

CHARGIN' THUNDER

Super Coupe Club of America

Volume VI

March 2001



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

A wise man will hear and increase learning, and a man of understanding will attain wise counsel. Proverbs 1:5

Bill Evanoff – Editor & Coordinator

Ron DiPaola – SCCoA Webmaster

Phone: 513-697-6501

Fax: 513-697-0580

Email: sccoa@usa.net

Web Site: <http://www.sccoa.com>

Super Coupe Club of America

6239 Fay Court, Loveland, OH 45140

Phone: 513-697-6501

Fax: 513-697-0580

Email: sccoa@usa.net

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.

Table Of Contents

March 2001 Chargin' Thunder

Cover: Kurt Sunday's beautiful '92 SC

Pg. 3 - From The Birdnest Editorial, by Bill Evanoff

Pg. 5 - SCCoSW Sin City Meet Recap, by Kurt Sunday

Pg. 10 - Short Wheelbase SC #5 Lives, By George Davenport

Pg. 13 - M5R2 Rebuild Details, by Scott Shockley

Pg. 18 - 1989 Super Coupe Dealer Ordering Info.

Pg. 25 - 1990 35th Anniversary Promotional Literature

Pg. 33 - 1993 "A" Plan Pricing Guide

Pg. 37 - All About Oxygen Sensor

Pg. 38 - 2001 Mobil 1 All Ford Challenge Flyer

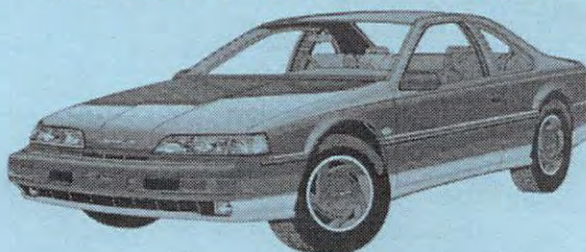
Pg. 39 - 2001 Carlisle Ford Nationals Flyer/Info.



John Nolan Ford is offering SCCoA members Ford original equipment replacement parts at **"wholesale" pricing** (+ shipping). **Contact Parts Manager Ron or Bob at 1-800-837-8114** and simply tell him you are a Super Coupe Club of America member.

John Nolan Ford, Inc.
3250 Highland Ave. at Ridge Road
Cincinnati, Ohio 45213
Local # 513-631-6965
Fax # 513-631-5344

Toll Free # 1-800-837-8114



From The Birds Nest

By Bill Evanoff

The Super Coupe Club of America carries on into the new millennium bigger and stronger than ever! I am pleased to report that we have more new members this year than in years past and we also recently signed up member 1500. Phone calls and letters continue to pour in from across the country from SC and supercharged XR7 enthusiasts that have recently found out about our club. They have been actively searching for more information about their great cars and find that the SCCoA is a lone oasis dedicated to these cars in a very large, dry desert that is all focused on Mustangs, Mustangs, and more Mustangs.

Recently, the SCCoA has been blessed with a little publicity in the Muscle Mustangs and Fast Fords magazine. This well known national magazine had a full page article written about the SCCoA in their February 2001 issue in the "Cyber Stallions" section. This is a monthly column by one of their editors, Jeff Bauer, which features web sites devoted to different Ford vehicles. Ron DiPaola, our webmaster, wrote Jeff over a year ago asking him to consider www.sccoa.com for a future article. Thankfully, Jeff finally saw the light and contacted Ron and I via email last September and we excitedly provided him with the answers to a set of questions he asked us. Jeff did write a very flattering article about the SCCoA site and had numerous favorable comments showing that Ron DiPaola has really done an outstanding job with it. I've thanked Ron before within the CT pages for his contribution to the club, but he continues to out-do himself year after year.

Member Kurt Sunday, of Las Cruces, New Mexico also promoted the club late last

year. He contacted Car Craft and invited them to one of their action-packed SCCoSW outings. They respectfully declined his gracious offer but they did reward Kurt with a one-page review of the SCCoSW and SCCoA web sites. They too had many great things to say about our club and I'm sure has been responsible for our recent growth spurt.

Viva Las Vegas

Speaking of Kurt Sunday, he and I had a great time together at the recent SCCoSW Las Vegas meet. I flew out from Ohio to party with this wild bunch and I am now a believer that no other SCCoA chapter has more fun at their outings than does this bunch of great guys and gals.

Their outings are totally crazy, yet totally organized at the same time. This group puts a tremendous amount of planning and effort into making their outings a success and guaranteed fun. I was very impressed with the organization of this chapter and would submit them to other chapters as a model to which they should strive to emulate. Secondly, anyone who even remotely lives within a reasonable driving distance should plan to attend their future outings. There is a more detailed report on this outing that starts on page 5 of this issue.

Chargin' Thunder Improvements

When I mailed out the 2001 renew form last year, I gave everyone the opportunity to voice their opinions on improvements they would like to see in future issues and also to ask questions.

I received a ton of positive comments generally stating that everything was great and to "keep up the good work". In this issue I have added page numbers and a table of contents. These are simple things to do, but I've never done them before. I had many requests to add these items.

I did receive a few dissatisfied responses also and they generally related to not receiving CT issues. I have attempted to address these concerns individually but I would encourage everyone to not wait six months to let me know if you happen to not receive a CT issue. We may have your address incorrect or most likely the "bulk mail" envelopes we send out are not getting delivered. Bulk mail is not returned to its sender if the delivery is unsuccessful, therefore we have no idea that you have not received what you are due.

Article Help Needed!!

One of the other questions I asked on the renew form was "what subjects would you like to see articles on in the future?" Here are a few of the subjects that were asked for:

- Transmission Swap – AOD to 5-speed.
- Drag Racing Techniques – How to hook up, shift points, etc.
- Reducing Wheel Hop – How to?
- Replacing worn leather seat bolsters or entire seats – How to? or cost?
- Sway Bar Comparisons.
- Cooling System Optimization – How to?
- Notchy M5R2 Shifting – How to fix? (Check out this issue!...editor)
- Driveline Bushing Replacement – How to?
- What parts will interchange/upgrade between years?
- SC Exhaust System Comparison
- 6-Speed Tranny Swap
- Street Tire Comparison
- Fresh Air Kit install and larger MAFS and Throttle Body how to?
- JBL Radio Repair/Upgrades
- Aftermarket Spring & Shock Comparison
- SC Engine Rebuilding Tips/Suggestions
- Stock Camshaft Specs. and Upgrades for Cams

- Lower (160 or 180 degree) Thermostat Pros/Cons
- Update on aftermarket chips...anything new/better?

These were just a few of the many great article ideas. I'd like to throw out an open invitation to have articles written on these subjects if you feel qualified to do so. Contact me so that I know you will be working on an article and therefore work will not be duplicated.

World Ford Challenge

The SCCoA will be attending this event again this year in St. Louis. There is a flyer for the WFC on page 38 of this issue and you will find all the relevant information you need there. The club will be staying at the Best Western in Collinsville IL. The rooms there are limited so call 618-345-5660 ASAP for reservations.

Carlisle All Ford Nationals

Want to win a low mileage 1990 Anniversary SC? Then plan to attend this year's show and pick it up on Sunday afternoon. This show is the annual "do not miss" show of the year for SC/XR7 enthusiasts. I'm projecting over 75 cars in attendance and a great time will be had by all. There is a Carlisle flyer on page 39 of this issue along with our hotel information. Book your rooms ASAP, as they are now very limited in supply. There is a Days Inn next to the Super 8, so that may be an alternative for anyone getting shut out at the Super 6...err Super 8.

See YOU at the upcoming shows!

SCCoSW's Sin City Meet

January 12th to 14th, 2001

By Kurt Sunday

Everything concerning the SCCoSW's Sin City Meet was a blast. It should be illegal to assemble that many SC nuts in Las Vegas ever again. About 17 cars participated in the antics.

This article's first mission is to give special recognition and heartfelt thanks to our hosts, Kelly and Faye Simons, of Las Vegas. Secondly, we would like to thank the Holiday Inn on the Las Vegas Strip Security Guards for allowing us to fill the 4th floor of their parking garage with a lot of SC tire smoke.



Eric, Emily and I arrived at the Holiday Inn on the Las Vegas Strip around 3am Friday. Unpredicted snow in Arizona added several hours to the scheduled 12 hour drive from New Mexico. There were several SC's already scattered throughout the parking

garage. We spent most of the day Friday gathered at various parts of the hotel greeting the SC's and SCCoSW members that were arriving during the day on Friday. Mark Hassenyager put down a great Coy Miller Stage 2 burnout right in front of the Holiday Inn Lobby.



Our first group cruise was to Hooters for a great dinner and some cool pictures. After dinner, the SC's blasted back down to the Strip for a ride on the Big Shot on top of the Stratosphere Hotel. The Big Shot is 4G rocketship-ride -perfect excitement for the crazy SCCoSW Boys. We actually went on that a\$\$ puckering ride twice.

We returned to the Holiday Inn's parking garage. They had blocked off a huge part of their 4th floor parking garage for the SCCoSW. Everybody took turns putting on a smoke show – the SC's sounded awesome as the blower whine echoed through the parking garage.

