not rounded off or blunt. Also, check all the roller bearings for wear, bluing, or deformities.



The output shaft assembly

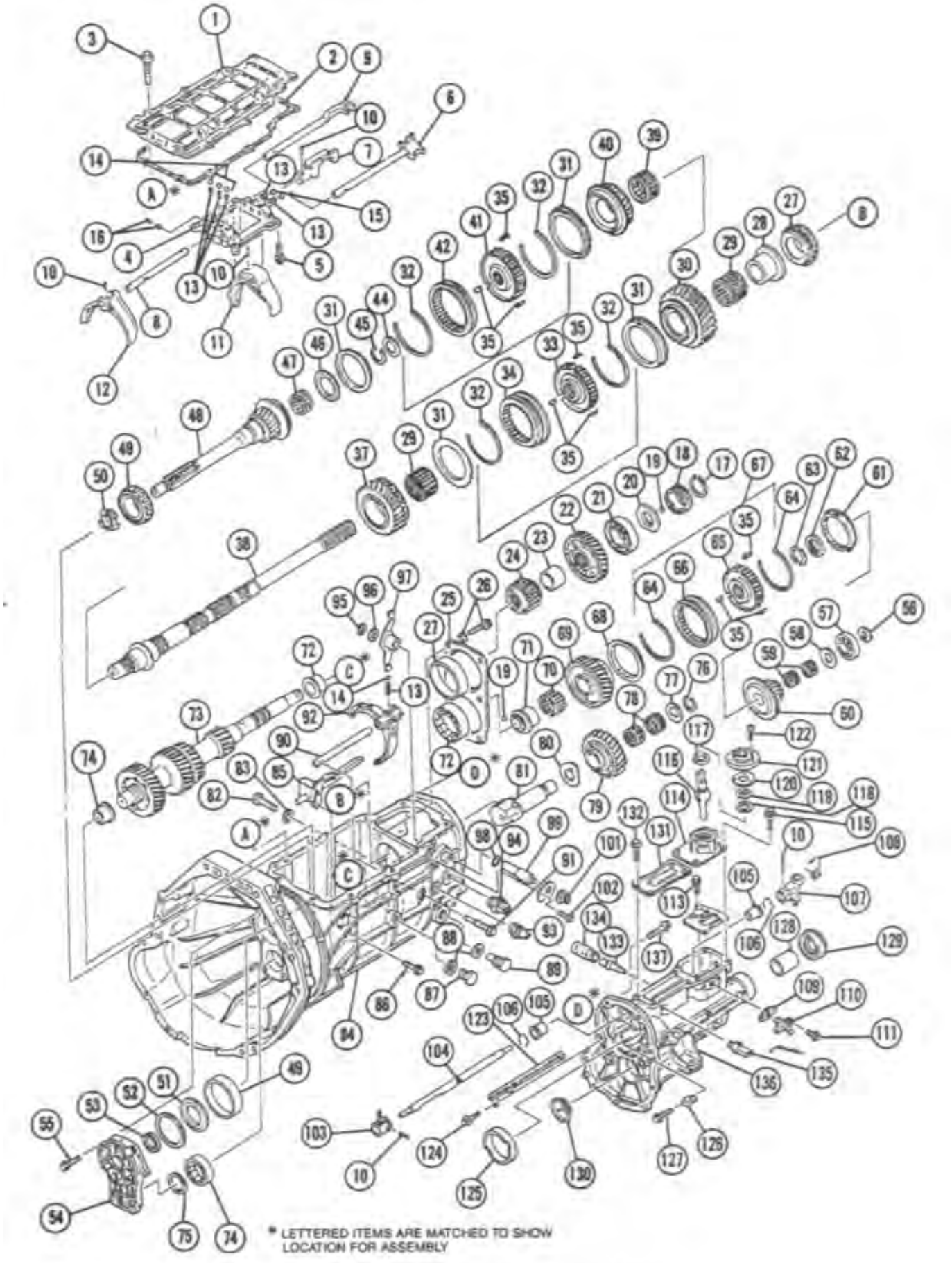
We can now start on the main section of the transmission containing the 1st through 4th gears. There are three shafts in this section. The input shaft, the main shaft, and the counter shaft. We'll remove them as assemblies and disassemble them outside the housing. There is a retaining plate on each end that secures the shafts and bearings in place. There are six bolts holding the plates. Removing the rear plate is no real problem but the front plate inside the bell housing hides several small parts. The input shaft seal will stay imbedded in the front bearing cover, but remove the bearing shim and oil baffle.

