

CHARGIN' THUNDER

Super Coupe Club of America

Volume VII

December 2002



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

For by grace are ye saved through faith; and that not of yourselves: it is the gift of God: Not of works, lest any man should boast. Ephesians 2:8/9

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From The Bird's Nest

By Bill Evanoff

Every three months for the past three years, I have produced a Chargin' Thunder newsletter for SCCoA members. I have always waited until the newsletter was virtually finished to begin writing this editorial. Perhaps I felt I was saving the best till last.

I'll admit, some of my editorials have been very brief, while others have been quite lengthy and I have run out of space to write more pages. I have always thought that this section was important to members, as it was the club coordinator's opportunity to share what may be new, important, or just share what's on my mind.

Well, as everyone knows, I shared a lot of what has been on my mind in the September issue. The general feedback from those who have called me in the past few months is that they REALLY do not want the SCCoA to go away. They would like the CT to continue and generally like the club just as it is.

Unfortunately, I'm going to bring out the old "Change is good" line again. The changes as detailed in the last CT are still on schedule and George Davenport, the interim coordinator, has several pages describing the direction for the club in 2003. His editorial is on the following page.

I encourage everyone to embrace the opportunities that are to come. The membership will be able to shape and mold the SCCoA into what would best suite the group as a whole. All major decisions will be voted upon and the whole process will be as democratic as possible. There will be more opportunities to get involved with the new SCCoA as responsibilities will be shared. The club needs everyone to stay active and visit the SCCoA.com web site so they can vote on all the issues that will be brought forward. This whole process will begin in January of 2003.

What will I be doing from now on? I certainly do not plan to disappear from the SC/XR7 scene. I'll be assisting George, as needed, of course. I'll most certainly be attending all the big T-Bird shows too. I will also continue to operate, and hopefully expand, the Super Coupe Performance business that I have been doing since September of 2000. I've received many calls asking if my phone number will remain active, if people can still call for advice, and buy parts. Yes, Yes, and Yes!

In conclusion, it has been my pleasure to serve the membership of this great club. I am quite certain that I have chosen the correct person to bring about the numerous changes that the club will be undergoing. I wish George all the best and ask that everyone work with him as a team to move the SCCoA onward and upwards



Bill and Patty with their '90 XR7 automatic and '90 SC 5-speed

SCCoA Future Directions

By George Davenport

From the frying pan....

It's not without some sadness that I watch Chargin' Thunder disappear from the automotive scene. It is the only publication I know of that is entirely dedicated to our supercharged V6 cars. I have to give credit to Bill Hull for getting it all started those many years ago and also to give thanks to Bill Evanoff for giving us the high quality publication that we enjoy today. Last, but not least, I'd like to give a big pat on the back to the loyal members both past and current who have supported the SCCoA, Super Coupes and XR7s throughout this whole time. Without their contributions we never would have made it this far.

Last issue Bill stated his reasons for stepping aside as coordinator and turning over the keys to me. This leaves some people deliriously happy that the club will no longer be run by someone that owns a thriving SC parts business. It also leaves some people wanting to keep things the way they are. This leaves all of us responsible for helping choose the club's future direction. The way the dues have been collected for the current membership means that all memberships end on 12/31/02! Essentially the current incarnation of the SCCoA will be finished on that day.

But don't worry; the club is not going to disappear. Bill and I have had numerous serious discussions about where the assets of the club will end up. We arm wrestled over some things and settled other things the old fashioned way by seeing who could toss an M90 supercharger the farthest! Additional details on what the club received will be available in early January on the SCCoA Boards. Suffice it to say Bill is being very fair and generous as always. I'm just not sure I

should have agreed to let Patty do the distance measuring on the M90 tossing!

Bill Evanoff told me a few weeks ago while I was at his house discussing the club's future with both he and Patty, that the life span of the club coordinator was about three years. Bill Hull had lasted that long and Bill Evanoff also lasted that long. It's yet to be seen how long a "George" can (or should) last!

...Into the fire!

So, I really lucked out. I got picked to be an interim coordinator of a large automobile club that has no members, no organizational structure and no money! Well, at least, my name is not Bill! Many will ask, what makes me qualified for the task ahead? I don't have a good answer for that one! But I do have a plan.

Essentially, I want to keep the club going until we can get some type of elected officers in place. I also am trying to refrain from getting the club into any long-term commitments that it cannot get off when the legitimate leaders are in power.

Here's the approach:

- 1.) Determine which club assets will be in the club's possession on 1/1/03 (Domain name, Chargin' Thunders, club goodies, etc.)
- 2.) Establish the SCCoA as a not for profit organization.
- 3.) Establish a checking account for the organization.
- 4.) Establish nominal membership fees to cover organizational costs (Web site hosting, club setup costs, etc.)
- 5.) Collect membership fees (Fees will be based on estimated club costs and estimated membership numbers. Not

- designed to create a big cash surplus at the start. Fees will most certainly be changed as the club gets organized.)
- 6.) Publish accounting for all monies collected and spent (Simple accounting of what comes in and what goes out.)
 - 7.) Poll the newly established membership to gather ideas on what management structure to establish (This membership would be the dues paying guys/gals.)
 - 8.) Have membership vote on the club structure and officers
 - 9.) Turn club over to officers
 - 10.) Sell all my SC cars, move to an island far away, because I'll have no friends left in the SC community once we get this far!

From bullet #6-on I can start to enlist more and more help, since we will have a defined membership group. Fortunately, I am not alone at the start since Ron DiPaola has offered his assistance on all the web stuff. Hopefully he and I can stay on friendly terms until the cavalry (membership) arrives! This big plan is moving more slowly than anticipated through the Holiday Season, but will get into high gear early in '03.

Since we are becoming a web-based club, it is critical that we have enough capacity to provide service to all who visit our site, both member and visitor. In the short term, web hosting will only be done by established providers that are providing the server machine. We had several different offers from people who post on the board, but Ron and I did not want to get into arrangements like that at this time. The elected officers and members can certainly handle web hosting differently. My gift and show of commitment to the club was to purchase the first three months of service with our new provider. This roughly covers the October-January time period. Until we start collecting membership fees, additional

service may be covered through the donations previously received for a new server. There have been some snags with the new provider, but we are working through them to eliminate the "server busy" messages that we all hate.

Now a few words on what I will not be doing. I won't entertain too many suggestions from BBS users until membership is in place. I am not currently seeking any position with the club. I don't know what capacity if any I'd run for in the yet to be defined elected structure. I won't limit the board forums and postings to members only. The exception to this will be that only members will be able to vote and decide on club structure and officers. I'm also not seeking to merge with other clubs or bring back lost chapters. I do hope to establish a working relationship with all SC/XR7 related clubs to present a unity of force for our vehicle.

I don't expect that everyone will agree with some of the decisions and policies I'll put in place during this interim period. I have always tried to be fair and like I said before I am trying very hard not to make any moves that will hamstring the club for future endeavors. So keep collecting your ideas for the club. We'll try to get them all in the big compromise pot of democracy early in 2003.

I realize this is all bad news for all you web challenged members of the club. With the demise of Chargin' Thunder, I don't really have a way to reach out to you without a web connection. I do hope you can get on a friend's computer and stay in touch. I also hope to bring Chargin' Thunder back to life as soon as possible in an electronic format that could possibly be printed and mailed, if there is enough interest. Many have suggested this and I know when the leadership is in place, we can get people to assist in this endeavor.

There are a lot of issues we will be working out over the next many months. The process will always take too long for some and final plans will not include the ideas of others. I hope we can hammer out the compromises

and still appeal to a large majority of car owners. In this brave new world at least we will have no one to blame except the membership for what we did or did not do!

Letter to the Editor

Dear Bill Evanoff and all SCCoA members,

THANK YOU! You can't imagine the feeling we experienced when we saw the row of Super Coupes in the parking lot, each of the rear side windows with the words "In memory of Adam Mullen Sept 23, 1983 - Sept 23, 2002." Super Coupe Club members had come from many cities in Florida to say goodbye to our very special son.

Emails, flowers, cards, letters, donations, offers of help to get the car ready to travel to Carlisle next year, and even racing videos came from all over the country. We were overwhelmed with the kindness and generosity of the many groups including SCCOA, TBU, TBSCEC, Super Coupe Club of the Southeast, NJTACC, and the Super Coupe Club of Iowa.

How could so many people know and care for Adam? What a special group of people you are! We sincerely thank you for your support and for being so kind to Adam these past few years. Many times he would tell his mom that it was because of the Super Coupe people that he was able to withstand the pain and suffering he went through.

Some of you would phone him and talk about cars for hours and the pain would evaporate from his face. Many more would be there on instant messenger at odd hours to get him through the night and allow us just a little

sleep. To those of you who said you would come to the hospital to do a burnout, we wish you could have seen the joy on his face as he craned to look out the window to make sure there was a spot he could see in case any of you came.

We knew some of you only by the modifications you had made to your car or your email address. Many hours we had to look at pictures of a Super Coupe with shaved door handles, five speed conversion or flames. Other times it was just a bunch of smoke. We are glad that Adam knew you.

What other 18-year-old would turn away a brand new Mustang or Camaro for a White '91 SC? Adam said that none of the other clubs would have members like the Super Coupe Clubs. Mom remembers the day that she went to the tax office to get the special tag for his car and the twinkle in his eye as he installed the tag "SC Kid" on his rear bumper getting it ready for the journey to Carlisle. We also remember his disappointment when the car couldn't make the journey. However, we remember his exuberance when he called from Carlisle to tell us about meeting so many of you in person. He was so proud that he had driven so many Super Coupes. Thank you to all of you who gave him the thrill of being able to drive your cars. We look forward to meeting you all at Carlisle next year.

Sincerely,
The Mullen Family

Are You Married to a Super Coupe Geek?

By Patty Evanoff

Wives, here's a test to find out if you are married to a Super Coupe Geek (as if it weren't obvious already).

If your husband says "Come quick! Come quick!" and all he wants is to show you a picture of a really cool Super Coupe on the Internet.

If while driving the car, your husband can't find the street he's looking for but he can spot a Super Coupe from a mile away.

If you try to get him to discuss and give opinions on world events, and he tells you all about what new cars and options are coming out this year.

If your "vacation" trips consist of sites seen on the way to a car show. (On our last "trip" Bill took more pictures of cars and parts at the SEMA show than he did of the Grand Canyon!).

If he taped over the episode of ER you wanted to watch with Hot Rod TV.

If he rents or buys DVD's with car chase scenes and forces you to watch them over and over again in slow motion.

If he fixes the plumbing in the garage so that warm water comes out of the water hose so he can wash the Super Coupe in the winter.

If he can't remember the details of your first date but he can remember every detail of buying his first Super Coupe.

If he blows a head gasket and is so depressed about it that he needs counseling.

If you go out to dinner with a Super Coupe couple and you make the men promise not to talk about cars, there is an awkward silence because they have nothing to say to each other.

If practically everything in his wardrobe has grease on it.

It's Christmas. The family is over. You've worked for weeks to make everything perfect (shopping, wrapping, decorating, cooking etc.), and you have to call him five times to come to supper. The family is all seated at the table waiting. Finally, you go to him and unplug the computer to stop him from emailing his Super Coupe buddies so we can eat and open gifts.

Your kid needs help with his science project and he says, "Go ask Mom". A Super Coupe buddy needs help with his car and he says, "I'll be right over".

You tell him the dryer is making a funny noise. He says, "Ignore it". But when the Super Coupe has a rattle, it's a major catastrophe!

He says he didn't hear you when you asked him several times to fix the sink, but he hears mysterious noises that the Super Coupe makes that you don't.

You ask him to please clean out the dust from the refrigerator coils and he says, "I don't have time now." You later find him in the garage polishing off the microscopic smudges from the Super Coupe.

No one is allowed to use the phone all day because he's expecting a call from the auto parts store.

He parks miles away from the entrance to a restaurant to avoid door dings and your feet hurt because it's hard to walk that far in heels.

He drives an old embarrassing junker to work so that his Super Coupe can sit in the garage covered up and protected. He knows he has a nice car, even if nobody else does.

He's going out in his Super Coupe with some friends and you say, "Be Careful!" He says, "I never do anything reckless." Then his buddy tells you later of his near-death experience while riding with your husband.

His mother brings over a box of your husband's childhood toys. In it are model cars, Hot Wheels and an electric racetrack.