To hype the Sin City event we advertised that a VIP mystery guest was flying in on Friday night. Turns out everybody guessed that it was Bill Evanoff who was joining us. Everybody wanted to help carry his luggage and try and guess what SC parts were in there. It was an honor to have him there. I think it was about midnight before we gathered in the hotel's

bar for some drinks. Cool Houman arranged it so we could watch some of our club's videos on the bar's big screen. It was much better than cramming 20+ drunk people into Dr. Fred's room as SCCoSW rules dictate. I was surprised at how many passer-bys from the casino stopped to watch. By the way – if you think the SCCoSW is nuts you're wrong. Houman brought 2 of his friends from British Columbia, Canada – we watched some of their SCCoNW meet videos. They are unbelievably crazy. Check their web site for some videos.

The crowd also witnessed some wild video taken by Jeramie Schall of the Colorado Boys' journey to Vegas – the clip starts with a shot of Ted's SC speedo pegged at 120+, then he pans up for an awesome shot of Dr. Fred passing them at over 160!

A Saturday morning 8am racetrack departure time came pretty quick after a night crazy night of gambling and cocktails. Please note: no SCCoSW members drink, then drive. We design our meets so that the SC's are parked for the night before hitting the beers.

I don't know about you, but it was really freaking cool to be driving your SC and look over and see Bill Evanoff hanging out in the passenger seat! It was actually one of my greatest honors to have Bill in my SC while the pack of SC's headed for the racetrack. We even called the legendary Bill Hull on my cellular phone to clue him on the action taking place ... talk about an awesome SC moment.

The big deal at the track was Dr. Fred verses Jim "The King of California" Demmit. Jim Demmit's SC is awesome and Jim can drive the heck out of it. Jim's Dad claims that "it's all in the head". A lot

of SCCoSW members were amazed at how fast it was with so few modifications. Dr. Fred's 4.3 Monster Motor debut didn't go well at all. Fred spent most of the day reprogramming his EEC because of the Denver to Las Vegas altitude change. I think Jim's best ET for the day was a 13.4 and Dr. Fred's was a 13.8. I expected better times based on the mid 40's temperature, but the altitude played a much bigger factor than expected.

Put it this way... Fred's hood has a backwards "3.8" stamped in it from the tork, when the thing is running correctly. Jim and Fred have the fastest SC's I've ever seen that were not on the bottle.

The SCCoSW's personal veterinarian, John Shelton, had AOD problems, so his Coy Miller equipped SC stayed home. John instead drove his 95 Ford Escort, better known as the Azusa Annihilator, with some giant Hoosier slicks for Dr. Fred's use. Special Thanks to Jeff, Tory and their crew from Southern Nevada Performance (702-632-0165) for a great lunch BBQ.



After a long day at the track we headed to the Race Rock Café on Fremont Street. Kelly and Faye Simons made special arrangements so that our SC's were parked in the Race Rocks special sidewalk parking area. Kelly Simons handed out real cool

award plaques at the Race Rock dinner. Jim Demmitt took Best ET and Best of Show. Hal, a local Las Vegas Scer, took first in eliminations and I was flattered to receive an appreciation plaque "for everything I do for the Club".



SCs parked outside the Race Rock

On Sunday morning, Kelly lead the SC's to breakfast, then to Hoover Dam. It was dam fun!

I hope everyone that reads this understands how cool it is to assemble a group of people that have the same passion for the Super Coupe. If you haven't gone to a meet yet – you need to! It's simply the most fun I've ever had... not to mention the friends you'll make – heck, I talk to Dr. Fred, Colonel Glenn, Eric Carrasco, and Bill Evanoff more than I talk to my parents.



The SCCoSW pet tarantula on the curb



Again, the SCCoSW would like to thank Kelly and Faye Simons for their efforts and hospitality. I'm sure they spent a few hundred of their own funds to provide the dash plaques, trophies and Las Vegas gift bags they handed out. That's what happens when you have the SC passion!

Also, Todd Jelle designed and made some awesome Sin City Meet T-shirts. Contact him via the SCCoSW's Web Page if you'd like one.

Attendees:

Kelly and Faye Simons
 John Shelton
 Kurt Sunday
 Eric Carrasco and Emily
 Chris Maloy and Amy S
 Sara and Hal
 Jim Demmitt and his father Jim
 Vikki Barrett
 Lisa Trapani
 Rob Noth and wife
 Mark Hassenyager
 Fred and Jackie Holzhauer
 Ted Brash
 Jeramie Schall
 Todd Jelle and Michele
 BC Houman and his Video Crew

Bill Evanoff
Matt from Los Angeles
Chris Campos

Keith and Son with a clean 5.0 LX Sport
And our Coolest Member - Cool Vance Day
that flew in from Florida



The SCCoSW group at the Race Rock Cafe



A few of the SC's lined up while at brunch on our way out to Hoover Dam

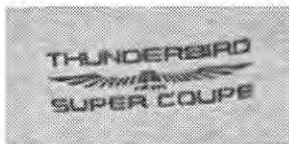
Announcement: The SCCoA gave away two free 2001 memberships for those who renewed their membership before February 1st. The big winners were Jason Parham of Tuscaloosa, AL, and Jimmy White of Adrian, MI. Congratulations!

Custom Embroidered Auto Apparel

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

Only thing original is the driver, George Davenport!

By George Davenport

Back in the late summer of '98 I came across a '90 Thunderbird Super Coupe for sale. That was not too unusual, but what was unusual about the car was that it had been shortened 8" in length. The ad read "SWB #003, Short Wheel Base Thunderbird". Unfortunately, it was for sale in California and I was in Pennsylvania. I did make several phone calls inquiring about it and finally got the number of the man that had originally built it. He was Doug Kielian of Auto Kraft in Lincoln, Nebraska.

I talked with Doug several times on the phone and found that he was interested in building another one. I owned an '89 Thunderbird SC that I had purchased new in April of 1989. It now had over 200,000 miles on it and had become my all-time favorite car that I had ever owned. So, for my car's 10th birthday, it was on a trailer heading for Lincoln in February '99. I would have SWB #005.

While Doug was busy cutting my car in half, I found just the man to build a motor to replace the old one. Coy Miller of Coy Miller Racing Engines in Harrisonburg, Virginia was making some motors that were putting out some unbelievable horsepower numbers. I had to have one for my car.

Finally in August of 2000, we watched my new engine being run on Coy's engine dyno. The numbers for my engine were just over 420 horsepower and over 530 lbs. of torque at 3,500 RPM. To put those numbers in perspective, the stock horsepower came in at 210. Coy had more than doubled the output of the stock motor. I should mention, I chose to stay with the same type of motor the car was originally equipped with, a

supercharged 3.8L V6. That's right, a V6 engine.

Finally after nearly 2 years, I had a car with some amazing body work, a very stout motor on an engine stand and a whole house full of every kind of Thunderbird SC part that you could imagine. At that time, I had more SC parts than most Ford dealers even stock!

Now there was only one little thing left to do. That would be to put it all together. I possessed neither the time, the tools, nor the workspace. (And maybe not all of the needed mechanical skills) so I went to Rick Hartman at Independence Ford to assemble my fine collection of automobile pieces.

Rick was the only mechanic I would let work on my car. He always diagnosed and fixed any problem I had and could clearly explain to me what had been done. He was my first and only choice for my project.

What he (and the rest of Independence Ford) probably did not bargain for was that I would be in the garage checking on the progress (and making suggestions) every chance I got. Through it all he remained calm, somehow kept his sanity, and always treated my car as if it were his own. Now the only real problem was trying to get the car away from him!

Actually the whole dealership has treated me like family. The parts department has tracked down nearly every obsolete Thunderbird SC part in the whole country. The service department has always done an excellent job of working with me to schedule my car around all of the other work that needs to be done in their shop. All of the office personnel answering the phone recognize my voice when I call. Even the sales personnel come by to see how the

work is progressing. I'm there so much, a few of the new employees even think I work there!



Rick has taken a few of the braver Independence Ford employees for "test" rides. None have been the same once they returned. The car feels like a Muscle Car of a bygone era, when premium gas was 100+ octane and gas prices were much less than today. The car has exceeded my expectations (and budget). In short, it is fun to drive. You just cannot get that smile off your face as you drive or ride in it. Isn't that what hobbies are all about?