A plastic impeller to pump oil back through the bearing is next on the input shaft. If it is broken or breaks coming off, you will need to replace it. With the bearing retainer plates removed, it is possible to remove the outer races of the countershaft front and rear bearings. With these out, the countershaft can be moved back and down and away from the main shaft.

After removing the outer races from the input and main shafts, they can be separated and removed. The front of the main shaft fits into a bearing that is inside the end of the input shaft. Move the main shaft as far back as it will go and pull the input shaft back and out through the top opening. The main shaft will then move forward and out of the top opening, also. The countershaft in the bottom of the housing will now come out through the same top opening.

Let's look at the main shaft assembly first. The gears and synchros are removed via the rear of the shaft. There is a bearing pressed onto the shaft here and it will have to be removed with the proper type of puller. Take it to a machine shop if need be. Slide off the bearing assembly followed by the 1st gear, 1st/2nd synchro, blocker ring, 2nd gear with bearing, 3rd gear and bearing, blocker ring, 3rd/4th synchro, blocker ring, and spacers. Again, remove the synchros as an assembly and do not separate them. Inspect all of the synchros and gears for signs of excessive wear as previously described.

We are ready now to start reassembly. It is basically the reverse procedure. Due to the complexity and length, I am covering this in two parts. We'll cover the reassembly in Part II in the next issue.