Even today he buys model Super Coupes. His kids want to put them together with him but he won't let anyone take it out of the box, let alone remove the plastic wrapping.

He suggests you take a long car cruise with him across the country with other Super Coupes and you say, "Not without Valium".

Your husband is four hours late from work. You are worried about him and notice that the Super Coupe is missing. You call the police and they have not heard of any accidents involving a Super Coupe. You just KNOW that he has finally killed himself in that thing and is somewhere over a cliff. You call his mother crying hysterically. Then you hear that familiar hum from his exhaust coming down the street and your daughter says, "Oh yeah Mom, now I remember, he went golfing!" (A true Evanoff story).

You hide your head in embarrassment as your husband guns the engine and races away from the stoplight.

Your trips to Grandma's house normally take two hours, unless your husband is driving in the Super Coupe and then it takes an hour and a half.

You say "Honey, can you find time to just sit with me and talk?" He talks for five minutes and he's out of conversation. The phone rings and he talks to his Super Coupe buddy for an hour.

He tells you a story he heard from a Super Coupe buddy at Carlisle. You ask him, "Which guy was he? Describe him." And he tells you "He's the guy with the black '89 Super Coupe that has the Cobra R Wheels." You say, "What does the guy look like?" and he says, "I don't know".

You take him with you to the grocery store. You turn around and he's gone. You're not worried. When you are done shopping you just swing by the magazine isle and find him in the car section.

You ask him what he wants for Christmas and he says, "The 500 horse power package." You say, "Sure honey", because he now can't say "no way" when you ask for diamonds.

You never complain when he buys yet another car part for the Super Coupe. You just keep it in your memory bank so that you can use it against him later. Then when you want to buy something, you casually remind him of the two new SC crate engines in the garage that he bought "just in case he might need them someday".

He won't pick up the newspapers or his socks, but if you dare to brush your hair in the Super Coupe, he's furious. And heaven forbid if anyone should actually eat in the car!

The neighbors see him constantly washing and cleaning the Super Coupe and comment

to you about how nice it must be to have a husband who likes to keep his things clean and neat. You say to yourself "yeah right" because you have to get a bulldozer to push the car parts aside so you can walk through the basement.

He forgets his family's anniversaries and birthdays, but he remembers the names of every color shade of Super Coupes from every year.

His masculinity is measured by the size of his throttle body.

At car shows, he shows off too much and becomes a different person, doing burnouts, accelerating too fast, taking curves too hard, that you tell people that you're not with him.

Words you never say to your husband unless you want him to divorce you----"You could always sell the Super Coupe."

If you can relate to any of these situations, I understand your dilemma. You are married to a Super Coupe Geek! Since I am a psychologist, I will be conducting a "Wives of Super Coupe Geeks Support Group" every year at Carlisle. Meet me under the canopy.



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For further information: URL: <http://www.zianet.com/sccosw/DrFred>
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Saved from Extinction

By Tony Serno

I had been looking for a winter project last year and really wanted a 95-5 speed with a moonroof. Last October I found one that had been wrecked and bought it with the intent of restoring this rare bird into an excellent example of a beautiful SC again. Whoever owned this car before it was totaled did not take care of this car at all. The interior was filthy with stains all over. The starter did not work and once you push-started the car it barely ran. The exhaust was hacked up and sounded horrible plus there was the issue of the serious body damage. The car did drive nice and straight if I was to mention the good parts of it.



The side damage

I had a friend come with me when I went to look at it as I had intended to buy the car and needed someone to drive my truck back the 150 miles home. I think he thought I was nuts for buying it as he looked pretty shocked by the sight of this car.

Shocked would also describe the look on my wife's face when this thing rumbled into our garage. It seems there was no one but a true

SC enthusiast who would want anything to do with this car.

I started with a plan, which was to take the car to a body shop for an estimate on replacing the quarter panel and then doing the rest of the work myself. As it sat it needed a quarter panel, quarter glass, door and some miscellaneous side skirt pieces.



This poor Bird needs some TLC

I began by replacing the starter and then started to disassemble the car so that the body shop could replace the quarter panel. It was when I started to take the car apart that I found more things wrong. The passenger side door and fender had been damaged previously and poorly repaired. Also, there was a dented rocker panel underneath the broken passenger rocker skirt.

I was glad to hear the body shop say there was no damage to the unibody on the car and that all it would need was a quarter panel. They used a new Ford piece and did an excellent job. I got the car back and totally stripped any parts that would be in the way when it came time to paint the car.

I installed a new passenger side fender driver's door. I re-installed and aligned all the doors and fenders after I replaced the worn out door hinges on both sides.

I also started to do a lot of research on painting cars as I intended to do this work myself. I had never painted anything but the walls in our house before this car.



The door and quarter panel are replaced

I started to ready the car in preparation for the coming paint job as soon as the weather warmed up in the spring. After spending countless hours fixing the dings and sanding the body of the car I started to realize why it costs so much to get a quality paint job done by a professional. I used a scuff pad on the old paint to degloss the old paint so the new primer and paint would adhere. Once I finished with the body I started stripping the paint off the side skirts and bumper covers. For this I used a chemical paint stripper made for urethane parts.



After this was done I purchased 2 paint guns. I bought a high quality professional gun for the color and clearcoat and also a cheaper

gun to spray the primer. Not only that, I had to get the proper filters and regulators for my air compressor to keep oil, water and dirt out of the air supply.

Everything I had read about painting said you shouldn't try a pearl paint for your first paint job or don't spray a tri-coat pearl paint in a garage but I was determined to paint this car pearl white. Instead of using the Ford White Opalescent color, I had decided to use a GM color, because of all the new Cadillacs I had been seeing running around with beautiful Diamond White paint. This color is almost identical to, but a little brighter, than the Ford color.

I began the paint process by masking the car and spraying multiple coats of primer/surfacer on all the areas where bodywork was done. This is a high build primer that can be sanded and will make all the slight imperfections disappear. I spent a lot of time block sanding these areas, especially the previously repaired passenger door to make them perfect before I began painting.

Once all the sanding and priming was complete, I cleaned the car making sure to blow any sanding dust out with compressed air so that it wouldn't show up later in the paint. I then re-masked the car with fresh masking paper and started to spray the inside door, underhood and trunk jambs.

I used a PPG Deltron urethane tri-coat paint system that had an off white base coat, translucent pearl coat and finally a clear coat on top of that. These paints are nasty to breath so I was sure to wear a chemical mask whenever I was using them. Once I was finished painting the jambs I finally got to see what the color looked like on my SC and I was very pleased with the outcome. After letting the jambs cure for a few days I carefully masked them so that I would not

get any overspray on the fresh paint. Then I sprayed a coat of sealer on the car to get it all one color so that the paint wouldn't have any discoloration due to the different primers and paint colors underneath.



Installing the new door hinges

I propped the bumper covers and skirts up on saw horses and then began to spray actual paint. You don't have a lot of time to do this properly because of flash times for the 3 different coats of paint. You are fully committed to finish the job that day as soon as you pull the trigger on the spray gun. After any one coat sits much more than 8 hrs PPG recommends that the paint be scuffed and re-coated because you will lose your chemical bond if you wait too long. It took me all day to finally get to my last layer of clearcoat. I was hoping to finish while it was still daylight to keep the majority of the bugs away but it was completely dark by the time I was done and the bugs were out in full force. I shut off the lights in my garage so as not to attract them, went in the house, and hoped for the best while the last coat cured.

I had been really worried that when I went back out in an hour or so that the car would be covered with bugs dried in the paint but to my surprise there were only a couple of small ones which could easily be removed. Since I was painting the car in my garage, and not a paint booth, I expected there would be some dirt in the clearcoat, so I sprayed an extra

coat so that I would be able to wet sand and buff it if I had to. I spent the next few days wet sanding the car as it had a couple of runs and some bugs and lint in it. I used 1500 grit paper first to flatten the runs and then 2000 grit on the rest of the car to remove any surface imperfections. When you do this you have to be sure to use a sanding pad to keep from getting finger marks in the paint and also make sure you keep the paper wet and clean by rinsing it often so that you don't create any scratches that can't be buffed out. You must also be careful not to sand through the clearcoat and ruin all the work you just did.



After I finished sanding I used a high-speed rotary buffer and foam buffing pads to bring the shine back to the car. I first used a 3M



rubbing compound and finally a 3M-machine glaze to finish it off. Now the paint was looking awesome and I was anxious to put the car back together as it had looked like a complete wreck for many long months. I put all the new rubber window glass runs and windows back in the doors and installed the quarter glass. I also bought all new rubber weatherstrip and front and rear window

moldings and then painted the B pillars with a fresh coat of satin black paint. New headlights and clear corners were also used along with color matched 96-97 door handles.



Freshly painted

This poor SC was now starting to look like a new car. I reinstalled all the seats after cleaning and conditioning the leather. I also had to rebuild the console as the previous owner destroyed the old one putting a CD changer in the armrest storage area. I shampooed the carpet multiple times and scrubbed and cleaned all the door panels and rear plastic panels. I put in a new factory shift boot and knob with a B&M Ripper shifter plus installed an Alpine CD player and Kenwood speakers, as the car had no functioning stereo when I got it.

The suspension came next on this 104k mile car and was rebuilt using new upper and lower control arms and all new bushings in the front and Koni adjustable shocks and H&R springs all around as well as Air Lift bags in the rear. The stock rims from my 94 SC were used as they were in flawless condition and just sitting there after I upgraded to Cobra R's on it. I also had new Dunlop SP5000 tires installed.



Now I had a really killer looking SC that ran and sounded horrible. I replaced the IAC motor and installed new plugs and Taylor wires and the car now idled perfectly. The hacked-up exhaust got replaced with a Flomaster catback with high flow converters. On the intake side I added a Magnum Powers SC top, a MAC intake, a chrome Pro-m 75 MAF and 70 mm T-Body. ASP underdrive pulleys finished off the performance mods.

While I was removing the old top from the supercharger I noticed that someone had stripped out one of the bolt holes in the blower case and just jammed another larger

bolt in the stripped hole. I decided to pull off the blower and disassemble it to put a helicoil in the case. While it was apart I decided to port the inlet and outlet of the blower case as well as enlarge the opening in the plenum to match the larger throttle body and finally I put on a 5% blower pulley and back together it went.

I am very proud of the final result. Not only did I save a rare SC from being carved up for parts but I also ended up with a second beautiful Super Coupe and some new painting skills to go along with it.



Never too late to modify!

By Bill Winstine
wwinsti@888validate.com

My affair with T-Birds began with the release of the Turbo Coupe. I owned a 1983, a 1986 and a 1988. Then along came the '89 Super Coupe. I had to have one. It was great! A luxury car with teeth.

It surprised a lot of other automobiles; they found that big car was very quick. But then one day in 1992, while waiting to pay my toll at the Delaware Memorial Bridge, a Mack truck that had lost it's brakes decided I was a good target! 60 feet and six cars later, I survived but the '89 Bird was dead.



And that's how I came to have my '92 Super Coupe. I really did very little modification to the car. I installed a rear wing, (that rear deck just cries for one), added cornering lamps, (one of the two options that I didn't have, the other was the factory alarm), and ran pin stripes along the break in the door and body panels. Then to make the car just a little more mine, I modified the LED panels on the rear to serve as extended brake and turn signal lights

The car stayed that way for 10 years and 90,000 miles! Then I found Super Coupe Performance! It was great, I loved it, my

wallet hated it! I was a kid in a candy store and I had some money to spend.

So I did:

- Kooks coated headers
- High flow cats
- SCP high exhaust system
- High flow fuel pump
- 38lb injectors
- 5% supercharger pulley
- Underdrive accessory pulleys
- IC cooling fan
- 75mm MAFS
- 70mm throttle body (Had the plenum ported to match)
- Polyurethane suspension bushings front and rear
- Polyurethane differential bushings
- 3.27 ring and pinion
- Tokico shocks front and rear
- Magnum Powers Fresh Air Intake System with K&N filter
- Magnum Powers Supercharger Big Top
- New O₂ sensors
- Magnecor Plug Wires



In addition to the above changes, I also replaced both front side upper and lower control arms, replaced the frame side bushings on both sides in the rear. After all that, I decided to replace any rubber bushing or any thing that had rubber on it with new factory units. I bought so many parts the Ford dealer started giving me a discount! To top it all off, I installed a Cervini hood. I have



three more things to do to complete the rework of the car; replace the speakers, get at least my seat reupholstered, and a paint job. And maybe the upgraded porting on the supercharger and the 85mm Magnum Powers throttle body, and well, you get the idea!