**1989 Ford Thunderbird SC
SWB #005 Modifications List:**

Body/Interior:

Wheelbase shortened 8" (113" to 105")

Flared rear fenders

Shortened side moldings

96-97 Thunderbird headlamps

96-97 Thunderbird clear corner turning lamps

94-95 Thunderbird SC front bumper

89 Cervini's fiberglass hood (modified to fit '96 lights and '94 front bumper)

92-93 Thunderbird trunk lid and lights

Xenon rear urethane spoiler

96-97 Thunderbird door handles

Paint: Original Twilight Blue with extra pearl and metallic flake

Cloth upholstery with custom embroidery

B&M Hammer ratcheting shifter

Full roll cage

K40 hidden radar detector

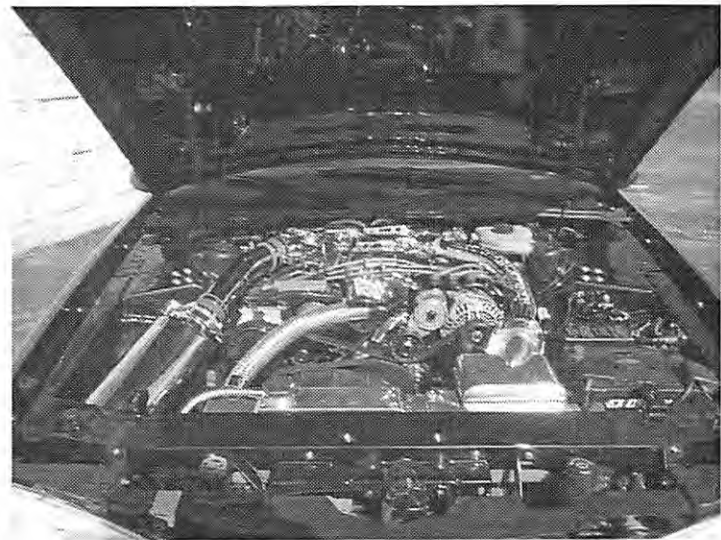
Ford Racing Products Cobra steering wheel

Custom embroidered floor mats

"A" pillar gauge pod (trans and oil temp)

Alpine 3-disk in-dash CD changer

SVO 1/4 mile timer



Suspension/Brakes:

13" Mustang Cobra front calipers & slotted rotors

11" Mustang Cobra rear calipers & slotted rotors

Mustang 5 on 4 1/2" bolt pattern

1 1/4 front and rear sway bars

Mark VIII aluminum lower rear control arms

Raxles super shafts rear half-shafts

Boyd Coddington "Rodder" custom wheels

Michelin Pilot Sport Tires: 255/45/17 front, 285/40/17 rear

Tokico 1.5" lowering springs and shocks

Jacking rails

Kenny Brown front and rear subframe braces



Exhaust:

HP Motorsports custom built dual 2.5" stainless exhaust with X-pipe

Borla Mufflers

Random Technologies High Flow cats

Custom long tube headers with 1 7/8" primaries

Jet Hot 2000-degree black header coating

Oval polished stainless steel exhaust tips
(Clint Kendall - New Zealand)

Engine/Transmission/Drive Train/Exhaust:

Coy Miller Racing Engines Stage II High Performance Supercharged 3.8L V6

'94-95 Eaton Supercharger

Magnum Powers Raised Supercharger top

10% overdrive on Supercharger

ASP underdrive pulleys: alternator/water pump

Magnum Powers enlarged inlet plenum

83mm Magnum Powers Throttle body

77mm Pro-M MAF

Magnecor 8.8mm plug wires

9" AutoPhysics cone filter with custom stainless steel housing

Chrome 3" intake tube

Super Coupe Performance Double sized intercooler

Griffin radiator

Exide sealed spiral battery

Stainless steel hose ends & braided hose covers

Generous amounts of powder coated and chromed parts

Generous amount of polished aluminum and stainless steel parts

Art Carr high performance transmission parts and SVO wide ratio gear set

Art Carr 2800 RPM stall, 10" non-lockup converter. Art Carr one piece input shaft

Lentech valve body with overdrive delete

Aluminum driveshaft

Mark VIII aluminum differential with 3.55 gears and Auburn Pro locking differential

Special Thanks:

Crone Machine Shop: Joe Crone

This guy can machine anything from a drawing on a paper napkin. His hands have created many, many parts for SWB #005.

Powder Birns: Ardin Birns

This guy can powdercoat almost anything and makes it look good. SWB #005 parts would have that "spray can" look without his talent.

A&A Auto Parts: Bart Shrawder

If you need an after market part for your car and he cannot find it, then it is not available!

Swartz Ultimate Collision Repair: Steve Swartz

Steve and his crew handled painting the engine compartment, underneath the car and final paint buffing. Their work is second to none.

Commercial Stainless: Brian Wawroski
They do food service equipment on the side, so they can afford to make killer stainless and aluminum parts for projects like mine.

SCCoA: Bill Evanoff
This is the car club that kept my interest going in Thunderbird SCs the last three years when I could not drive my car!
(www.sccoa.com)

Future Web Site for SWB #005:
www.thundercoupe.com

Driveline Makeover

By Scott Shockley

The transmission has always been the unsung hero of most automotive tales. The SC is no different in that respect, the transmission is usually the last to see any serious attention. This article will attempt to enlighten and educate those seeking to address their own transmission woes. This episode in the ongoing saga of "As the Gear Spins" will concentrate on those who wish to row their own boat. In the quest for the perfect machine, don't forget that the lowly driveline plays a vital, yet unglamorous, roll

in making the Super Coupe a fine grand touring machine.

The Super Coupe is factory equipped with a Mazda M5R2 5 speed manual transmission. Although often cursed, it is quite a good tranny.

The SC manual transmissions are broken into two distinct models. The 1989 – 1993 models which have gear ratios of 3.75, 2.32, 1.43, 1.0, and 0.75:1, while the 1994 – 1995 models have ratios of 3.42, 2.15, 1.34, 1.0, and 0.75:1. The ratios for the 1994-1995 models were revised to improve the spread and aid the overworked blocking rings between first and second on the older

models. This revised gearing, combined with the increase in torque for the 1994 model year, made for a much more pleasurable driving experience. Both transmissions were coupled to a 2.73:1 final drive axle ratio that came standard with Traction-Lok. This, added with the transmission overdrive was beneficial in attaining the EPA rated 17/24 and 18/26 mile per gallon economy rating.

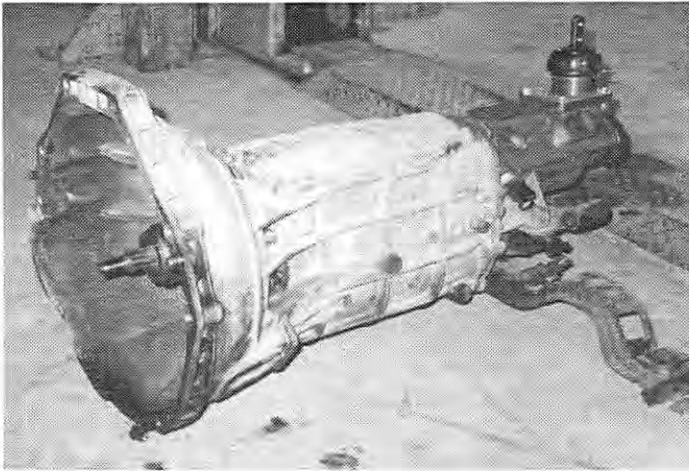


Figure 1: Mazda M5R2 Transmission

However this author has personally attained 28 mpg in both a 1992 and 1994 models. Sorry! Sidebar slip up, back to transmissions.

The Super Coupe M5R2 is a Mazda unit built in Hofu, Japan. It shares more than a family name with another model, the M5OD-R2, the unit used in many of Ford Motor Company's truck applications. While the truck model shares many components and designs, it is far from an identical transmission to the M5R2. The greatest difference is the shift components, the shift mechanism enters the transmission from the top and the shifter is located directly above the cluster gear. The M5R2 on the other hand has the shifter mechanism located on the case extension (tail housing). The gear ratios in the M5OD-R2 also differ from those in the M5R2. While there are plenty of differences in these two boxes, some components can be shared. The M5R2 uses

fiber backed blocking rings in the synchronizer assemblies, while the M5OD-R2 uses an all-brass unit. The fiber units in the Super Coupe can be replaced with the brass units. While this procedure can be done by an accomplished home mechanic, some of the tools are specialized, and the process time consuming. During my update procedures involving a rebuild of the M5R2 I left this work to professionals like the ones at Liberty's Gears.

The Thunderbird uses a hydraulic concentric slave cylinder clutch system that is non-adjustable. The hydraulic system uses brake fluid, and as such, should be flushed out every few years, or at least when driveline work is done. The slave cylinder has been known to leak on occasion, and due to the design, the transmission must be removed for it to be replaced. When a cylinder leaks, in most circumstances it contaminates the clutch lining and the clutch has to be replaced as well. The flywheel can be refinished if it is in good condition and not heat checked. However, as the



Figure 2: Concentric Slave cylinder

clutch is non-adjustable there is a minimum thickness. The minimum distance from crankshaft mounting flange to clutch surface is 22.95mm (0.90 in). If you need to compensate for flywheel thickness, the aftermarket has devised flywheel shims that relocate the flywheel rearward. The shim is placed between the flywheel and the crank, and they are available in .050in and .025in sizes. If you can not find a listing for the SC at your local parts house, ask for one for a F150 with either a 4.9L six cylinder or 5.0L V-8 engines as the SC V-6 share the flywheel bolt pattern with these two engines.

The original equipment clutch went through some development changes along the life of the SC program. The clutch disk itself has a spline pattern of 1 1/16 – 10, which is a common standard and is shared with a multitude of applications. The early cars (1989-1993) used an 11" diameter friction surface, while the later units grew to 11.5" units. The 11" clutch setup is shared with a number of F150 applications, both inline six cylinder and V-8 applications, and the early SC. This is the reason the early clutch setup is so easy to find and usually in stock. The later unit is a bolt-in upgrade for the early cars because the pressure plate bolt pattern is identical. However, they are less common, more difficult to get, and fewer performance upgrades can be had for them. As this is written, Centerforce has not yet created a dual friction part number for the 11.5" unit, but I am positive that they would build one for you. The SC uses a 164 tooth zero balance flywheel, and there are lightweight units available from companies such as McLeod. The lower mass flywheels allow the engine to accelerate quicker. However, the trade off is more torsional instability, which can make smooth clutch action difficult if the mass is reduced too much. For those who have taken the SC to the Nth degree, some of the dual disc clutch

systems for the Mustang or trucks may be adaptable to the SC V-6. Contact McLeod.