M5R2 5-speed transmission – exploded view

1 Top cover
2 Gasket
3 Bolt
4 Shift control frame
5 Bolt
6 5th/reverse shift rod
7 3rd/4th shift gate
8 3rd/4th shift rod
9 1st/2nd shift rod
10 Roll-pin
11 1st/2nd shift fork
12 3rd/4th shift fork
13 Detent spring
14 Shift detent ball
15 Shift rod damper seal
16 Interlock pin
17 Speedometer gear snap ring
18 Speedometer drive gear
19 Ball
20 Output shaft locknut
21 Output shaft rear bearing assembly
22 Reverse drive gear
23 Output shaft 5th/Reverse sleeve
24 5th drive gear
25 Center bearing cover
26 Center bearing cover bolt and washer assembly
27 Output shaft center bearing assembly
28 1st gear bearing sleeve
29 1st/2nd gear bearing assembly
30 1st gear
31 Synchro blocking (1st, 2nd, 3rd, 4th) ring
32 Synchro 1st/2nd/3rd/4th spring
33 1st/2nd synchro clutch hub
34 1st/2nd synchro sleeve
35 Synchro insert key
36 1st/2nd synchro assembly
37 2nd gear
38 Output shaft
39 3rd gear bearing assembly
40 3rd gear
41 3rd/4th synchro clutch hub
42 3rd/4th synchro sleeve
43 3rd/4th synchro assembly
44 3rd/4th synchro hub spacer
45 3rd/4th synchro retaining snap ring
46 Output shaft thrust bearing assembly
47 Output shaft pilot bearing assembly
48 Input shaft
49 Input shaft bearing assembly
50 Input shaft oil scoop ring
51 Input shaft bearing oil baffle
52 Input shaft bearing shim
53 Input shaft seal
54 Front bearing cover
55 Front bearing cover bolt
56 Countershaft locknut
57 Countershaft rear bearing assembly
58 Reverse gear thrust washer
59 Reverse drive bearing assembly
60 Reverse drive gear
61 Synchro blocking (Reverse) ring
62 5th/Reverse synchro thrust washer
63 5th/Reverse synchro split washer
64 Synchro 5th/Reverse spring
65 5th/Reverse synchro clutch hub
66 5th/Reverse synchro sleeve
67 5th/Reverse synchro assembly
69 5th gear
70 5th gear split bearing assembly
71 5th gear bearing sleeve
72 Countershaft center bearing assembly
73 Countershaft
74 Countershaft front bearing assembly
75 Countershaft bearing shim
76 Reverse idler retaining snap-ring
77 Reverse idler thrust spacer
78 Reverse idler gear bearing assembly
79 Reverse gear
80 Reverse idler thrust washer
81 Reverse idler shaft
82 Reverse idler shaft bolt
83 Reverse idler shaft bolt washer
84 Transmission case
85 Front bearing oil trough
86 Oil trough retaining bolt
87 Fill plug
88 Fill/drain plug gasket
89 Magnetic drain plug
90 5th/Reverse shift fork rod
91 5th/Reverse shift fork bolt
92 5th/Reverse shift fork
93 5th gear position switch
94 Back-up light switch
95 Snap-ring
96 Washer
97 5th/Reverse counter lever
98 Counter lever pin O-ring
99 Counter lever pivot pin
100 Counter lever pin retaining plate
101 Counter lever pin locking nut
102 Counter lever retaining plate bolt
103 Shift rail selector finger
104 Extension shift rail
105 Shift rail bushing
106 Shift rail bushing snap-ring
107 Shift rail offset lever
108 Control selector spring
109 Gasket
110 5th/Reverse inhibitor assembly
111 Bolt
112 Gearshift lever guide
113 Gearshift lever guide bolt
114 Shift control housing
115 Shift control housing bolt
116 Shift lever
117 Shift lever bushing
118 Shift lever bushing shim
119 Shift lever bushing wave washer
120 Shift lever retaining plate
121 Dust boot assembly
122 Dust boot assembly bolt
123 Rear oil trough
124 Rear oil trough bolt
125 Output shaft rear bearing sleeve
126 Rear bearing sleeve plate
127 Rear bearing sleeve plate bolt
128 Extension housing output shaft bushing
129 Extension housing oil seal
130 Countershaft oil funnel
131 Extension housing blind cover
132 Extension housing blind cover bolt
133 Breather assembly
134 Breather assembly cover
135 Neutral sensing switch
136 Extension housing

"MY THREE BIRDS"

By James R. Pearce (Joisey Jim).

1989

Back in September of '89 I started a new job in Princeton, NJ, at the Carnegie Center office park. Along with the job came a company car. Most other managers had Crown Vics (yuck, I wanted a car not a boat). So I asked my boss what the deal was and he sent me to the local Ford agent.

The first thing I saw was a gleaming new Titanium SHO. Knowing that these 'bad boys' had 200+ hp (a first for front wheel drive at the time) I though that this was the car for me. Anyway, the test drive proved otherwise. All that torque steer and a 5 speed, which felt like a crash gear box. What a disappointment, despite the high revving Yamaha motor.

So the salesman pointed over to the T-Bird SC (bright red with a spoiler). A bit small for a business car, I thought, and 'bright red' - they are never gonna let me have this. Well, 15 minutes into the test drive I was hooked. What 'a sleeper' this car was and, rides great too.

When I told my boss he said "Go for it, but park it in the underground garage, not in front of the office." Well, I chickened-out of the red and selected white instead. That 1990 Oxford White Super Coupe didn't have the JBL, so they put in an Alpine system instead (even better). It was a dream to drive, despite the occasional stiff shifting 5 speed.

I really felt, however, that it needed something to unleash its power, but couldn't find anything on the after-market. Finally, I came across the small pulley & belt combination in Racer Walsh's catalog. So on that went. It must have been a 10% because she was pushing 15 psi of boost. Of course, I had no idea about head gaskets at that time. I clocked up 90,000m before I left the company. Bernie, one of the salesmen who I passed it on to, went all the way to 247,000 miles before the head gaskets finally blew.