The car runs unbelievably and to give credit where it is due, with a few exceptions, all the above equipment was installed by Yarnell's Garage. They are a local shop that specializes in excellent work and attention to detail.

I live in West Chester, PA and maybe it is just this area, but since I had all of this done, I cannot get any one to engage me in a little heavy foot competition! Stang's and rice

burners pull next to me look the car over then slowly go away. I don't know if they just have not seen a T-Bird that looks and sounds BAD or they think I'm driving my sons' car. I guess I will have to go to Maple Grove dragstrip to get any action.

In closing I really do love this car and it may be the last car I'll own, unless I find another Super Coupe!

Oh by the way, any of you out there that are putting in or thinking about putting in the 3.27 gears with the 5 speed, first gear on a hard launch is punch it and shift! Don't even look to see the tach or you will most likely redline, and the redline comes up pretty quick in second also!

Be SCing you!

Super Coupe Performance, LLC

Tel. 513-697-6501

Fax 513-697-0580

Email: sccoa@usa.net

<http://www.supercoupeperformance.com>



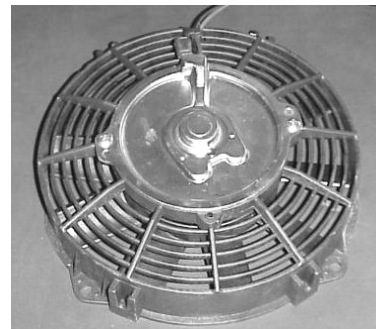
Shine at the Track or on the Street with products from Super Coupe Performance!



***New 17" T-Bird
Bullitt Wheels***



**KVR X-Drilled
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**800 CFM IC Fan - \$75
*Currently on Special***



New Chrome "T-Bird SC" Plate Frame



Chrome SCP Fresh Air System

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M5R2 Transmission Rebuild Revisited

By Mike Puckett

When my friend Ben and I rebuilt my M5R2 five speed transmission last year we used the brass blockers for the truck transmission thinking that they would have longer life than the fiber backed blockers normally used. What I discovered was that they were unable to be speed shifted without crunching even though with normal shifting they seemed to be just fine.

After a season of drag racing with them it became obvious that I would need to replace them with the fiber blockers if I was going to continue racing this transmission. So, I decided to try the rebuild myself and bought a set of the fiber blockers from my local Ford dealer for \$160. The once formidable task seemed much less daunting now that I had watched and worked with Ben on the original rebuild and had written the Charging Thunder article in June and September of 2001.

Armed with my article, the blow-up diagram, and the parts list I decided to go it alone and do it myself this time. I've since rebuilt a second transmission and I'd like to relate my experiences now in order to help anyone else who would like to do this themselves. For a good and experienced shade tree mechanic rebuilding the M5R2 is not that hard and could save lots dollars in labor and shipping costs.

The first thing I did was to reread my own article and make several copies of the blow-up diagram and parts list in case of errant greasy fingers. During the entire project I constantly referred to the blowup diagram. I bought a box of quart sized zip lock freezer bags with the white labels to put the different

groups of parts in as I dissassembled the transmission. This way I could write the name and location of the parts on the plastic bags and I wouldn't lose anything or get confused about where they went during reassembly. Use a ballpoint pen rather than a felt tip type marker so the transmission fluid that's on everything won't wash away the writing when it gets on the bags.

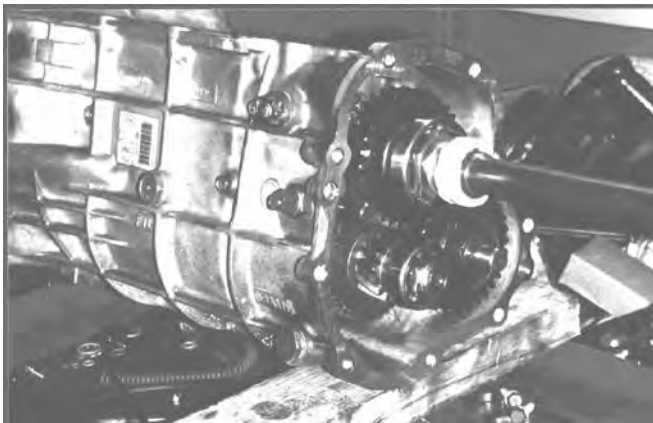
After unbolting it I put the shifter in a bag with it's bolts. The top cover bolts went in another bag. The shift linkage parts for 5th and reverse went in another bag. The output shaft gears and bearings went in still another, and so forth, until all of the different subassemblies were bagged and tagged.

I thought that the steel pins in the linkage would be difficult but they are easy to knock out with a punch. When you start removing the gears from the output and counter shafts watch out for the two little steel balls, one is used to keep the speedometer gear from slipping and the other is on the lower shaft for the 5th gear bearing sleeve. I used some sticky tape to remove them from the shafts. Don't let them get away. To block the gears to prevent the shafts from turning during dissassembly just engage both synchronizer shift collars putting it in two gears at the same time. I used a chisel and mallet to loosen the two large nuts on the two shafts. The large one was easy but the smaller nut was a real bear. I also had a little trouble removing the notch indentations on them.

Keep the exploded parts list handy and make sure that you remember or note the orientation of parts as they come out. I had to put the reverse and 5th gear parts on the end of the countershaft in two bags, labeling them appropriately. After I removed the bearing retainer plates and bearing races I had to drag the transmission housing over to

the edge of my work bench to get room enough to angle out the output shaft. It was the only way to get enough clearance to lift it over the input shaft's 4th gear and remove it from the housing. I moved the counter shaft down and out of it's bearings to get enough clearance on the bottom.

With the output shaft assembly out I inspected all the gears and cleaned up any gunk, glop, and metal or plastic bits that I found. The end bearing on the long end of the shaft is a press fit and needs to be pulled with the proper tool.



Rear of the transmission with the output shaft shown

I took the output shaft with me over to Southern Gear to get some parts and they pulled the bearing off for me while I was there. A rebuild kit available from Southern Gear contains the fiber backed blockers, the front and rear seals, a set of shims, the two large shaft nuts, and the thrust bearing for around \$330.

The wornout blockers were obviously bad being really loose while the new blockers fit snugly in place. Actually changing the blockers themselves is only a five-minute job. One of the synchronizer clusters popped out a couple of the little rectangular pins while I was handling it. I pulled the wire springs out, reset the pins in place and reinserted the wire springs that need to wind in the proper

direction. They're easy to slip in place, no problem. Be sure to orient the synchronizer clusters correctly on the outshaft so that they face the right direction. I repressed the bearing by blocking the inner race and knocking it down and seating it with a pipe and mallet. Of course, you can take it back to the machine shop for repressing if you'd prefer.

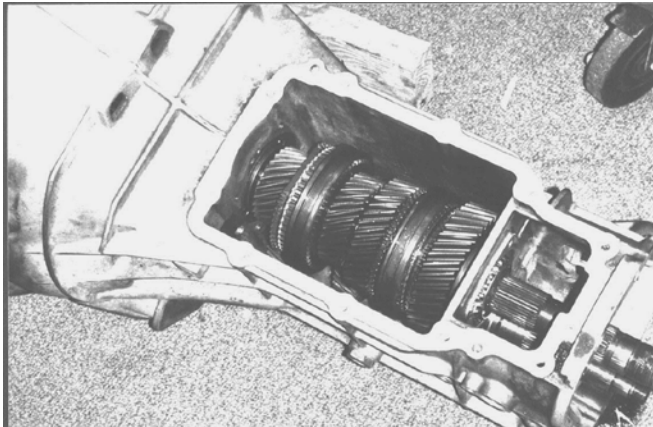
Reassembly the second time went much smoother than the first time although I did manage to crack the plastic oil scoop on the front of the input shaft while seating the bearing races. On the first rebuild I broke the thrust bearing during reassembly. Oh well, back to Southern Gear. I found it important to seat the bearings with a thick wooden dowel rod and mallet; just watch out for that plastic oil scoop.

The first time I did the rebuild I had trouble with the bearings binding until I firmly seated them this way. And, if it still binds you'll need to go back through it and figure out why it's binding. That's how I found the broken thrust bearing. Once both of the end plate's bolts are torqued the whole assembly should rotate smoothly and easily without any extra torque to start turning the shaft.

Check the end play in the input/output shaft. If there is any lateral movement at all you will need a shim kit to shim the front bearing. The input shaft might wiggle a little bit but it should have zero end play. All through reassembly I kept turning and rotating the shafts and shifting the shift collars back and forth to make sure they always rotated smoothly and didn't bind up.

If you have access to a regular shop manual and have all the clearances listed you can check everything with a gauge as you go. Unless it's a very high mileage unit I'm not sure I would be too concerned unless there is

obvious visible wear and I'd recommend replacing any part that didn't look right.



Top of the unit exposed

The reassembly of the 5th and reverse gears went smoothly. I just slipped everything back in the way they came out. I used a mallet and chisel to set the two large retainer nuts on the ends of their respective shafts and intent them at the notch. Also with the labeled plastic bags of parts I had no problem locating anything. I even managed not to drop either one of the two little steel balls.

The tail housing bolts right up to the main housing. Put a light coat of Ultra Black silicone sealer on both mating surfaces of all external seams especially the front bearing cover. Once the tail housing was in place I assembled the 5th/reverse shift selector parts and installed the shifter. The only thing left to do was fill it with fresh ATF. I used Mercon III as recommended by Ford.

Once again I turned the shafts and slid the gear selector rings back and forth and circulated the fluid. Satisfied that it was ready I lightly siliconed the top cover mating surfaces and slipped the top cover in place and bolted it up. I must have done a good job because that first transmission is now in my '90 drag racer. It's been from Georgia to Indiana and back and to the drag strip 3 times without a hitch. It runs and shifts smoothly. I can even get it into 1st gear at the traffic light. I'll keep the one I just rebuilt as a spare and should the need arise, it will be ready.

How to Lower Your 1/4 mi ET by 1/4 sec for Free

By Mike Puckett

Sooner or later all secrets get out so I thought that I'd share with you something that has dramatically lowered my ET's this year. When I finally ran a 13.44 this last November I knew that this worked. And this will work for anybody's SC if they want to squeeze their times down a tad more. Anyone who has seen my 90 SC drag racer has noticed that there is no interior in it. Can you believe that there is over 200lbs of interior weight crying to get out.

Open the door and what do you see that is really essential in a drag race? The drivers seat, instruments, shifter, and the steering wheel, and pedals. That's basically it. A lot of

the cars I see at the dragstrip that are serious race cars have no interior, just bare painted metal. Lets start by removing the passenger seat. There are two front bolts and two rear nuts on studs. Undo those and tilt the seat back to unhook the electrical connectors. Now lift it out if you can. Hey, that sucker's heavy isn't it. I'd say about 65-75 lbs or so. I'm currently looking for a lighter weight seat to replace the heavy drivers seat. Next goes the rear seat. Push in at the front of the bottom cushion until it pops out and then undo the other side. Drag it out and you'll see the two bolts in the bottom corners holding the seat back in place on the floor. Unbolt them on both sides and then lift the seat back off of its hangers. It's now free to pull out. See that sheet of insulation hanging there. Do you need it? Nooo, pull it out! Don't tear it up so you can reinstall it later if need be. Now you

can see all the way into the trunk. Did you clean it out? Well, you'll need to because we're going pull out the trunk mat. Why? It weighs almost 10 lbs that's why. You see, lots of little things add up to a big thing but no one thing adds back in a lot of weight. But hey, we're just getting started.

The next things to take out are the inner door panels. There is a screw down at the bottom rear corner to remove. Take off the plastic piece from the front corner of the window to allow the panel to rise up. Take out the screws on the switch panel, lift it out and undo the electrical connectors. We'll remove the switches from the panel later and reinstall them so we can raise and lower the windows. I removed the insert behind the latch handle before removing the whole door panel. Pry it from the top only and it will pop outward so you can pull it off being careful not to break the plastic tab at the bottom. There are a couple of screws holding the door panel on and when those are removed the panel lifts up and comes right off. Each of these panels is close to another 10 lbs. Listen to the stereo? Not at the dragstrip, so pull those speakers out, too. Four screws hold them in. Now, we can do the rear seat panels. Just remove the screws and they pull out. Two more heavy speakers are back here, too. Seat belt motors? Don't need them, although I still sit there waiting for the belt to retract before I realize, oops, no motor. We don't need the seatbelts anymore, either, except for the driver's, so unbolt those and take them out. Some of the seat belt retainer bolts will require a T50 torx bit. We can do without the rear package tray as well.