Another change that can be made to the SC transmission is the shifter. The SC unit does not have a good reputation for staying together, especially with those of us that want to bang gears like we are driving a Mustang. The components to rebuild the stock shifter are available at your local Ford dealer, for how much longer is anybody's guess. For those who rebuild your shifter use some thread lock compound, something the factory neglected. After a decade or more, even the stock shifter can become much looser. The only aftermarket solution



Figure 3: SC Centerforce CF1 Clutch

is from B&M Racing and Performance, with the Ripper shifter. This unit is much tighter and reduces shift throws about 25%. It also utilizes the factory upper shift lever to maintain transmission gear rattle isolation.

Follow along as we upgrade the clutch in a 1992 model and show you some of the SC idiosyncrasies. The SC transmission removal process is not really any different than any other rear wheel drive muscle car. There are a few things that do set it apart from the process in a farm truck that we will

cover. The major difference being the independent rear suspension and centrally located fuel tank.

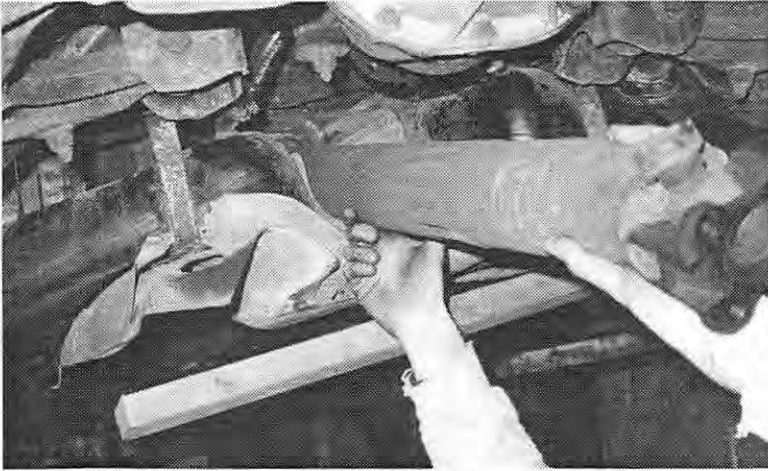


Figure 4: Removing the driveshaft

The first step is to begin inside the vehicle and remove the shift knob by unscrewing counterclockwise. The console top is removed next by extracting the screws located under the center console storage compartment lid. The cover is lifted at the rear and slid rearward to disengage the dowels just under the CD player. The cover is then guided off around the shifter and emergency brake handle. Once the console top cover is removed, the two upper shift lever retaining bolts can be unbolted. With that accomplished, you can move to the underside of the car. Before doing so, disconnect the battery ground cable for safety. Once the vehicle is safely supported on a hoist or jackstands, remove the body reinforcement located just in front of the gas tank. The factory service manual and I differ at this next step, removal of rear exhaust. While you can remove the transmission with the rear exhaust in the vehicle, I remove it completely because it is so easy to do and I do not have to remove anything else to do it. The factory shop manual disconnects the exhaust joint located just aft of the resonator, and leaves the rear exhaust in place. I, on the other

hand, pop off the rubber retainers at the differential and aft of the mufflers and remove the rear exhaust from the vehicle. The extra room under the car is worth the few extra minutes work, especially if you are working on the ground.

The next step is to mark the relationship of driveshaft to the differential companion flange so the driveshaft can be reinstalled in its original position. The shop manual then has you remove the four retaining bolts for the differential pumpkin and lower it down on the axles, and slide the driveshaft rearward over the differential. While this does disengage the driveshaft from the transmission, it does not remove the driveshaft from the vehicle and it can still be an obstruction when removing and reinstalling the transmission. My preference is to leave the differential in place and lower the fuel tank to remove the driveshaft. This is accomplished by removing the catalytic converter assembly, then the driveshaft loop and central body stiffener, located behind the exhaust heat shield located just in front of the fuel tank. Once these components are removed, the fuel tank can be lowered enough to completely remove the drive shaft from the vehicle. The only things that have to be removed from the fuel tank are the four bolts on the retaining straps. The lines and electrical connections stay in place because you only need to lower the fuel tank, not remove it. This is accomplished with the use of a floor jack and a block of wood. Be careful, as fuel is about seven pounds per gallon. It is easier when the tank is almost empty.

Once the drive shaft is out of the way and the catalytic converter assembly has been removed, the next steps are the starter and transmission electrical connectors. The clutch hydraulic line is next and has been a mystery to some; the line is based upon similar principals as that of the Ford fuel

lines. The hydraulic line fitting has a white plastic retainer bushing wrapped around the end at the transmission bell housing. The bushing is to be depressed into the slave cylinder (toward transmission). Then, while applying light pressure, slightly pull on the line to remove it from the slave cylinder. There is a special tool (T88T-70522-A) that is available from OTC, but I do not know anybody who has purchased it. The tool is designed to be able to apply pressure to the retainer bushing around the diameter to aid in removing the line. However, a flat bladed screwdriver has sufficed for me in the number of times I have performed the job.



Figure 5: Removing the hydraulic line

At this point, the job is no different than any other clutch job. Remove the six bell housing bolts, the two oil pan bolts that pass into the bell housing from the front, and the cross member. Then slide the transmission from the clutch and lower it out of the vehicle. The transmission is heavy and cumbersome so be careful when lowering it. Bribe your friends for the much needed help. It is always better to have more help than you need. Also, it is helpful to keep a stock of your friends' favorite refreshments on hand. Once the transmission is out, the clutch removal is straightforward.

Installation is not much more difficult than reversal of the removal, however, a few things to be aware of, even though the slave cylinder is self-sealing when you remove the line. I always bleed the system just to keep fresh fluid in the cylinder. The bleeding process is no different than that of hydraulic brakes. Just make sure you get all the air out. When installing the clutch itself use an alignment tool or an old input shaft. This step will save much time and a few choice words when installing the transmission. I use a T-5 Mustang input shaft as they are dimensionally similar and with enough broken parts around they are easy to find for free. The transmission has a fill plug on the side of the case. Make sure the transmission fluid is up to the threads on the fill plug. Remember that the M5R2 takes automatic transmission fluid, not a heavier gear lube. Mobil 1 ATF is highly recommended.

Sources

B&M Racing & Performance Products LLC
9142 Independence Avenue
Chatsworth, California 91311
(818) 882-6422
www.bmracing.com

Centerforce
2266 Crosswind Drive
Prescott, Arizona 86301
(502) 771-8422
www.centerforce.com

Liberty's Gears
6390 Pelham Road
Taylor, Michigan 48180
(313) 278-4040

McLeod
1600 Sierra Madre Circle
Placentia, California 92870
(714) 630-2764
www.mcleodind.com

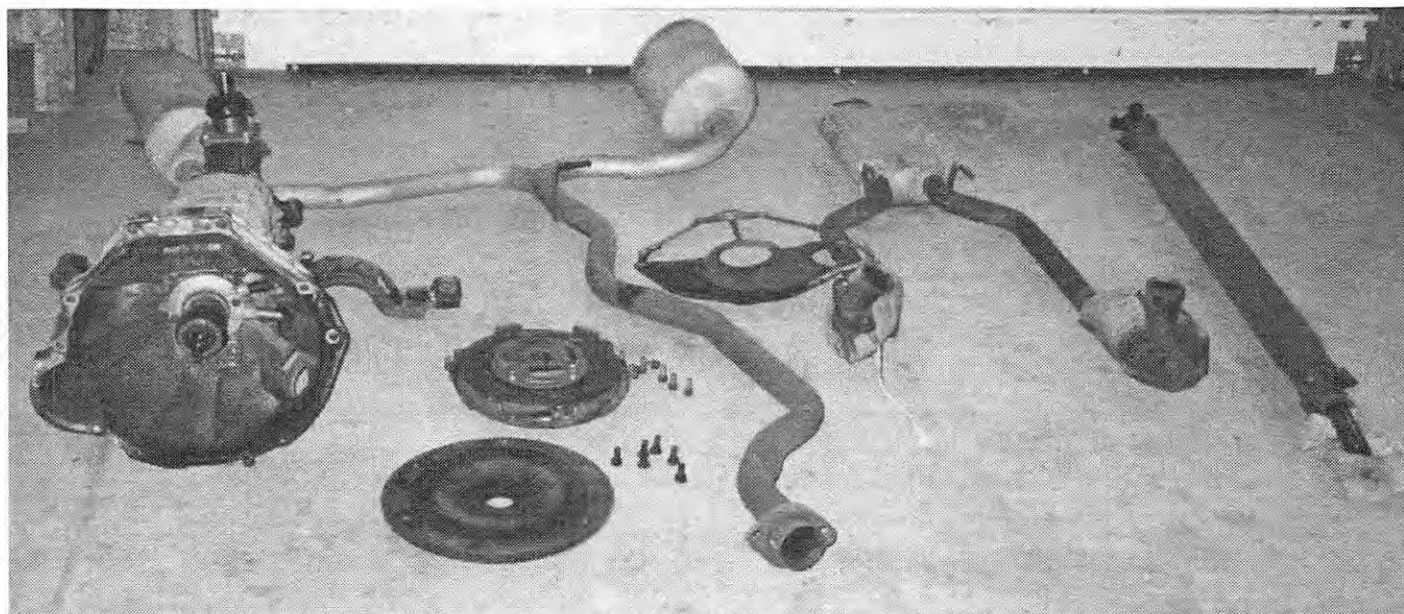


Figure 6: The parts are off the car...now I have to put all this stuff back in?