In the meantime, I had started a new job nearby in Lawrenceville and had bought a used Honda Accord (got pretty bored with that in a hurry).

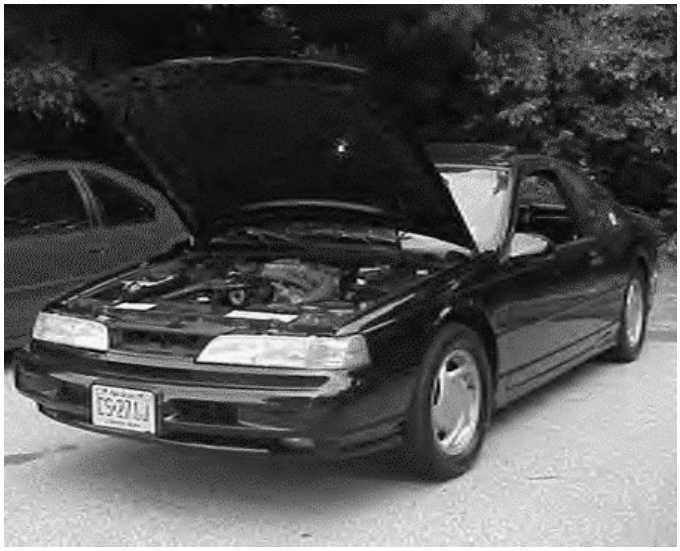
1993

My youngest son Mark (who was approaching driving age & had his eye on the Accord) noticed a black SC at our local dealer. Missing the SC a lot, I promptly visited the dealer. This car, black-on-black, was a 1993 5 speed; moon roof JBL, etc, and only 15 miles on the odometer. This was in Feb.1994, so it had been sitting on the lot for a while or they'd traded it from another dealer. The sales manager said he only wanted to cover their invoice on the car, which was around $22,000. But knowing these cars didn't hold their price at the time, I offered him $20,000. He laughed, but two weeks later I bought it for – you guessed it, 20g's !!

The very first thing I looked for was the pulley & came across the famous 'chip & pulley' combination by SuperChip. Being innocent at the time, I installed it. However, I was hungry for more power and when I saw a Magnuson advertisement for the Eaton supercharger, I called them. Gerry from Magnuson gave me a sheet of possible bolt-on improvements, one of which was a C&L MAFS. And, it was Lee Bender at C&L that put me on to Bill Hull. I instantly became a member of the SCCoA (#413) and the 'rest is history' as they say.

That 1993 SC now has 165,000m with the following bolt-ons:

Flowmaster Exhaust
C&L MAF with K&N cone filter
3.27 Rear
KVR cross-drilled rotors
B&M shifter
70mm BBK Throttle Body
Raised Supercharger Top
I/C Fan
8.5mm Magnacore wires,etc
Tokico shocks & lower springs
A&A rear spoiler w/brake light
190 lph BBK fuel pump
145 mph speedometer



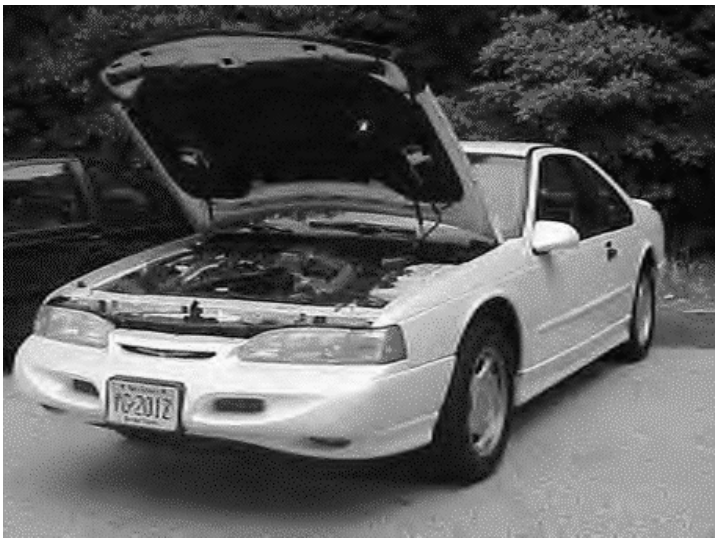
The black '93…now Marks car

It truly is one of those rare cars I've owned (I've had 16 cars now, 11 of which were Fords – particularly the Escort RS & Lotus Cortina, when I lived in England) that I look forward to driving each & every day.