Let's not forget the console. Remove the box lid and all the screws holding the box in. Unscrew the shift knob and lift the console top out maneuvering it around the brake lever. Then remove the bottom half of the console after that. I have a 5 speed so I removed the shifter boot and put back on

securing it with good old black duct tape. I assume that the AOD shifter will be similar. How about that glove box in the dash? That's a pretty heavy door at 7 lbs. There is another plastic and metal panel under the steering wheel we can remove along with the kick panels on either side. The carpet is another 10 lbs but I left mine in after removing the underneath padding and heater ducting. The plastic door and window trim and the headliner can come out, too, but leave in all of the weather-strip so it won't leak.

Removing a sunroof and replacing it with sheet metal I found to be a very expensive job. With a couple of shops refusing to do it and another giving me a \$1000 estimate I decided that it wasn't worth it for only 25-35 lbs. I also kept the power window motors not only to be able to raise and lower the side windows but to keep them from falling down. All the switches were taken out of the panels, removed, and plugged into their appropriate sockets. I used plastic ties to secure them to the door frame to restore functionality. The same with the console switches. The radio came out since I'd already removed the speakers but I left the Maintenance Monitor in as it was useful.

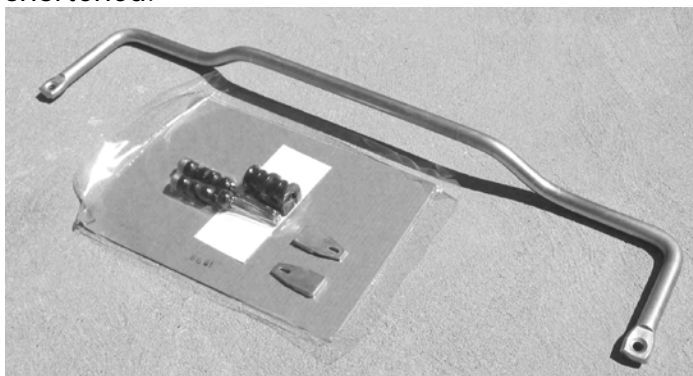
There might be a few other items that can still be removed but if all of this were weighed it's a good 200-225 lbs. At about a .1 sec drop in e.t. per 100 lbs weight reduction you can see that it's possible drop about 1/4 sec off of your 1/4 mile times. So, want to improve your best e.t. or is there maybe someone who's always a couple of tenths faster than and you can't quite seem to ever beat him? Surprise him next time and it won't cost you a cent, just a couple of hours labor. The whole character of the car changes. The exhaust sounds different, the engine and road vibrations feel different, it feels noticeably more nimble, and you'll surely see the difference in your dragstrip timeslips. So, lighten up will ya'.

Addco 1 1/8" Rear Sway Bar How-To

By Jack Petrie

I had always thought that my Thunderbird handled the curves pretty well, but, as I've read many times in the CT, I needed more! I was very pleased with the installation of a set of Eibach lowering springs and a set of KONI shocks. But I could still feel the car push a bit when I would really drive hard into a highway cloverleaf. I discussed my needs with several friends and finally decided a rear sway bar upgrade would be just the ticket to improve the handling even further.

I went with the Addco 1 1/8" bar with the short outer end links. The end link length is important because you need to specify if you have lowered your car or if it is still at the stock ride height. In my case, the Eibach springs had lowered my car 1.5", so the end link had to be 1.5" shorter than a stock link to maintain the proper rear bar alignment. Apparently, the rear bar should be parallel to the ground and with the stock end links it would be pointing up in the air at about a 20 degree angle if the end links were not shortened.



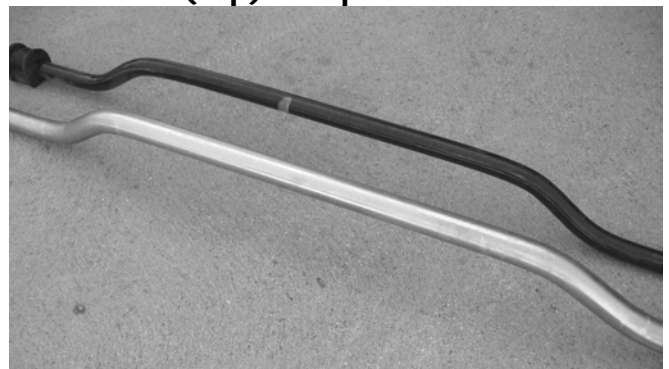
The rear bar with the hardware kit

The bar I chose had an attractive gold anodized finish, for rust protection. I was surprised to see how much larger it was compared to the factory rear bar. It really looked beefy. According to stiffness charts, a

1 1/8" bar is approx. 160% stiffer than a 1" bar. Since the stock SC bar on my '90 measured .940", then the 1 1/8" bar would likely be twice as stiff as the factory bar. It may not seem like much of an upgrade but I don't believe most people have any idea how much stiffer a sway bar becomes with each 1/8 of an inch increase in size. Addco also makes a 1 1/4" and 1 3/8" rear bar for the T-birds and Cougars but I wanted to maintain ride comfort for the street. Ultimate handling, at the expense of ride quality, was not my top priority. Believe me, the 1 1/8" bar made a HUGE improvement!!



Stock bar (top) compared to the 1 1/8"



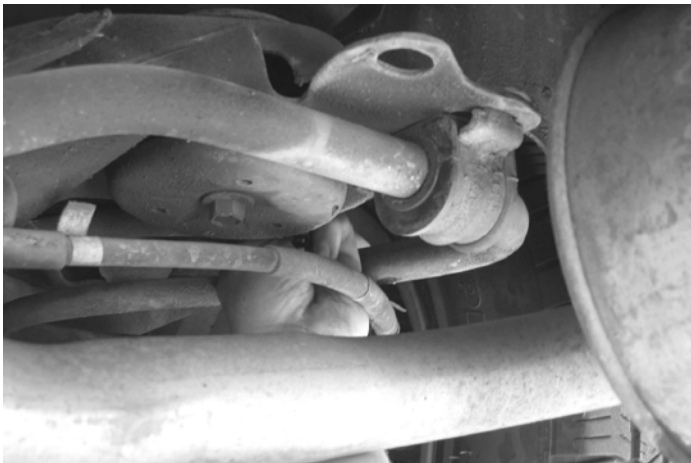
Removal and installation was pretty straightforward. The car **MUST** be supported by ramps or raised on a lift when installing the bar and links. Do not attempt to raise the car with a jack and support it with jack

stands, as the end links will likely be bent when the car is lowered back down to the ground. Trust me, I know this the hard way. Enough said.



Removing the end links

I started by removing both the end links. It's a tight squeeze, but you can get a wrench up high and one easily down low to loosen both end nuts at the same time. Remove the nuts and disassemble the end links from the car.



The mid-section bushing/bracket

If you have looked at your hardware kit, you will be wondering if you received the correct end links. The Addco ones are dramatically different than the stock ones. The stockers have an upper swing arm to them, which the new ones do not. My new ones fit right in place and appeared much stronger and thicker than the stock pieces.

Next, I removed the single bolt on each of the mid-section bushings. Once the bolt is out, the bracket can be pushed away from the car and the bar will promptly hit you on the head if you don't see it coming first. Granted, the stock bar is small, but it does have some weight to it...enough to give you a headache.

The exhaust tubing is in the way of the bar so that it will not completely fall to the ground once both the mid-section bushings/brackets are unlatched from the body. The fun now begins as you need to find the optimal way to get an unusually shaped bar away from the car. If the exhaust were not there, this would be a snap. It took me a few minutes of trial and error before I found that I needed to push one side of the bar outwards past the body work and then make a few fancy moves with the bar to get it free.



New bar in place

Installation is simply reversing what you have just taken off. Overall, this job took me about 90 minutes, including raising the car and cleaning up. For the dollar and time investment, the payoff was terrific. The car handles so neutrally now. Where I once would squeal a tire around a corner, the car now proceeds through effortlessly. Ride quality is virtually unchanged but the handling limits are now up to my expectations!

The Twin Screw vs. Roots supercharger

The final proof

COMPARISON /EFFICIENCY

Although the Twin Screw and Roots are both "positive displacement" superchargers and use the same capacity rating system (liters and cu"/revolution), that is where the similarities end, size for size, the twin screw is simply more efficient.

What really matters to most of us is how much actual power an engine makes with a particular supercharger. The amount of power will depend on how efficient the supercharger is. We all know that a cooler denser air charge can make more power, right? If the supercharger requires less engine hp to drive it, the engine will subsequently develop more horsepower. Finally, if a supercharger develops more boost at a given rpm, the engine makes more power as boost equals hp.

CHOICE

Picking the size is easy. There are plenty of choices (150-750hp) ranging from .32L (19 cu") to 2.4L (144 cu"). Selecting the most efficient supercharger is equally as easy if one takes the time to research the facts. If you do, all roads lead to the Twin Screw.

COMPARISON

The best method of comparing high performance products has always been to test both products on the same vehicle under identical conditions in a controlled environment. Such a test

was recently arranged by Kenne Bell and Muscle Mustangs and Fast Fords Magazine.

A 1.5l (90 cu") Twin Screw and 1.5l (90 cu") Roots with identical capacity ratings were tested and compared. Four (4) pulley sizes were selected to cover the full boost range (7 psi to max). Pulley diameters were the same for both.

TEST VEHICLE

Stock '99 Mustang 4.6 automatic trans with production Roots aftermarket kit, stock 80mm, mass air meter, throttle body and filter, heads, cam etc. A Kenne Bell boost-a-pump was used with the stock in tank pump to feed and regulate the flow of the 42lb Ford injectors. A Kenne Bell switch chip® precisely calibrated the engine spark, fuel etc. A data logger recorded all events (boost and temp in and out of the charge cooler, inlet temp, fuel pressure, air fuel ratio, spark timing, hp, torque etc.). Anyone doubting the superiority of a Twin Screw should check out these tests.

THE TESTS

For the ultimate test, we compared both with a maximum output 2" pulley. The Twin Screw develops a whopping +72hp over the Roots type under equal conditions. Also note the Twin Screw developed a full 4 psi (+33%) more boost, yet the actual

2" PULLEY			
SUPERCHARGER	PEAK HP	BOOST PSI*	TEMP RISE PER PSI BOOST*
TWIN SCREW	388 (+72)	15,8 (+33%)	11,6° (-35%)
ROOTS	316	11,8	18,0°

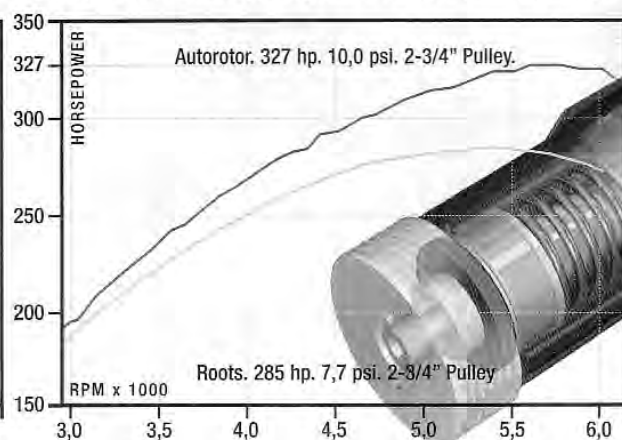
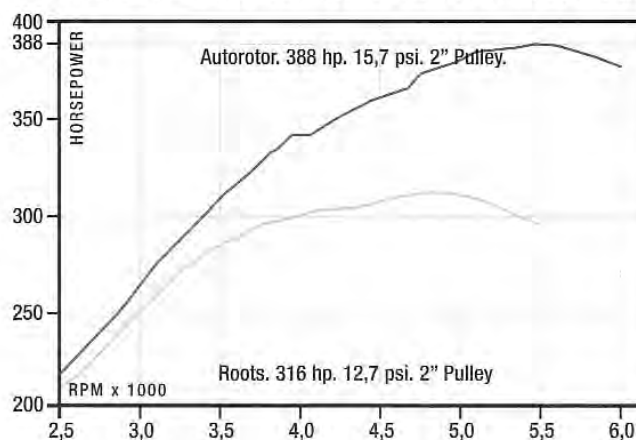
*77° inlet temp. All measurements taken at 6000 rpm. HP is "peak" rear wheel Dynojet. Divide by .8 for engine HP.