1989 Super Coupe Technical Dealer Ordering Information

Compliments of Scott Shockley

1989 MODEL THUNDERBIRD

ENGINE-TRANSMISSION-AXLE RATIO AVAILABILITY			STD. RATIO AXLE	WITH OPTIONAL TRACTION-LOK (45C)
ENGINE — TRANSMISSION	MODELS	CODES		
3.8L EFI W/AUTOMATIC OVERDRIVE	STD, LX	994 & 44T	3.27	3.27
*3.8L EFI SUPER CHARGED W/5-SPD. MAN. (1)	SUPER COUPE	99R & 44S	2.73	STD.
*3.8L EFI SUPER CHARGED W/AUTO OD (1)	SUPER COUPE	99R & 44T	3.27	STD.

(1) Includes anti-lock braking system and Traction-Lok Axle.

FUEL ECONOMY

ENGINE DISPL.	TRANS.	F. E. LABEL ADJUSTED		EST. ANNUAL FUEL COST
		CITY	HIGHWAY	
3.8L EFI	AUTO. OVERDRIVE	19	27	\$648
*3.8L EFI SUPER CHARGED	W/5-SPEED MANUAL	17	24	868
	W/AUTOMATIC OD	17	23	868

ENGINE HORSEPOWER AND TORQUE RATINGS (2)

Engine Displ.	Trans.	Nominal Compression Ratio	Horsepower	Torque
			H.P. @ RPM	FT. LB. @ RPM
3.8L EFI	AOD	9.0:1	140 @ 3800	215 @ 2400
*3.8L EFI SUPER CHARGED	ALL	8.2:1	210 @ 4000	315 @ 2600

(2) Representative horsepower and torque ratings adjusted to SAE J-1349 net.
 ★ New or revised for 1989.

12-12-88

1989 MODEL THUNDERBIRD

Major Standard Equipment

EXTERIOR	Standard	LX	Super Coupe
BUMPERS — Soft color-keyed, front and rear, 5 mph	■	■	■
BUMPER RUB STRIPS — Black with bright insert	■	■	
Black			■
CLADDING, LOWER BODYSIDE			■
GLASS — Flush windshield, door, quarter window, backlight	■	■	■
LIGHTS — Aerodynamic halogen headlamps/parking lamps	■	■	■
Integral fog lamps in unique front fascia			■
High-mount stop lamp	■	■	■
MIRRORS — Left-hand remote control (Black)	■		
Dual electric remote control (Black on LX; Color-keyed on Super Coupe)		■	■
MOLDINGS — Black windshield/door/quarter window/backlight	■		■
Black windshield/backlight; bright door/quarter window		■	
MOLDINGS, BODYSIDE PROTECTION — Wide black with bright insert	■	■	
Narrow black			■
WHEEL COVERS — Deluxe	■		
Styled Road		■	
WHEELS — Cast aluminum, 16 inch x 7 inch, with locking lug nuts			■
INTERIOR			
BELTS, SAFETY — Two point passive restraint system with active lap belt in front, three point active restraint system in rear outboard positions, lap belt for rear center position, five seating positions, reminder chime	■	■	■
BRAKE, PARKING — Foot Operated	■	■	
Hand operated mounted on console			■
CARPET — 16-oz. cut-pile	■		
24-oz. cut-pile		■	■
CONSOLE — Full length, with floor-mounted shift	■	■	■
DOOR TRIM — All vinyl with hand grip handles, storage bins	■		
Luxury level with woodgrain, courtesy lights		■	
Luxury level with courtesy lights			■
DRIVER'S FOOTREST			■
ILLUMINATED ENTRY SYSTEM		■	
INSTRUMENT PANEL — Upper storage compartment with sliding cover		■	■
Woodgrain appliques		■	
LIGHT GROUP — (See Luxury Light/Convenience Group page 4 for content)		■	■
LIGHTS — Courtesy dome and luggage compartment	■	■	■
Rear seat courtesy lights		■	■
LUGGAGE COMPARTMENT — Low liftover design, carpeted	■	■	■
MIRRORS, VISOR — Dual covered with headliner pocket	■	■	■
Illuminated		■	
SEATS — Reclining bucket seats in cloth trim with inertia seatback releases	■		
Luxury cloth bucket seats with driver's six-way power		■	
Articulated sport seats with power adjustable lumbar support, power adjustable seat-back side bolsters, seat back map pocket, and 4-way headrest			■
Rear seat center armrest		■	■
SIDE WINDOW DEFOGGERS	■	■	■
SPEED CONTROL		■	

1989 MODEL THUNDERBIRD

Major Standard Equipment

INTERIOR (Cont'd)	Standard	LX	Super Coupe
STEERING WHEEL — Luxury	■		
Luxury leather wrapped		■	
Sport Soft Feel			■
TILT STEERING WHEEL		■	
FUNCTIONAL			
AIR CONDITIONER — Manual	■	■	■
ALTERNATOR — 65 amp.	■		
75 amp		■	
Heavy Duty (90 amp)			■
AUTOMATIC RIDE CONTROL ADJUSTABLE SUSPENSION			■
AXLE, TRACTION-LOK			■
BATTERY, MAINTENANCE-FREE — 48 amp.	■		
58 amp.		■	
72 amp.			■
BRAKES, POWER — Front disc/rear drum	■	■	
Anti-lock Braking System (ABS) with Four-wheel disc			■
VEHICLE MAINTENANCE MONITOR		■	■
DIGITAL CLOCK (Integral with radio)	■	■	■
ELECTRONIC ENGINE CONTROLS, EEC-IV	■	■	■
ENGINE — 3.8L V-6 with multiple-port sequential EFI	■	■	
3.8L V-6 with multiple-port sequential EFI, supercharged/intercooled with dual exhaust			■
FUEL DOOR, REMOTE RELEASE		■	
FUEL TANK — 19.0 gallons, tethered gas cap	■	■	■
GLASS, TINTED (COMPLETE)	■	■	■
HORN — Dual-note	■	■	■
INSTRUMENTATION — Analog instrument cluster with trip odometer, low engine oil indicator light/fuel gauge/temperature gauge	■		
Electronic LCD instrument cluster with digital speedometer, and odometer; electronic tachometer and gauges for voltage, oil, temperature and fuel; analog temperature gauge; trip computer with average fuel economy, instantaneous fuel economy, trip distance, fuel remaining and distance to empty.		■	
Performance instrument cluster includes analog tachometer, adjustable suspension "firm ride" indicator light and supercharger boost gauge, temperature gauge, oil gauge and trip odometer			■
LOCK GROUP, POWER (See page 4 for content)		■	
RADIO — Electronic AM/FM stereo search with clock and four speakers	■		■
Electronic AM/FM stereo search with cassette tape player and clock		■	
STEERING, POWER — Rack and pinion	■		
Speed sensitive rack and pinion		■	■
SUSPENSION — Front long spindle SLA, with stabilizer bar, variable rate springs, lower control arm, and tension strut	■	■	■
Rear Independent, attached to isolated sub-frame, with stabilizer bar and variable rate springs	■	■	■
Special handling package			■
TIRES — P205/70R15 BSW all-season	■	■	
P225/60R16 95V BSW performance			■
Mini-spare	■	■	■
TRANSMISSION — 4-speed automatic overdrive	■	■	
5-speed manual overdrive			■
WINDOWS, POWER SIDE	■	■	■
WINDSHIELD WIPERS — Interval	■	■	■

5-22-89

1989 MODEL THUNDERBIRD PREFERRED EQUIPMENT ORDERING GUIDE

(ADDITIONAL MISCELLANEOUS OPTIONS ARE ALLOWED,

BUT PACKAGE CONTENT MAY NOT BE CHANGED; PACKAGE CONTENT IS DENOTED BY AN X)