1994

This is not the end of the story, though. While on my way home from taking my youngest daughter, Sarah, to college, I passed a gleaming pearl-white SC parked in the front of a shopping center with a "4 sale" sign. I couldn't resist. It was a '94 auto with only 15,000 miles and, here we were in Sept., 1998. I called the owner who happened to be a local cop and he was asking $15,000. Well, here we go again with the "SC's don't hold their price" story and I bought it (yes, two weeks later) for $12,000

I couldn't have been happier. My son, too, because he passed the Accord on to his sister and took over driving the '93 SC. I now have 77,000m on the '94 so I've driven approximately 330,000m in Super Coupes since 1990 – unbelievable!



Jim's white '94

My list of modifications on the '94 now exceeds the '93. It has the following:

Kenny Brown suspension & strut tower braces
1996 Trans upgrade & TransGo shift kit
75mm Bullet MAF & custom alum intake (MN 12) with AutoPhysics cone filter
2nd generation raised Super Coupe Performance SC top
70mm BBK Throttle Body
FlowMaster Exhaust
I/C fan with MN12 relay
Cool Fan Override (MN12)
8.5mm Magnacore Wires

Triple gauge pod with Intellitronix (white face) A/F Ratio, Trans.Temp. & Voltage
White Face main gauge cluster
11.57" Front Brake rotors/upgrade
A&A rear wing with brake light

Of all the modifications, those for both the 5 speed & auto trans. were the most rewarding. Besides the B&M shifter (which wasn't installed until it became available last year), the use of Redline synthetic gear oil & the longer SVO shift knob made a tremendous difference to the 5 speed. I haven't completed all the 1996 upgrades in the 4R70W transmission but the shift kit, deeper sump, Mercon V, accumulator pistons, etc, have sharpened the shift considerably and eliminated the common TC shudder.

So my shopping list finally grows smaller, with maybe SVT wheels, rear sway bar, headers & roller rockers remaining.

My rare dislikes for these cars, however, include the '89-93 padded vinyl steering wheel. You don't know how many conversations I had with Momo & Grant to try to get them to develop a steering wheel hub for our cars. Maybe the new Ford Racing wheel will fit the earlier models as well. Does anyone out there know if it will???

Sometime in the future, the '93 will need an engine re-build if I can wrestle it back from my son. I have run that baby hard over the years, many times in the 150 mph range, along Highway 401 in Canada. Hey, you guys in the Ontario chapter, don't tell the OPP.

HAPPY SC-ing.

World Ford Challenge 2001

Photos compliments of Chris Mendola

Bill Evanoff's red SC leads a flock of Birds out to dinner Saturday evening. OK, so he was second in line because someone had to take this picture. The 20-mile highway trip across town for dinner was one on the highlights of the weekend. Super Coupes ate up the road at speeds up to...well, we drove swiftly!
Approximately 30 Super Coupes and XR7s had a great time again this year in St. Louis.

Kurt Kreisz is taking his driving seriously, but why is his friend laughing?

Ted Lyon's SC is now equipped with a Vortec supercharged 302 capable of over 600 HP. Ted competed in the One Lap of America this year and did extremely well despite an upper engine problem that made the motor consume 50 quarts of oil during the event.