Only the supercharger was changed on the engine to illustrate the superiority of a 1.5L (90cu") Twin Screw supercharger over a 1.5L (90cu") Roots supercharger.

2-3/4" PULLEY			
SUPERCHARGER	PEAK HP	BOOST PSI*	TEMP RISE PER PSI BOOST*
TWIN SCREW	327 (+42)	10,0 (+30%)	11,0° (-26%)
ROOTS	285	7,7	15,0°

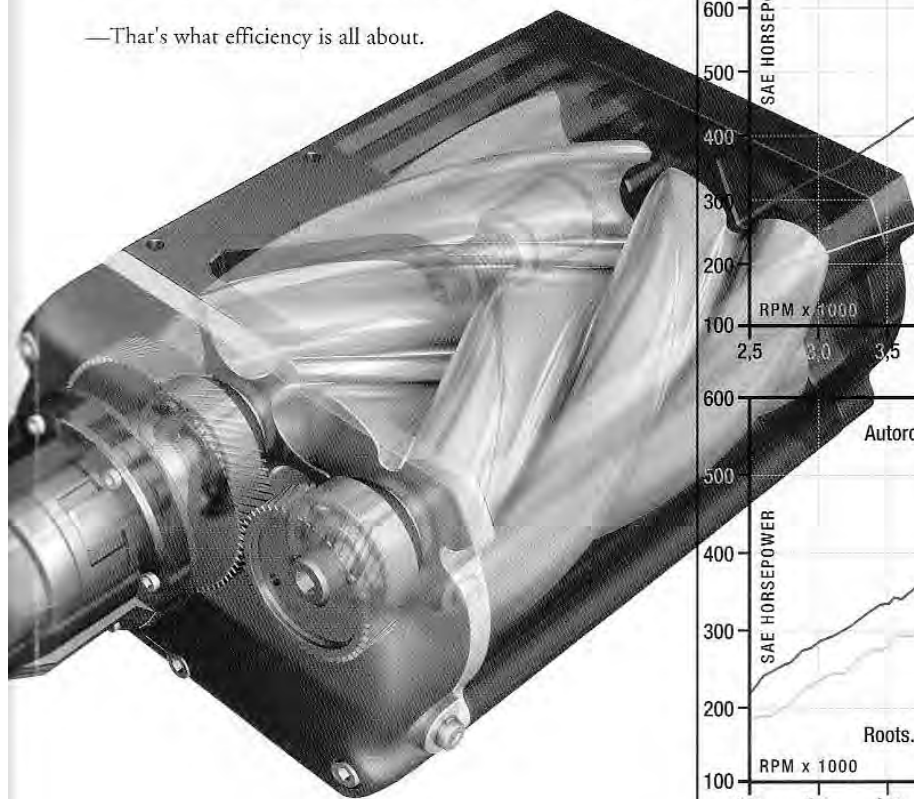
*77° inlet temp. All measurements taken at 6000 rpm. HP is "peak" rear wheel Dynojet. Divide by .8 for engine HP.

Only the supercharger was changed on the engine to illustrate the superiority of a 1.5L (90cu") Twin Screw supercharger over a 1.5L (90cu") Roots supercharger.



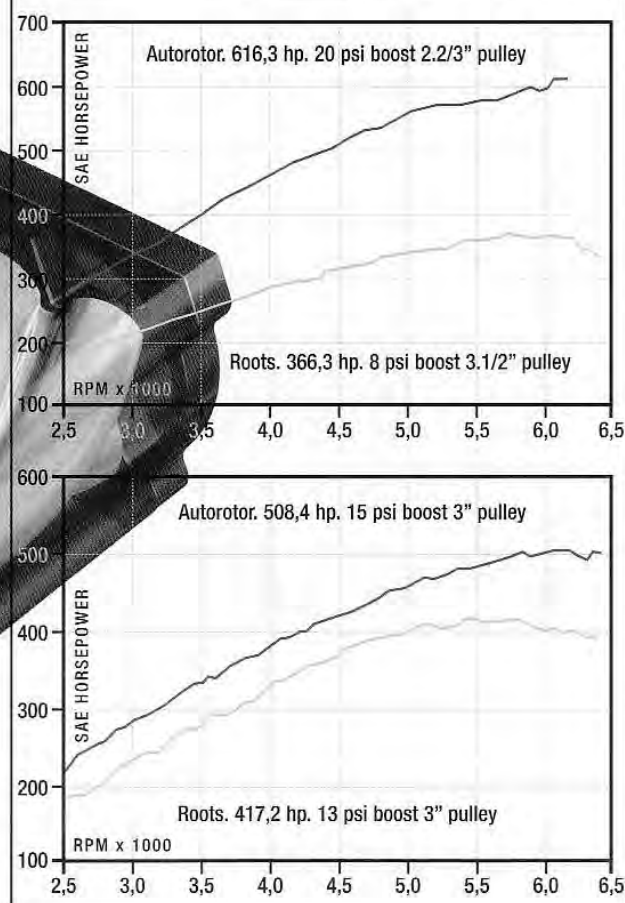
air discharge temperature was 35% cooler! "Boost" is merely the benefit of a supercharger overpowering or pumping more air (cfm) than the engine can flow in naturally aspirated form! The more efficient the supercharger, the higher the boost. Although "rated" the same (90 cu"/1.5l), the Roots just couldn't keep up. It was unable to match the cfm output – and therefore the boost – of the Twin Screw which obviously pumps more air at the same rpm. If the Twin Screw produces 33% more boost (cfm) with 35% cooler air and makes 72 more hp under equal conditions, it would be safe to say that the Twin Screw is more efficient! The data clearly proves the Twin Screw is a far superior product. For those wondering how they also compare with a 2-3/4" pulley and lower boost levels, check out the data. The Twin Screw again produced +42hp, 30% more boost with 26% cooler charge temperature. Note: Approximately 10-16hp of the Twin Screw power advantage emanates from its lower parasitic loss. It simply requires less engine hp to drive than the Roots. And yes, the speed of the Twin Screw could be reduced approx. 30% to match or "dumb down" to the Roots boost level. Then the charge temp would be even cooler by approx. 46° (4 psi x 11.6 = 46.4°)! And since the Twin Screw rpm (cfm) would be lower, the parasitic or pumping losses go down incrementally.

—That's what efficiency is all about.



Outpowered 600+hp Cobra

Autorotor Twinscrew Supercharger replacement kit for the Ford Mustang Cobra -03. Also available; Autorotor Twinscrew Supercharger replacement kit for Ford F150 Lightning 99 – up. Made by Kenne Bell. For contact with Autorotor distributors: www.opconab.com.



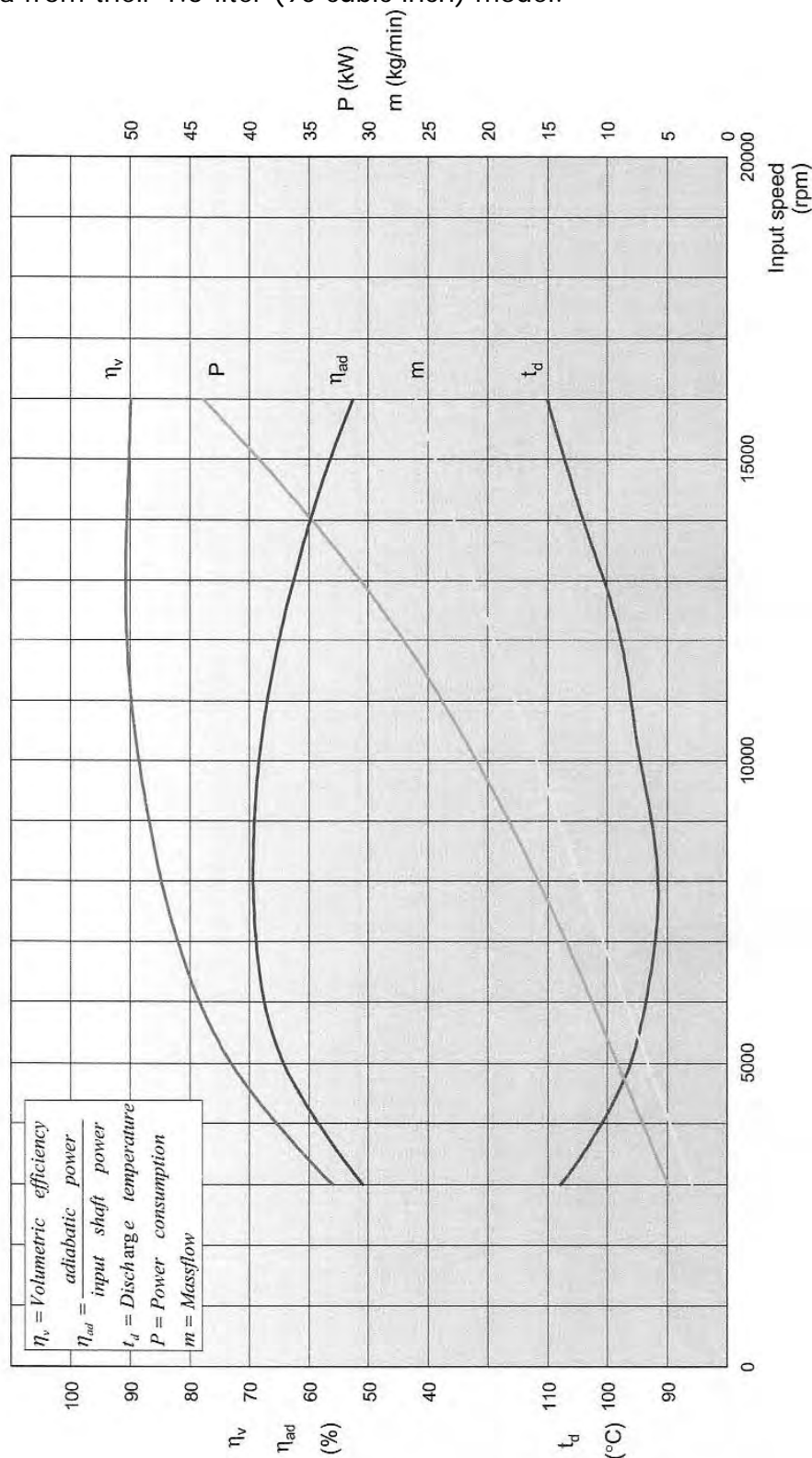
Autorotor Superchargers: Kenne Bell has been offering Autorotor twin screw supercharger applications for several years. This supercharger is a competitor of the Eaton supercharger and offers superior performance, but at a much higher purchase price. I recently came across some technical sales literature for these units and it is shown here for you to drool over. The chart shown is the performance data from their 1.5-liter (90 cubic inch) model.



Full load performance characteristics of Autorotor supercharger type OA 3150

Displacement: **1.50** l/rev.
Built in pressure ratio: **1.4**.