BODY

P60 2 DOOR STANDARD

P62 2 DOOR LX

P64 2 DOOR SUPER COUPE

		STANDARD	LX	SUPER COUPE	
PACKAGE CODE		151B	162A	157B*	REMARKS
PACKAGE CONTENT	OPTION CODE				
MIRRORS, DUAL ELECTRIC REMOTE.....	628	x	S	S	
BRIGHT WINDOW MOLDINGS.....	682	x	S	NA	
RADIO, ELECTRONIC AM/FM STEREO WITH CASSETTE PLAYER/CLOCK.....	589	x	U	x	RADIO CREDIT OPTION AVAILABLE WITH 151B.
SPEED CONTROL AND TILT STEERING WHEEL.....	52N	x	S	x	
ILLUMINATED ENTRY SYSTEM.....	47J	I	S	I	AVAILABLE ONLY WITH 59C LUX. GRP. OR 144 KEYLESS. SEE PAGE 4 FOR CONTENT/RESTRICTIONS.
LOCK GROUP, POWER.....	563	x	x	x	
SEAT, 6-WAY POWER DRIVER'S.....	53A	x	x	x	
SEAT, 6-WAY POWER PASSENGER.....	53J	x	x	x	
WHEEL COVERS, STYLED ROAD.....	655	x	U	NA	
DEFROSTER, REAR WINDOW.....	57Q	x	x	x	REQ'D IN NEW YORK STATE. INCLUDED WITH 632 COLD WEATHER GROUP. SEE PAGE 4 FOR CONTENT.
LUXURY LIGHT/CONVENIENCE GROUP.....	59C	x	I	O	
WHEELS, CAST ALUMINUM WITH UPSIZED TIRES (BSW P215/70R15).....	65H	O	x	U	
PREMIUM LUXURY GROUP(1).....	61E	O	x	O	NA WITH 41X PACKAGE DELETE.
INCLUDES:					
LUXURY LIGHT/CONVENIENCE GROUP.....	59C	I	x	O	SEE PAGE 4 FOR CONTENT/RESTRICTIONS.
FLOOR MATS, FRONT.....	12H	O	x	O	
KEYLESS ENTRY SYSTEM.....	144	O	x	O	INCLUDES 47J ILLUMINATED ENTRY. REQUIRES 563 POWER LOCK GROUP. NA WITH 41X PACKAGE DELETE.
ELECTRONIC PREMIUM CASSETTE RADIO WITH PREMIUM SOUND.....	588	O	x	O	
POWER ANTENNA.....	91H	O	x	O	NA WITH 58Y RADIO CREDIT OPTION.
OTHER REGULAR PRODUCTION OPTIONS					REMARKS/RESTRICTIONS
ANTI-LOCK BRAKING SYSTEM.....	552	O	O	S	INCLUDES 45C TRACTION-LOCK AXLE. SEE PAGE 4 FOR CONTENT/RESTRICTIONS.
ANTI-THEFT SYSTEM.....	18A	O	O	O	
AUTOMATIC OVERDRIVE TRANSMISSION.....	447	S	S	O	
AXLE, TRACTION-LOCK.....	-	O	O	O	
LEATHER AND VINYL SEAT TRIM.....	Pg.5	NA	O	O	SEE PAGE 6 FOR AVAILABILITY AND CODES. INCLUDES SPLIT FOLD DOWN REAR SEAT WITHOUT ARMREST ON SUPER COUPE. NA WITH 41X PACKAGE DELETE.
MOONROOF, POWER.....	21B	O	O	O	INCLUDES 677 DUAL VISOR VANITY MIRRORS. DELETES ALL PACKAGE CONTENT (EXCEPT 57Q AND 628 ON 151B) AND DISCOUNT IF REAR DEFROSTER IS NOT DESIRED, CODE 57Q IN DELETION SECTION OF ORDER FORM.
PACKAGE DELETE OPTION.....	41X	O	O	O	
PAINT, CLEARCOAT.....	Pg.5	O	O	O	
RADIO SYSTEMS.....					
FORD JBL AUDIO SYSTEM.....	916	O	O	O	REQUIRES 588 PREMIUM CASSETTE RADIO. REQUIRES 916 FORD JBL AUDIO SYSTEM.
COMPACT DISC PLAYER.....	917	O	O	O	NA WITH 91H POWER ANTENNA OR RADIO OPTIONS. DELETES PACKAGE DISCOUNT. SEE PAGE 4 FOR RESTRICTIONS.
RADIO CREDIT OPTION.....	58Y	O	NA	NA	REQUIRE 65N WIRE WHEEL COVERS ON LX WITH 162A. SEE PAGE 4 FOR RESTRICTIONS.
SPARE TIRE, CONVENTIONAL.....	508	O	O	NA	
TIRES, P205/70R15 WSW.....	T3F	O	O	NA	
TIRES, P225/60R16 EAGLE GT+4 BSW.....					
ALL-SEASON PERFORMANCE.....	T23	NA	NA	O	
WHEEL COVERS, LOCKING WIRE STYLE.....	65N	O	O	NA	DISCOUNT APPLICABLE WITH 162A.
LIMITED PRODUCTION OPTIONS					
BRACKET, FRONT LICENSE PLATE.....	153	O	O	O	REQUIRED IN STATES THAT ISSUE TWO PLATES. SEE PAGE 4 FOR CONTENT. NA WITH 41X.
COLD WEATHER GROUP.....	632	O	O	O	

(1) TO DELETE GROUP OPTION(S) FROM AN EXISTING ORDER, THE INDIVIDUAL OPTION CODE OR CODES AND THE GROUP OPTION CODE MUST BE ENTERED IN THE DELETION SECTION OF THE DEALER ORDER FORM.

LEGEND:

- x — CONTAINED IN PREFERRED EQUIPMENT PACKAGE/MAY NOT BE CHANGED
- O — OPTIONAL; NOT INCLUDED IN PACKAGE
- S — STANDARD
- I — INCLUDED
- NA — NOT AVAILABLE
- U — UPGRADED

NOTES:

- Bold box denotes focus models.
- Bold "X" denotes items required for package discount.

*1989 Thunderbird Super Coupe Special Value Program

When Preferred Equipment Package 157B is ordered, the following equipment will be included at No Extra Cost.

- Defroster, Rear Window
- Lock Group, Power
- Radio, Electronic AM/FM Stereo Cassette
- Seat, 6-Way Power Driver's
- Seat, 6-Way Power Passenger
- Speed Control and Tilt Steering Wheel

Additions to the packages are allowed.

SUGGESTED RETAIL	151B	162A	157B
TOTAL PACKAGE PRICE	\$2,214	\$1,419	\$1,371
TOTAL DISCOUNT (925)		(600)	(1,371)
NET PRICE	1,289	819	0

1989 MODEL THUNDERBIRD

ORDERING GUIDE

	OPTION CODE
ENGINES/TRANSMISSIONS — See page 6 for powertrain availability chart (Only Valid Combinations Are Shown — Engine Must Be Coded)	
3.8 LITER EFI 6-CYLINDER.....	994
WITH 4-SPEED AUTOMATIC OVERDRIVE.....	44T
Std. on LX and Standard; NA on Super Coupe.	
* 3.8 LITER EFI SUPER CHARGED/INTERCOOLED 6-CYLINDER ENGINE....	99R
Std. and only available on Super Coupe.	
WITH 5-SPEED MANUAL OVERDRIVE (STD).....	44S
WITH AUTOMATIC OVERDRIVE	44T
AXLES	
TRACTION-LOK AXLE — STANDARD AND LX.....	SEE PG. 6
TIRES (Must Specify)	
MINIMUM-APPROPRIATE SIZE WILL BE GENERATED	
BSW.....	T00
WSW.....	TOA
P205/70R15 BSW (Std. on Standard model and LX; NA on Super Coupe).....	T36
P205/70R15 WSW (NA on Super Coupe; locking wire style wheel covers recommended, and required on LX).....	T3F
P225/60R16 95V BSW Performance (Std. and only avail. on Super Coupe; Includes Goodyear Eagle and cast alum. wheels; NA with optional wheels/wheel covers, or 508 conventional spare).....	T22
P225/60R16 95V Eagle GT+4 BSW all-season performance (only available on Super Coupe).....	T23
CONVENTIONAL SPARE TIRE (NA on Super Coupe, T22/T23 P225 tires or 65H cast aluminum wheels).....	508
CALIFORNIA EMISSIONS SYSTEM AND HIGH ALTITUDE CONTROL CODES	
CALIFORNIA EMISSIONS SYSTEM (Required and only available on units for California registration; NA with 428 high altitude).....	422
CALIFORNIA EMISSIONS SYSTEM NOT REQUIRED (Control Code for units shipped to California dealers or units ordered by California dealers for registration out of state).....	423
NON-CALIFORNIA DEALER ORDER FOR CALIFORNIA REGISTRATION (Requires 422 California emissions system. Vehicle must be registered in California).....	76N
CALIFORNIA PUBLIC SERVICE/EMERGENCY VEHICLE EXEMPTION (Requires 423 California emissions system not required. Only available on units sold to authorized governmental units and privately-owned ambulance companies as listed in the 1989 Model Initial Ordering Guide published in June, 1988).....	766
HIGH ALTITUDE PRINCIPAL USE (Control code required on all units sold for principal use in high altitude counties, as defined in EPA regulations, and listed in the 1989 Model Initial Ordering Guide published in June, 1988. High altitude performance and/or emissions control equipment provided as required to comply with EPA regulations or general product vehicle performance acceptance standards. Also available on units for sale in high altitude fringe areas).....	428
NON-HIGH ALTITUDE PRINCIPAL USE (Control Code on units shipped to high altitude areas or units ordered by high altitude area dealers for registration in a non-high altitude area).....	429

* New or Revised for 1989.

GROUP OPTION CONTENT AND AVAILABILITY INFORMATION

ANTI-THEFT SYSTEM (18A)

Provides protection to the passenger and trunk compartment • an alarm will flash headlamp low beams, taillamps and sound horn intermittently for two to four minutes • starter will interrupt upon unauthorized entry until disarmed with door key or proper keyless entry code.