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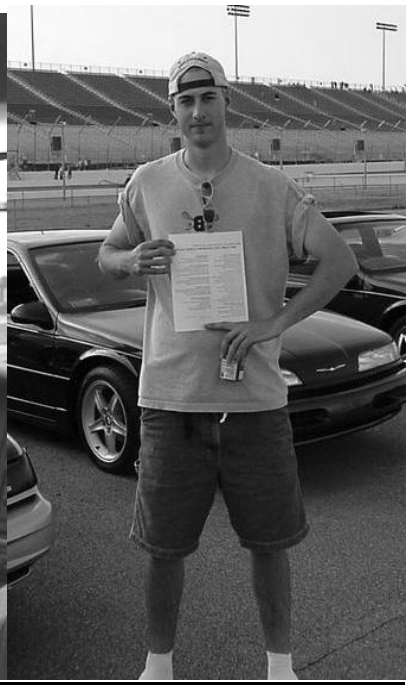

(L) Chris Mendola hits the gas on his 12 second SC. Apparently his tongue can't take the extreme take-offs. Micah Miller (right) was so proud he finally was able to bring his SC to a car show. Micah has attended numerous shows in the past…but all without his SC.

Duane Nettles is a little shy, but his car pulled down another big trophy again this year!

21st Annual

2001 Ford Display in the mall!!

Tri-State Mustang Club

tristatemustang.com

All-Ford Show

July 29, 2001

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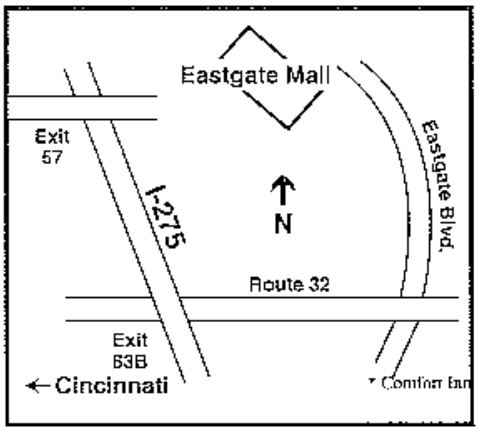

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Rich Steinbrink Memorial Show

Eastgate Mall

Sunday,

July 29, 2001

21st Annual Tri-State Mustang & Ford Event

STREET DRIVEN — CLASSES 1 – 28

1.	1903 – 1931	Production / Stock Ford	15.	1964 – 1966	Mustang Convertible
2.	1932 – 1959	Stock Ford	16.	1967 – 1968	Mustang All
3.	1960 – 1969	Small / Intermediate Fords	17.	1969 – 1970	Mustang All
4.	1960 – 1969	Full Size Fords	18.	1971 – 1973	Mustang All
5.	1970 – 1988	Stock Fords	19.	1965 – 1973	Mustang Shelby Boss
6.	To 1980	Trucks	20.	To 1973	Mustang Modified
7.	1981 – 1999	Trucks	21.	1974 – UP	Mustang Modified
8.	To 1988	Street Rods / Customs	22.	1974 – 1986	Mustang All
9.	All	Special Interest / Kit Cars	23.	1987 – 1993	Mustang HB & HT
10.	1955 – 1957	T-Birds	24.	1987 – 1993	Mustang Convertible
11.	1958 – 1966	T-Birds	25.	1994 – 1999	Mustang Convertible
12.	1967 – 1997	T-Birds	26.	1994 – 1999	Mustang HT
13.	1964 – 1965	Mustang HT & FB	27.	1993 – 1999	SVT Cobras
14.	1966	Mustang HT & FB	28.	1982 – 1999	Mustang Saleen

CLASSES #1-#28 are judged on CLEANLINESS, WORKMANSHIP, and OVERALL CONDITION – not necessarily originality.

CLASS #29 Mustang Concours 1964 – 1989
CLASS #30 2000 – 2001
Cars restored to the highest quality of workmanship, originality and cleanliness. Cars that meet the standards (including detailed undercarriage and engine compartment) will receive AWARDS OF EXCELLENCE. Participant Vote.

CLASS #31 DISPLAY ONLY
A way for those who want to have the fun of showing their car but do not want to be judged.

CLASS #32 PONY CORRAL
A display area for cars that are "FOR SALE". These cars are not judged. Any car with a "FOR SALE" sign will not be judged unless also registered in a class 1 – 29*.