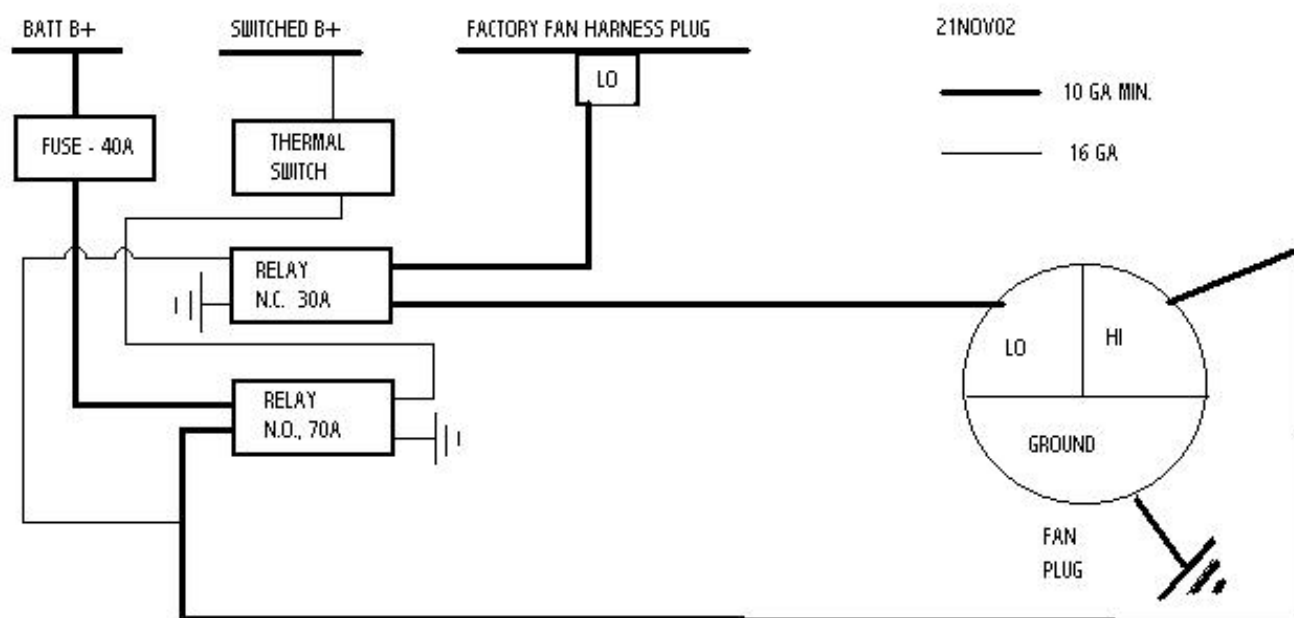
Test conditions: Discharge pressure: **1.8** bar (absolute).
Suction pressure: **1.0** bar (absolute).
Suction temperature: **20** °C.



FAN CONTROL - MY SOLUTION

By Bill Gray

Like almost everyone else with a Super Coupe, I'd been putting thought into how to get it to run cooler, 200-210 degrees instead of 220-230. Mine's a '90 5-speed with a NAPA 180 thermostat and an Auto Meter coolant temperature gauge. I figured the key is in getting the high-speed fan to turn on at a lower temperature. My simple logic was that once the high-speed fan turns on at 230 the temperature stays at 230, so if I turn it on at 210, it should stay at 210. I ended up deciding the best thing to do is to have the low speed fan operate normally, when the AC comes on, and control the high speed winding with a separate system. Here is the circuit I came up with:



The fuse is obvious. The thermal switch is adjustable from about 130 - 250 degrees and tells the relay that controls the high speed fan to turn on. The normally open relay shuts the high-speed fan off when the ignition is off and keeps the thermal switch from having to carry the full fan current. The normally closed relay turns off the power to the low speed winding when the high speed winding turns on. The heavy wires are 10 gauge, the light ones 16 gauge. Here are details on the components I used:

Thermal switch - from Centech, model FC-2PG, about \$70, which uses the signal from my Auto Meter temperature gauge sender (might be able to use the signal from the factory sender - I didn't ask). I'm not using the AC turn-on feature of this unit, but it's there. It also includes a remote LED to tell you when the fan is turned on. Note it isn't rated high enough in amps to handle the full high-speed fan current, thus I used it only to power the coil side of the N.O. relay. From

watching my gauge, it looks like it lets the temperature drop about 5 degrees then shuts the fan off.

Normally Closed Relay - Bombadier 0586224, about \$14. It's for a boat tilt/trim system, rated at 30A continuous @ 12 VDC. It or something similar is available at most boat places or on line from BoatUS. It's a SPDT, has both N.C. and N.O. outputs, but only one load input.

Normally Open Relay - NTE Electronics R51-1D70-12F, \$10, SPST, rated at 70A continuous @ 14 VDC, I got it from Signal Industrial Electronics in Hartford, CT. Any good electronics supply house should be able to get one. I've since found that J.C. Whitney and Watson Street Works both sell 70A relays but they're a little more expensive.

Wire Harness - Ford F43Z-14K095-DA. This thing is from a Tempo, costs almost \$50 and is worth it. It has male and female fan connectors (they fit my '90 - not sure if other years are the same) and a MAXI fuse holder. I found that the 30amp slo-blo type circuit breaker that came with the harness was not quite enough to handle starting the high speed fan, so I replaced it with a 40A MAXI fuse; the rest of the circuit is good for 50A continuous, so this is OK. I kept the ground wire on this harness intact. My system uses the factory fan motor ground.

In playing with this system I found a few things:

- The high speed fan draws about 70A on startup, settles to 28A running steady.
- The low speed fan draws about 30A on startup, settles to 15A running steady.
- There is easily tapped, switched power under the hood. The ignition coil fuse in the Power Dist. Box is switched; I stuck a wire on the rear (fused) side of this fuse to power the thermal switch and routed it out an existing hole in the bottom of the box. The thermal switch draws a very low amount of current so it doesn't overtax the 30A fuse. DO NOT try to operate the fan motor directly from this source.

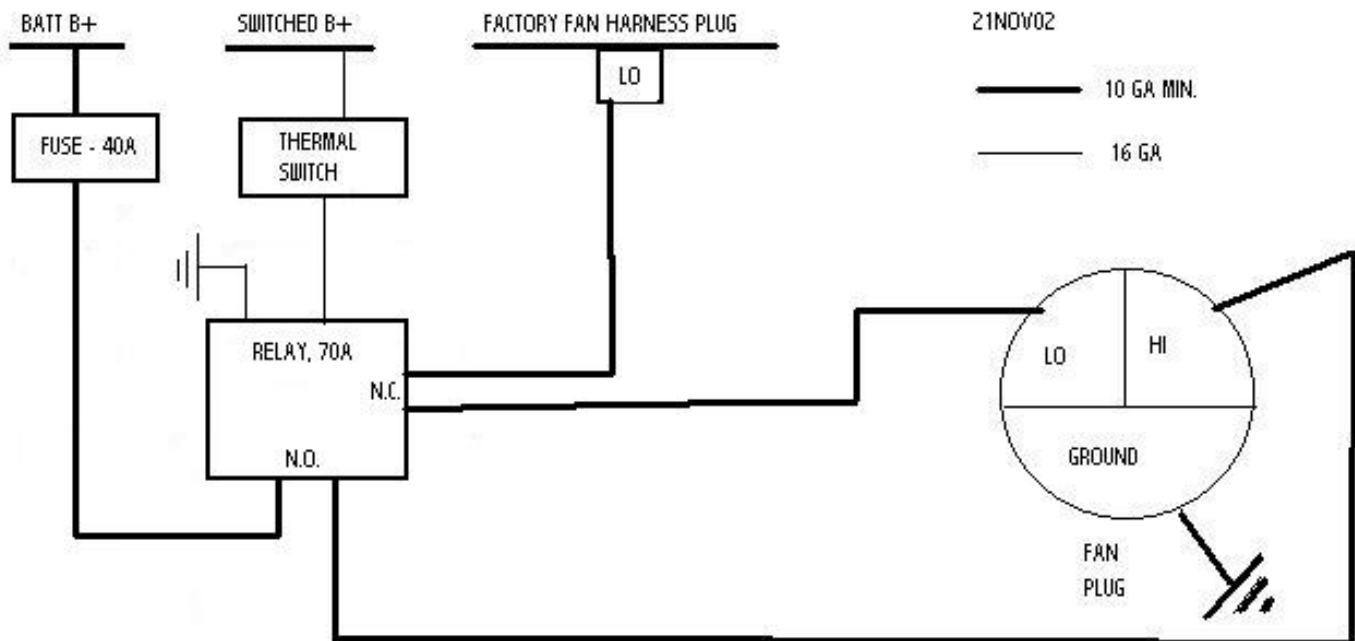
I located the thermal switch and relays near the battery.

IMPORTANT NOTE: If the fan wire run gets longer than about 10 feet, then 8 ga. wire should be used instead of the 10 ga. wire I used.

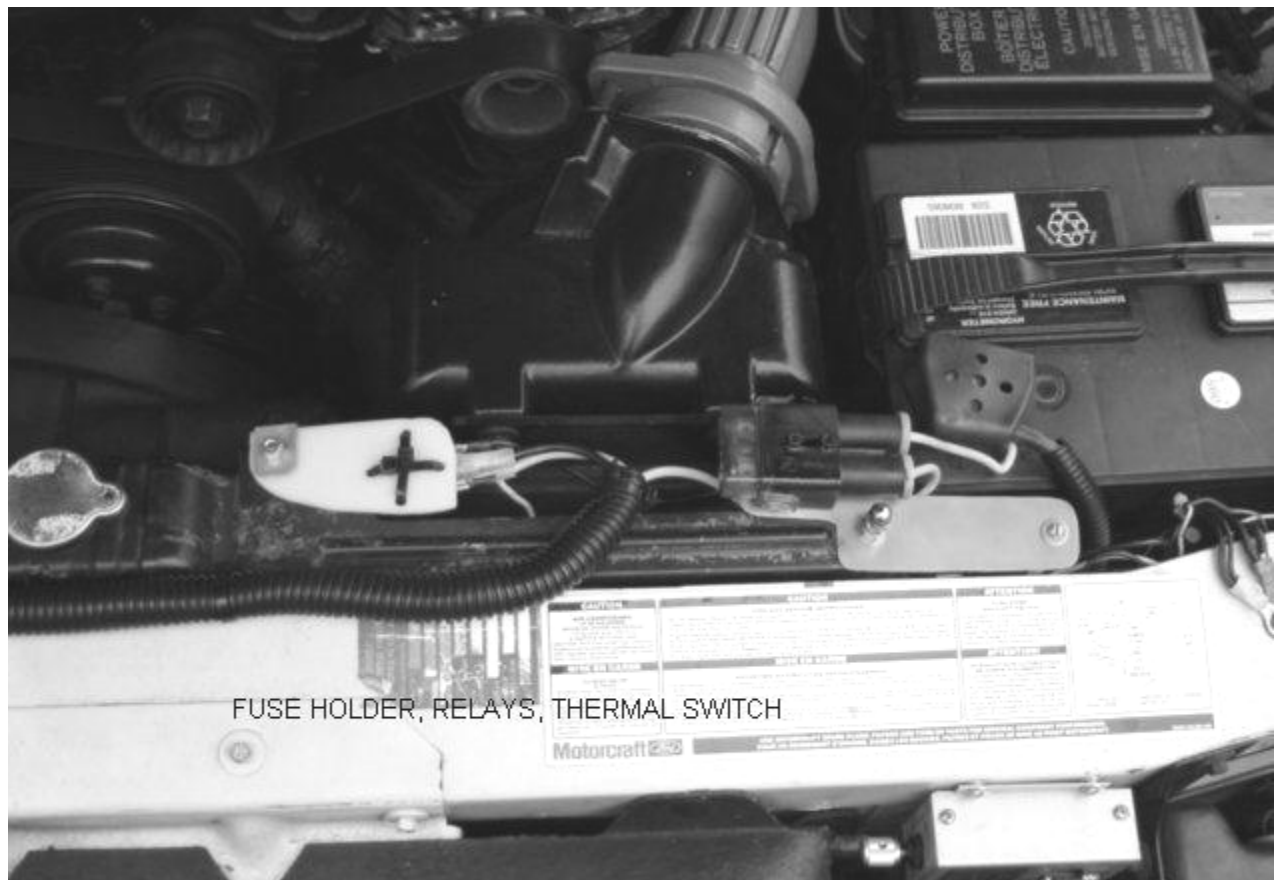
So far, about 3 months, the system operates as intended with only one little problem - my original wire routing allowed one of the 10 ga. wires to chafe on a corner of the radiator until the insulation wore through, shorted the wire to ground and blew the fuse. I cursed myself out for impatience, fixed the wires, re-routed them to avoid the sharp spot and put them in a piece of split plastic conduit. At least the failure happened in my driveway!

One nice feature of this system is I didn't violate any factory harnesses. If one of the components fails I can jump the component or unplug my system and plug in the factory system. Another is that I can turn the thermal switch all the way down and have the high speed fan on basically all the time; might be a good thing for a very hot day. I could turn it up if I need a little help passing HC or CO on an emissions test, or down for a little help passing NOX.