Requires • 963 power lock group.

NA with • 41X package delete option.

*COLD WEATHER GROUP (632)

Includes • engine block heater • 72 ampere heavy-duty battery (std. on Super Coupe • 75 ampere heavy-duty alternator (90 ampere standard on Super Coupe) • rear window defroster

*LUXURY LIGHT/CONVENIENCE GROUP (59C)

Includes • CORNERING LAMPS • DUAL ILLUMINATED VISOR VANITY MIRRORS (Std. on LX) • 47J ILLUMINATED ENTRY SYSTEM (Std. on LX) • AUTOLAMP SYSTEM — Automatically turns the car headlamps on for night driving and turns them off during daylight. The system also allows the driver to select a variable time delay of up to approximately four minutes from the time the ignition is turned off until the headlamps turn off automatically. Also includes Auto Dim feature that automatically keeps headlamps on low beam in traffic or lighted areas then switches to high beam when driving conditions permit • LIGHT GROUP — Includes front seat reading light, instrument panel courtesy lights and engine compartment light (standard on LX and Super Coupe). • AUTOMATIC DAY/NIGHT MIRROR (deleted with moonroof) • VEHICLE MAINTENANCE MONITOR — Includes adaptive oil change indicator, low fuel light, low oil level light, low radiator coolant light and low washer fluid light (Std. on LX and Super Coupe).

POWER LOCK GROUP (963)

Includes • electric power door locks • remote control electric decklid release in glove box • remote-control fuel door release in glove box.

Required with • 144 keyless entry • 18A anti-theft system.

Standard on • LX.

MISCELLANEOUS AND SPECIAL ORDER CODES

MISCELLANEOUS

Local/State Ordinance Deviation	761
Local/State Ordinance Deviation and Off Standard Paint/Trim.....	762
Off Standard Paint (NA with Super Coupe)	763
Predelivery Only	361
Predelivery with Undercoat.....	362
Priced DORA	C09

SPECIAL ORDER

DSO	D32
PTO (Available only with fleet and a minimum of 5 orders)	D33

FLEET ONLY		
BODY		1
P60 2 Door Standard		5
		0
		G
NOTE: PACKAGE CONTENT MAY NOT BE CHANGED		PACKAGE CODE
DESCRIPTION	ORDER CODE	
TRANSMISSION, AUTOMATIC OVERDRIVE	44T	x
BRIGHT WINDOW MOLDINGS	682	x
DEFROSTER, REAR WINDOW	570	x
MIRRORS, DUAL ELECTRIC REMOTE	628	x
SEAT, 6-WAY POWER DRIVER'S	53A	x
SEAT, 6-WAY POWER PASSENGER	53J	x
WHEELS, STYLED ROAD	655	x

NOTE: THIS PACKAGE IS AVAILABLE WITH THE SAME RPO'S (EXCEPT 41X, 59C AND 61E) AND LPO'S AS PACKAGE 151B (SEE PAGES 3 AND 4). IN ADDITION, THE FOLLOWING EQUIPMENT MAY BE ADDED AS INDIVIDUAL OPTIONS:

- RADIO, ELECTRONIC AM/FM STEREO PLAYER WITH CASSETTE PLAYER/CLOCK (589)
- ILLUMINATED ENTRY (47J)
- SPEED CONTROL AND TILT STEERING WHEEL (52N)
- POWER LOCK GROUP (963)

Do not overwork to be rich; because of your own understanding, cease! Will you set your eyes on that which is not? For riches certainly make themselves wings; they fly away like an eagle toward heaven. Proverbs 23:4,5

1989 MODEL THUNDERBIRD

EXTERIOR COLOR AND INTERIOR TRIM SELECTOR

EXTERIOR PAINT SELECTOR AND INTERIOR TRIM COMPATIBILITY STANDARD AND LX MODELS EXTERIOR PAINT COLOR	PAINT CODE	INTERIOR TRIM COLORS			
		TITANIUM	SHADOW BLUE	CURRENT RED	LIGHT SANDALWOOD
BLACK	1C	X		X	X
*ALMOND	6V		X		X
OXFORD WHITE	9L	X	X	X	X
— CLEARCOAT METALLIC — *					
*LIGHT TITANIUM	11	X	X	X	
*CURRENT RED	2S	X		X	
*LIGHT CRYSTAL BLUE	3Q		X		
*BRIGHT RED (NON-METALLIC)	6D	X			
*DEEP TITANIUM	4S	X		X	
MEDIUM SANDALWOOD	62				X
*CRYSTAL BLUE	7E		X		
TWILIGHT BLUE	7F	X	X		

EXTERIOR PAINT SELECTOR AND INTERIOR TRIM COMPATIBILITY SUPER COUPE EXTERIOR PAINT COLOR	PAINT CODE	INTERIOR TRIM COLORS		
		TITANIUM	SHADOW BLUE	CURRENT RED
BLACK	1C	x		x
OXFORD WHITE	9L	x	x	x
— CLEARCOAT METALLIC — *				
*LIGHT TITANIUM	11	x	x	x
*BRIGHT RED (NON-METALLIC)	6D	x		
TWILIGHT BLUE	7F	x	x	

*EXTRA COST CLEARCOAT METALLIC PAINT.

INTERIOR TRIM TYPE AND COLOR SELECTOR	INTERIOR TRIM COLORS			
	TITANIUM	SHADOW BLUE	CURRENT RED	LIGHT SANDALWOOD
STANDARD CLOTH AND VINYL BUCKET SEATS (Std.)	CA	CB	CF	CP
LX LUXURY CLOTH BUCKET SEATS (Std.) LEATHER AND VINYL BUCKET SEATS	DA FA	DB FB	DF FF	DP FP
SUPER COUPE CLOTH AND VINYL ARTICULATED BUCKET SEATS (Std.) LEATHER AND VINYL ARTICULATED BUCKET SEATS	EA GA	EB GB	EF GF	

* NEW FOR 1989

For Sale

1995 5-Speed Thunderbird Super Coupe

833 Miles! Build date of August 1995.

All papers with complete manual set and all dealer literature.

Pearl white, 5-speed, power radio, H.D. battery, tan cloth interior, no Moon-roof. Small collection of New-Old-Stock (NOS) parts, which includes cargo net, seat cloth, door panel, parts.

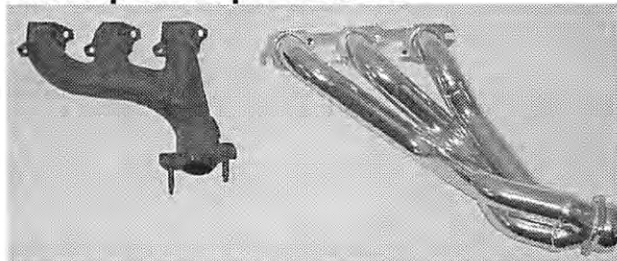
This car is all original and flawless in every way. Non-original parts include oil and filter, coolant, and battery.

Must sell, make offer to Lynn Barnett between 8 a.m. – 5 p.m. PST Call 714-835-3549

SUPER COUPE PERFORMANCE

The 3.8L SC/XR7 Performance Parts Specialists

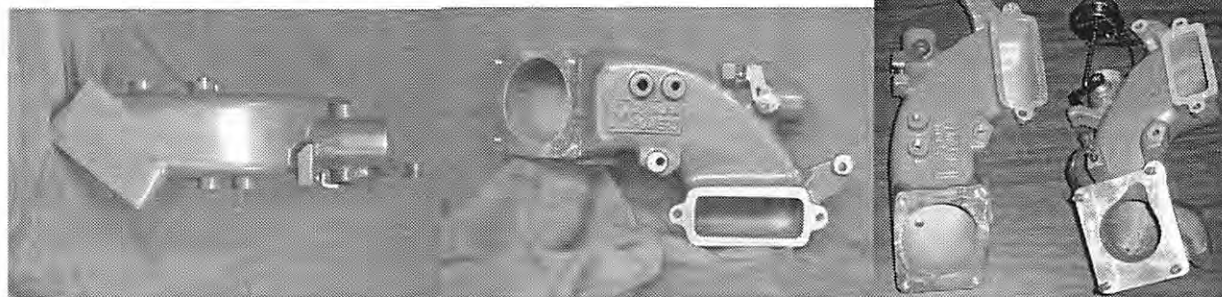
♦ The exclusive supplier of Kooks Super Coupe Headers



Uncoated SC Headers ... **\$499!**

JetHot Coated SC Headers ... **\$619**

Magnum Powers High Flow Inlets ... \$499! (See Sept. 2000 CT for great dyno results!)



NOW AVAILABLE, the MP 83mm Throttle Body designed to mate with this plenum

NEW Line of Custom Fit Thunderbird Car Covers – Indoor or Outdoor

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, ARP, 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: scco@usa.net Phone: 513-697-6501 Fax: 513-697-0580

A letter from Ford to dealerships promoting the 35th Anniversary model



Keith C. Magee
General Marketing Manager
Ford Division

Ford Motor Company
300 Renaissance Center
P.O. Box 43318
Detroit, Michigan 48243

Dear Ford Dealer:

In 1955, the impact of Thunderbird was immediate and sensational. Today, an all-new Thunderbird continues to build upon that success, and 1990 will be a 35th anniversary year of celebration.