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REGISTRATION
9:00 AM – NOON

CARS TO REMAIN ON SHOW SITE THROUGH TROPHY PRESENTATION

TROPHY PRESENTATION
Approx. 5:00 PM

Pre-registration fee includes a Custom Design Show T-Shirt and Dash Plaque

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Pony Corral (Cars for Sale) $15.00
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(Includes Dash Plaque for First 150 Cars & Drawings)

NAME _____ SHIRT SIZE _____ PHONE ( ) _____

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CAR: YEAR _____ COLOR _____ MODEL _____ BODY STYLE _____ CLASS _____

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P.O. Box 19849, Cincinnati, Ohio 45219

Questions as to classification shall be determined at the sole discretion of the Head Judge. I agree to abide by all rules of the show and understand I am responsible for my car and merchandise. I agree to release from all liability the Tri-State Mustang Club, Inc., Ford Motor Company, Eastgate Mall, Eastgate Mall Merchants Association for any damage, injury, lost or stolen merchandise from this event.

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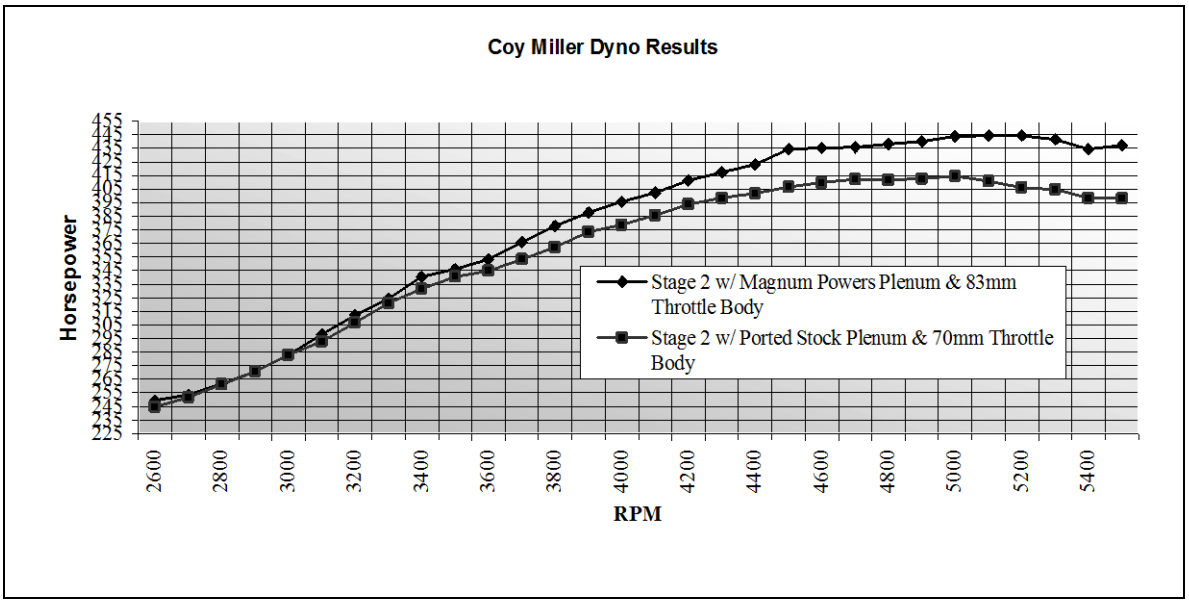

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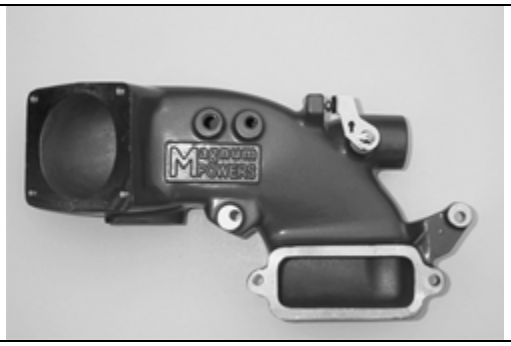

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