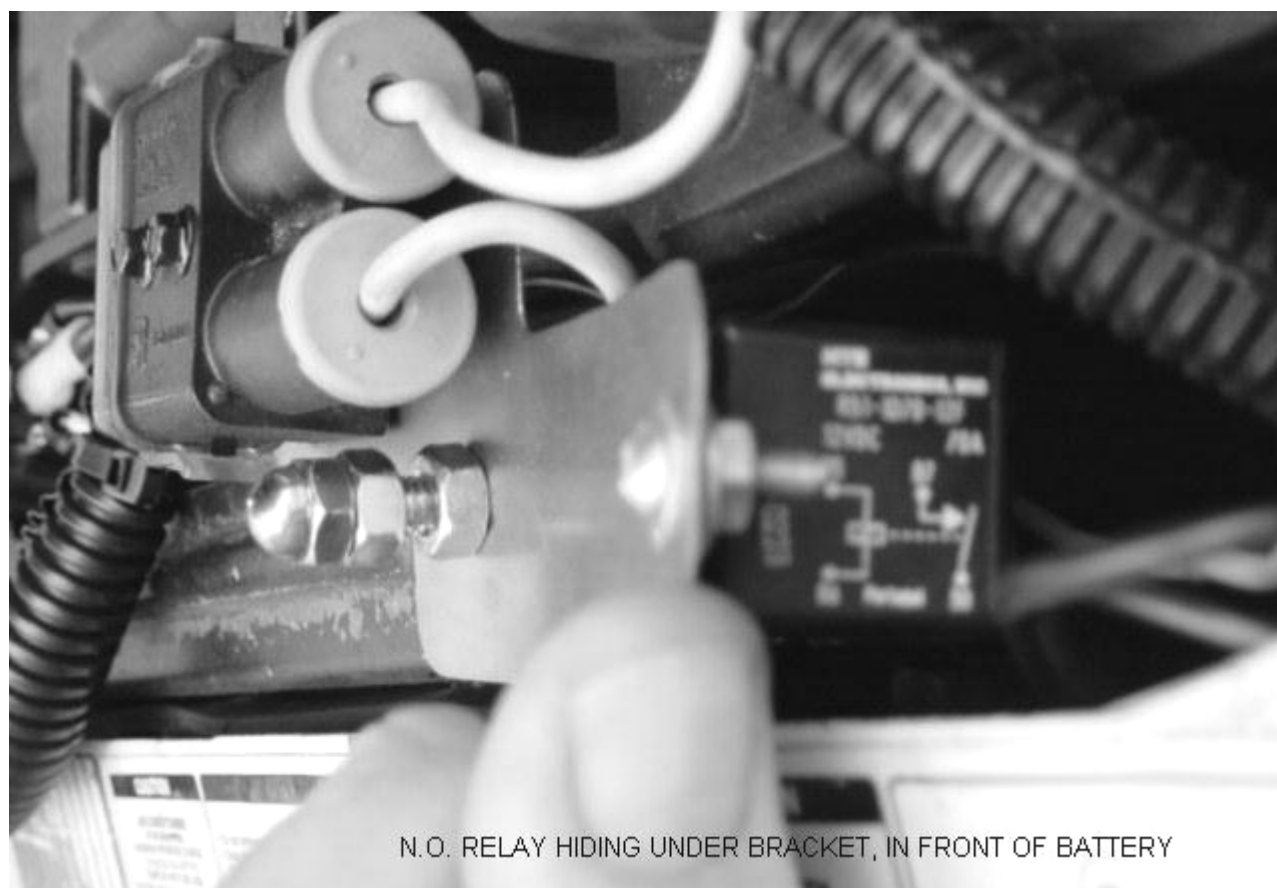
Here's a simpler circuit that would work if you can find a DPDT relay rated for 70A or more @12VDC (GFL finding that!):



Here are a few photos showing where I put things. Note I have a plan to make a one piece bracket to hold the relays and fuse holder. I just have to get around to doing it.







Hindsight is 20-20

By Steven Skoumal
SCCoA #1547

In high school I drove a 1966 Mustang convertible, the very first "new" car my Mother had ever purchased! It was a great car to cruise around in despite the lack of power coming from the very dependable straight 6 cylinder & Cruise-O-Matic tranny. After a while driving that, I was ready for a change and also desired something newer...OK, and faster too! This eventually led to another hand-me-down. My Dad this time offered the keys to his '88 Mustang LX 5.0L coupe.

Medical problems made it very difficult to drive the 5 speed LX, & I traded it for "my" first new car, a '91 5.0 LX hatchback with an AOD transmission. Seven months later it was stolen, stripped, and totaled!!! Its replacement was a 1992 Mustang GT. This car was a LEMON dressed in Oxford White! I immediately started looking at Thunderbirds; new, & used. You know what they say about

hindsight? Duh!!! I wish I had gone T-Bird much sooner.

Motor Trend named the 1989 Ford Thunderbird SC as car of the year! Unfortunately, the window sticker was working against me back then; so were the car dealers! Ford's advertising department was clearly marketing their beloved Super Coupe, toward an older crowd. By 1990, I'd taken the slogan; "Have you driven a Ford lately?" to heart!

Seeking a '90 Thunderbird brochure, I made my inquiry at the front desk of the nearest Ford store. Now, pushing the Anniversary edition SC, every single brochure had been claimed; Ford has done it again! However, I was armed with my Motor Trend magazine in hand; the one describing a Thunderbird Super Coupe, as an American version, of a BMW! I handed the owner/ manager, of Scarff Ford the article and said; "I really don't believe this! Prove to me that this car is this good."



Steve's black '90 SC is ready for take off!

Much to my surprise, and showing an immense amount of trust, the owner, Way Scarff gave me the keys to his personal tester. The car dealer's loaded "Stealth Black" Super Coupe had leather seats and complimentary 5-speed! The instructions were simple. "Have fun, drive safe, and be sure to show it to your Dad! I'll see you at 8:30 tomorrow morning." OK, to be honest, how many 19-year old guys would be given a chance like this? Especially given the well-known fact that I couldn't afford to buy this \$22,000+ car; in fact, it was never part of our conversation!

Tired of driving 5.0L Mustangs, it was time for a change. I was ready to step up to Ford's Flagship Automobile! To use the "PC" term, the Thunderbird I eventually purchased was "pre-owned." Taking full advantage of the rapid depreciation I bought my 1990 Twilight Blue Thunderbird Super Coupe in November of 1994. Amazingly, this was the *EXACT* car I would have ordered from Ford directly, given that option! In addition to every single option available, some special ones are:

- Power Moonroof (One I didn't need, and would NEVER miss in Seattle!)
- Keyless entry pad and special light pkg., including front cornering lights.
- Gray Leather twin 6-way power seats
- JBL sound system.

I needed this car! With only 37K on its clock, I bought my dream machine and NEVER looked back!

At the time, after market "go-fast" parts consisted of:

#1: K&N panel air filter

#2: A do-it-yourself head gasket TERMINATOR supercharger pulley, made by S&S Enterprises of Spokane, WA. (Which eventually did its job perfectly at 75K!)

To the rescue:

About three years ago, I saw a SCCoA sticker in the rear window of another local SC. By this time, my car was paid for and well past its 6yr/ 60K powertrain warranty. Although, it's probably worth mentioning that Ford had to replace my AOD & the supercharger for exactly \$100 a piece, and right at 59,800 miles too! Thanks Ford!

It was time to modify and luckily I had acquired a very competent mechanic, too! The SCCoA has been a powerful source of information. This gave me the opportunity to meet Bill Evanoff, unfortunately, only by telephone...(so far!) After one phone call I knew I'd made a new friend in Bill. I joined the club as member #1547 that day, and ordered every back issue of Chargin' Thunder, too. Offering a one-stop performance parts shop, a wealth of knowledge, outstanding customer service and the extra time spent with me via. long distance, I was hooked. The club's annual dues, at only \$40 have been worth every penny! (Just my opinion) I remain loyal and pass along Mr. E's business cards whenever it's appropriate.

I decided to modify my car into a 1990 Thunderbird SC / SVT with the help of Super Coupe Performance. The "SVT" badges can be found on "SVT" Mustangs & Contours; however, Ford stores sell them for \$8, & remain the legal option!

My SCP list:

- Tokico Illumina II front struts; stock shocks out back
- Fresh Air System with a K&N 9". I also trashed the air silencer
- C&L 73mm MAFS
- BBK/ "Super Coupe" 70mm TB
- Magnum Powers Classic large SC top
- Magnecor spark plug wires
- Motorcraft Double Platinum spark plugs
- I.C. Fan
- Set of (3) steel idler pulleys

- Robert Shaw 180deg.T-Stat. w/ matching Radiator cap
- Fel Pro head gaskets
- ARP studs
- Complete Timing set
- Trans-Go shift kit, w/ high Rev.kit= 5,000 RPM up-shifts in "D"+WOT shifts into O/D (A MUST HAVE, for any AOD car)
- Large custom-made down-tubes with high flow "bullet" cats.
- Magnaflow high flow resonator – (Note: Please see "Raves" section of the SCP site online for a letter from me stating this part is my personal recommendation for a "Best bang for the buck" award!)
- KVR cross-drilled front rotors

Other mods I've made:

- High Output headlight conversion with (Hyper-White) PIAA Bulbs
- PIAA 1500 Crystal Ion Fog Lamps (a perfect fit)
- New Radiator by Modine
- 50w Back-up lights & 50w cornering lamps (Both a very helpful at night!)
- 145MPH Speedo. Particularly useful on 100+ mile straight lines of concrete, found in Montana and Wyoming!)
- American Racing/ Silver "powder coated" Aluminum/ 16"x7" wheels
- Michelin MXV4 Energy Plus 225/60/VR/16 tires (These blow away the OEM Goodyear Gatorbacks) These are the best high performance "touring" tires I have ever owned; they're virtually silent maintain the proper "VR" speed-rating & handling.
- A daily driver needs Blizzak Snow Tires/ mounted on the factory wheels.

Yes, an SC will do more than just circles, in the snow!!!

Looking for even more electronic gadgets, I installed a Donnelly (brand-name) auto-dim/ rear view mirror that has a built in compass and outside temperature display. I also added a ALPINE AM/FM/CD/+Changer/ Ample

power is supplied by my 10 year old ADS-PQ8 amp. and a Pioneer 80w mono amp. to drive the 10" subwoofer. I'm using a combination of MB Quart & stock JBL speakers. The weight of this setup killed the need for air bag assisted "pre-loading" of the right rear wheel; I have lots of traction, and lots of bass!



To date my Super Coupe has never run better and mileage currently stands at 104K! It effortlessly chirps the tires in 2nd and 3rd gear w/o sacrificing ANY low speed driveability. After nine years, I have no plans of selling this car! The hood and bumpers (F&R) have been repainted, by choice. I'm happy to still receive compliments at the gas station. Although, I remain truly amazed at what people will talk themselves into upon seeing my \$8 SVT badges; while I remain silent!

No, this car isn't a BMW, nor did it cost over \$50~80 grand! However, for SC trivia purposes only I will share these 2 things with you:

#1 My stock Ford Super Coupe's Moon-roof is powered by a BMW motor: "Made in West Germany" (A fact un-appreciated by my friend, while he cranked open his "manual" moon-roof, on his '89 BMW 325i!

#2 Our Super Coupes also have VDO instruments (German again) However, they're

labeled on the back side of the Speedo & Tach, instead!

I greatly appreciate this opportunity to share my story, and I hope at least part of it was amusing to read!

Merry Christmas,
Please Don't Drink And Drive

.

For Sale: 1990 35th Anniversary Thunderbird SC

**This is car #1 of the 3,371 built. Yes, the FIRST Anniversary made!
This car is perfect and in show condition.**

Has won best of class in every show entered. At the Thunderbird International Convention at Costa Mesa California 2002 it scored 300 of 300 possible points. Has won best late model Ford 5 of the last 6 years at the Yellow Rose of Texas all Ford show in Ft Worth. All the anniversary items are included with the sale of this car. Special keys, pen, watch, car cover, New floor mats. Loaded with all options, A/C, moon roof, compact disc, AM/FM, Special Black wheels, suede & leather seats, automatic transmission and more. Car is in Texas and will deliver to either DFW or Austin airport for pick up. Family illness forces sale of this collectable Thunderbird.
Price: \$15,000.00 Contact Luke Ober at 254-399-2124 or 254 714-1967.

See the September 2001 Chargin' Thunder, as this car was featured in that issue.



1990 35th Anniversary For Sale

Attention SCCoA members! As you may know, Ford is celebrating it's 100th anniversary in 2003 and you all have a special opportunity to take part in it. Please read the following two pages in detail. As a Thunderbird enthusiast, you also have the opportunity to share your personal story with others and even attend the official Ford event next June. See you there! Editor

Ford Motor Company

Centennial Operations

November 4, 2002

Dear Automotive Enthusiast,

Ford Motor Company's 100th anniversary is less than one year away. Over the last one hundred years, the company has had significant impacts on the automotive industry, society and the world. Ford's unique heritage is a testament to Henry Ford's determination, passion and courage to manufacture an affordable car for the masses.

The company will celebrate this historic milestone on June 16, 2003, and we would like to ask for your help in generating interest and excitement. Listed below are a few story ideas for you to consider for a future edition of your publication. In the months ahead, we will continue to provide you with information related to the 100th anniversary that your readers might find of interest.

Your Stories

As part of the 100th anniversary, Ford is creating a living history not found in traditional historical material. The company is collecting and publishing stories from people who have been touched by the company in one way or another. Your readers are invited to submit stories on how the company and/or its products have impacted their lives. Examples may include a memorable experience with a product or person, first day working at the company or first product purchased.

The stories will be published on Ford's 100th anniversary website in a special section called "Your Stories." The website can be accessed through **www.ford.com** and there's no limit on the length and number of stories one can submit. The website is updated frequently and new stories are added regularly. Examples of the types of stories Ford is looking for are enclosed.

"The Road is Ours" 100th Anniversary Celebration

The company is planning a five-day event, June 12-16, 2003, on the grounds of the Henry Ford II World Center, which surrounds Ford World Headquarters in Dearborn, Mich. The event will feature classic Ford cars and trucks, as well as present and future products, and will celebrate not only the company's rich heritage, but also its vision for the future.

The centerpiece of the five-day celebration will be one of the largest displays of antique, classic and current Ford products ever assembled in one location. To display a Ford vehicle or attend all the planned activities, participants must register and purchase tickets. With a purchased ticket, enthusiasts will be provided with a Vehicle Display Application for the opportunity to exhibit a Ford product on the company's grounds throughout the event.

Online registration is now open and can be accessed by visiting the 100th anniversary website at **www.ford.com**. Each ticket is good for the entire five days and includes:

- A daily assigned parking area with shuttle service to and from the 100th Anniversary grounds
- Credentials on a commemorative lanyard for entry for all five days
- A 100th anniversary commemorative gift



November 4, 2002

Page 2

- Access to the outdoor theatre featuring live entertainment including: Motown, jazz, rock and country artists (talent to be announced later)
- Discounts on 100th anniversary merchandise, food and beverages
- Access to free shuttle service to Henry Ford Museum & Greenfield Village, the Henry Ford Estate—Fairlane and the Edsel and Eleanor Ford House
- Discount tickets to local attractions including: Henry Ford Museum & Greenfield Village, Henry Ford Estate—Fairlane and the Edsel and Eleanor Ford House
- Access to Ford Racing Night
- Children's activities

100th Anniversary Merchandise

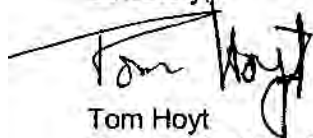
To help celebrate 100 years of innovation and passion for Ford products, a number of fine collectibles have been developed, including: 100th anniversary branded wearables—hats, t-shirts and jackets; travel mugs; pens; stationery; paperweights; clocks; watches; calendars; key rings; and die-casts.

We've enclosed a 100th anniversary merchandise catalog for your review. Merchandise can be ordered toll-free at **1-888-380-6663** or online at **www.fordcollection.com**. Additional catalogs are available by calling **1-888-380-9602**.

Also enclosed for your review is the 100th anniversary press kit. This provides an overview of Ford Motor Company's rich heritage and, for your convenience, a CD-ROM containing all of the press releases and high-resolution images needed to create a 100th anniversary section in your club's publication and/or website.

We appreciate your consideration and we'll continue to provide you with information to help keep your readers informed of anniversary events and activities. For additional information on Ford's 100th anniversary, please visit **www.ford.com** or contact **1-313-337-1136**.

Sincerely,



Tom Hoyt
Communications Manager
Centennial Operations Team

ATTENTION

—CARLISLE— All-FORD —Nationals—

CLUB COORDINATORS

The 2003 Carlisle All-FORD Nationals will take place May 30- June 1, at the Carlisle Pennsylvania Fairgrounds. We are offering early Fun Field registration discounts to clubs that have participated in the past. It is important you inform your members of this early discount registration fee immediately (by way of a club newsletter or direct mail).

It is also very important you follow the rules for early registration listed below.

- **Club Pre-Registration rate = \$30.00** (before Feb. 28, 2003) This will allow two adults and one vehicle into the show all three days. Between March 1 and May 10, the pre-registration rate will increase to \$35. After May 10, registration is \$45 cash. All pre-registrations must be received on or before the deadlines. Sorry, no extensions.
 - This rate is for individuals showing a car on the Carlisle All-FORD Nationals show field. This is not the fee paid for general gate admission.
 - We are offering pre-registration for camping and trailer parking for showfield participants. As the event grows larger every year, space becomes very limited, however, our priority is to offer ample room for show cars, swap meet and corral. In order to secure a 10' x 60' camping/trailer parking space for the weekend, please reserve the appropriate amount of space on the enclosed form.
 - Club pre-registration form must be completed and accompanied by a \$30 payment. Registrants may use a check, money order (payable to Carlisle Productions) Visa, MasterCard, American Express or Discover as a form of payment.
 - Club officials may submit registrations in a group packet. One check from the club official can be issued as payment for several members. When this method is used, the club member should send the registration form with payment to the club official. The club official will forward the group packet to Carlisle Productions on or before February 28, 2003. Include each member's name, home address, phone number and type of vehicle along with the club name and a club check.
- Note: we will not process blank registration forms. You must have a member registered at the time of payment. No late entries accepted.*

At this time, we can tell you the 2003 Carlisle "Give Away" will be a 1987 Mustang GT Convertible with only 35,000 miles. The Carlisle All-FORD Nationals will take place May 30-June 1, 2003. In March we will mail an informative event brochure to all pre-registered & past show participants. This piece will highlight the 2003 Carlisle All-FORD Nationals event schedule.

An indoor display of vehicles demonstrating the Ford heritage from the early to late models will be featured as the Carlisle All-FORD Nationals Invitational. The 1963 1/2 Galaxie Lightweight Reunion plus the Galaxie Club of America will be holding their 7th Annual Galaxie Nationals during the show. (Members: please talk with your club representative regarding details and registration.) Look forward to some very special guests from Ford Motor Company as well as some very exciting concepts to be displayed.

Thank you for your past show participation. We will offer the use of a tent to any club that has 25 vehicles pre-registered. Watch your mail for the club tent reservation form and we hope you will join us in 2003 for the Carlisle All-FORD Nationals.

<p align="center">CARLISLE</p> <p align="center">ALL-FORD</p> <p align="center">Nationals</p> <p align="center">May 30-June 1, 2003</p> <p align="center">CARLISLE PA FAIRGROUNDS</p>		<p>Club pre-registration form. \$30 allows two adults into the show all 3 days. Form must be received on or before February 28, 2003.</p>	
<p>Early Club Vehicle Registration: Multiple vehicle discount applies to vehicles titled to same address (owners card required upon check in).</p> <p>[] One vehicle pre-registered.....\$30 = \$ Year: Make: Model:</p> <p>[] Second vehicle pre-registered.....\$25 = \$ Year: Make: Model:</p> <p>[] Additional vehicle pre-registered...\$20 each = \$ Year: Make: Model:</p>		<p>Club Name: <u>Super Coupe Club of America</u></p> <p>Name: _____ Phone () _____</p> <p>Address: _____</p> <p>City: _____ State: _____ Zip Code: _____</p> <p>Year: _____ Make: _____ Model: _____</p> <p>Email Address: _____</p>	
<p>Trailer/Aux. Vehicle Parking (Overnight)</p> <p>10' F x 60' D or 20' F x 30' D \$20 = \$ 10' F x 30' D \$10 = \$</p>		<p>Make checks and money orders payable to Carlisle Productions, Inc.</p> <p>Charge to <input type="checkbox"/> VISA <input type="checkbox"/> MasterCard <input type="checkbox"/> American Express <input type="checkbox"/> Discover (check one)</p> <p>Account # _____</p> <p>Exp. Date _____</p> <p>Signature _____</p>	
<p>Camping:</p> <p>General 10' F x 60' D or 20' F x 30' D \$20 = \$</p> <p>Parking permit required for each unit (including tents) placed on space reserved above.</p> <p>How many parking permits do you require? # _____</p>		<p>Have you ever registered a show vehicle with Carlisle Events? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
		<p>Enclosed Payment:</p> <p>TOTAL ENCLOSED: _____</p>	
		<p>Mail completed form and payment to: Carlisle Productions, Inc. 1000 Bryn Mawr Rd., Carlisle, PA 17013 (or to your club official) Camping/trailer info call: 717-243-7855 or visit www.carsatcarlisle.com</p>	

START MAKING PLANS FOR CARLISLE 2003

If you plan to go to the 2003 Carlisle All Ford Nationals, you can use this form to pre-register and receive the terrific discounted three-day rate discussed on the previous page. This show is totally awesome and **SHOULD NOT BE MISSED**. If you cannot read the address where this form is to be sent to, it is: **Carlisle Productions, Inc., 1000 Bryn Mawr Rd., Carlisle, PA 17013**. DO NOT mail this form to a SCCoA club official, as it also states. I suggest you make a copy of this form because I would hate to see anyone permanently disfigure his or her Chargin' Thunder by attacking it with scissors.

The last few years the group has stayed at the Super 8 Motel and last year we also had a group at the Days Inn, across the street. Both hotels will likely be revisited this year and I encourage everyone to book their rooms as early as possible as the past few years these two hotels have been sold out as early as February.

Call the Days Inn Carlisle at 717-258-4147. They are at 101 Alexander Spring Rd.
Call the Carlisle Super 8 Motel at 717-245-9898 (or 800-800-8000). They are at 100 Alexander Spring Rd.

CALL TODAY TO MAKE YOUR RESERVATIONS! I don't want to say, "I told you so", if you delay and are shut out.

SC / XR7

PERFORMANCE PARTS

from Magnum Powers'

What is New From Magnum Powers™?

A Front Mount Intercooler Kit is Available NOW from Magnum Powers™?

This IC Kit features a HUGE 14" X 18.5" Core, CHROME IC Tubes, POWERFUL 16" Fan and all necessary High Quality Hardware so you can install it on a weekend! This Intercooler has the same cooling capacity as the Intercooler Coy Miller used on the record setting 12.18 second run so you know its packed with power. Surf to www.magnumpowers.com for the latest details. The cost is only \$1,550

Installation Ready MagnaPortII Blowers...(aka "No Wait" MP II) are available for your 89-93 SC so you can install your new Magnum Powers Intake System Saturday morning and be burning up the strip with 60 to 80 more HP Saturday Night! That's right, you don't have to wait for shipping, etc. and have your car down for weeks, just install it and be on your way! For ONLY \$1195 these Blowers are Chemically Stripped and Powder Coated for a New Appearance, Rebuilt and MagnaPorted. After you install your new system you can send your rebuildable old blower back to Magnum Powers for a \$250 core credit resulting in a final cost of ONLY \$945!! Such a DEAL!!

Our Induction System Includes:

- High Performance Supercharger Intake Plenum: Powder Coated - \$499 or Polished - \$549
- 85mm Polished Throttle Body: \$350
- 3 1/2" Show Chrome Intake Tube Kit: \$165 or \$250 for the complete Fresh Air Kit
- The Classic "Big Bore" Blower Top: Powder Coated \$330 or Show Polished \$365

Blower Porting Services:

MagnaPort™ (94/95) about 25-30 more HP - requires MP Plenum ... Only \$350

MagnaPortII (89-93) about 60 more HP - requires MP Plenum Only \$450

Standard "S" Port (all years) about 20 more HP Only \$290

Factory Authorized Dealers:

Super Coupe Performance (513) 697-6501

Coy Miller Race Engines (540) 433-0545

Check out our website at www.MagnumPowers.com