This celebration will generate excitement and sales in the full line of Thunderbird. Highlighting the celebration will be a special edition 35th Anniversary Thunderbird, which can be ordered beginning mid-December for February 1990 production.

To capitalize on Thunderbird's 35th anniversary year and begin generating showroom traffic immediately, this kit contains:

- promotional ideas to maximize the impact of the 35th anniversary celebration;
- an order form for special anniversary promotional items;
- a brief history of the Thunderbird;
- special anniversary calendar, patch and poster (poster mailed under separate cover);
- advertising planning materials;
- a description of the special 35th Anniversary Thunderbird.

The promotional items available were custom-designed for Thunderbird's 35th anniversary and are ideal for showroom displays or test-drive incentives.

The 35th Anniversary Thunderbird will present unique merchandising opportunities. Promote it side-by-side with the Taurus SHO as a high-performance package the competition can't touch. Our performance story is a strong one and we encourage you to capitalize upon it.

We hope you will take advantage of the 35th anniversary celebration and the sales opportunities that accompany such a milestone in automotive history.

Sincerely,

A handwritten signature in dark ink, appearing to read "Keith Magee", written over a light-colored background.

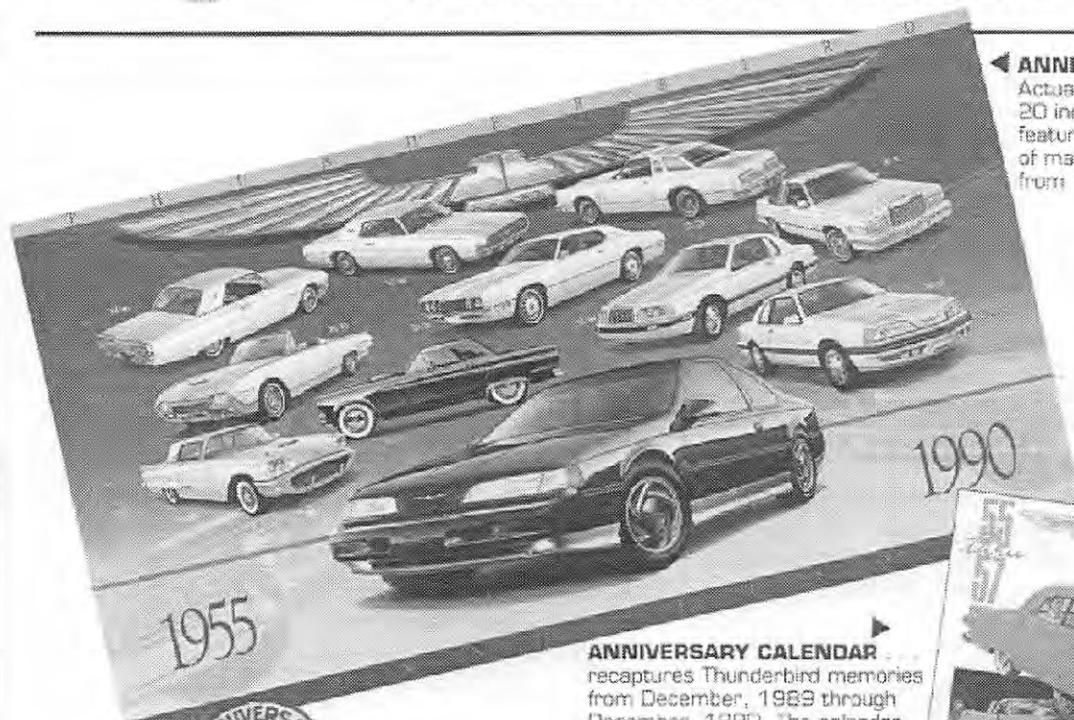
THUNDERBIRD 35th ANNIVERSARY



Ford Thunderbird's success story now spans three-and-a-half decades. As part of the birthday celebration, this exciting lineup of custom-crafted items — all original designs created exclusively for the 1990 Anniversary Year — is now available.

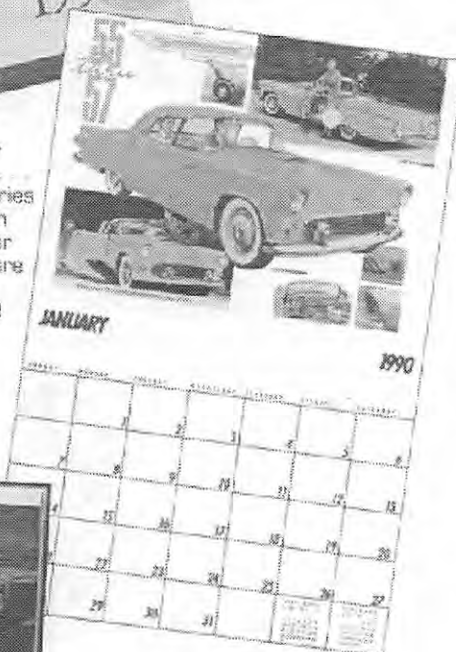
ANNIVERSARY POSTER

Actual poster measures 20 inches by 39 inches, and features exclusive renderings of major Thunderbird models from 1955 to 1990.



ANNIVERSARY CALENDAR

recaptures Thunderbird memories from December, 1989 through December, 1990. The calendar features reproductions from rare sales brochures, including the original 1955 Thunderbird. Add an imprint and your company or club name is visible throughout the year!



ANNIVERSARY EMBLEM PATCH

a replica of the official emblem featured on all special edition 35th Anniversary Thunderbirds: perfect for hats and garments.

ANNIVERSARY BANNER

an eye-catching, 4-foot by 8-foot banner in the anniversary colors. Ideal for nostalgia buffs, it features historic logos from the major model changes.



SOARING SPIRIT: Thirty-Five Years of the Ford Thunderbird

required reading for Thunderbird aficionados. This 64-page book was written by John Katz, the executive editor of Automobile Quarterly, recognized as one of the world's leading automotive authorities. The book contains 50 color and 25 black-and-white photographs, and covers every year of Thunderbird.



This flyer detailed the promotional material that was available for the 35th Anniv. model



RETAIL PRICING

Item No.	Description	Price	Quantity Desired	Subtotal
0001	Book	14.95		\$
0002	Calender	9.95		\$
0003	Poster	8.95		\$
0004	Patch (minimum order = 10)	3.00 each		\$
0005	Banner	35.00		\$
For orders less than \$15.00, add \$3.00 Shipping and Handling \$				
GRAND TOTAL \$				

SHIP TO:

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

VISA/Master Card #

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Expiration Date

Signature _____

Mail with check or money order To:

ADISTRA CORPORATION
35th ANNIVERSARY
HEADQUARTERS
101 UNION STREET
P.O. BOX 1000
PLYMOUTH, MI 48170

Please allow 3 - 4 weeks for delivery.

Book orders will not be shipped before
 November 1, 1989.



This dealership form details the cost for the promotional items. These items are quite rare today and unfortunately Adistra threw out the unsold product years ago.

THUNDERBIRD 35TH ANNIVERSARY PROMOTION PLANNING WORKSHEET



The 35th Anniversary of the Thunderbird presents a terrific opportunity to increase your showroom traffic, thereby increasing your Thunderbird and new vehicle sales. By using the enclosed promotional materials, you can celebrate this special anniversary and bring the excitement home to your local market.

Promotional Ideas

BIRTHDAY PARTY

- ❑ Hold a "35/35" promotion. Invite anyone who turns 35 during 1990 to come in and test drive a Thunderbird and receive a free "birthday présent"—which can be a poster or calendar or book. In conjunction with the promotion, hold a 35/35 prize drawing. All customers who come in for the test drive are automatically registered in a prize drawing—prizes can range from Thunderbird apparel to car accessories.

DRAW CROWDS WITH A CLASSIC

- ❑ Someone in your own backyard may own a historic Thunderbird. That T-bird in your showroom will increase traffic and allow your customers to compare the classic design of yesterday's 'Bird with today's sleek styling. Offer the Thunderbird calendar as a test drive incentive. (Be sure to look into a rider on your insurance policy for the historic car.)

ANNIVERSARY FUNDRAISER

- ❑ Tie in local anniversaries to the Thunderbird anniversary. If a town landmark, special city/town celebration, or historic date will be celebrated during 1990, offer a Thunderbird LX as the grand prize in a raffle or contest for charity fundraising. (Be sure to check with local and state licensing agencies before organizing a raffle or lottery of any kind.)

SNEAK PREVIEW

- ❑ Local car club chapters may appreciate a "sneak preview" of the 35th anniversary Thunderbird. Invite club members to be among the first to see the Anniversary model when it arrives and, while they're visiting your dealership,

test drive the new Thunderbird SC or LX. As a gesture of appreciation for their years of Thunderbird loyalty, give attending members an anniversary emblem patch, poster, calendar, or book.

EVERYONE LOVES A PARADE

- ❑ Offer a fleet of Thunderbirds for use in your local high school's or college's homecoming parade. Demonstrate the power and beauty of the new Thunderbirds by having them pull the floats.

ADVERTISE T-BIRD EXCITEMENT

- ❑ Take advantage of the Thunderbird excitement in ads in your local papers or on local radio stations. As an incentive, offer the poster or calendar as a test drive giveaway.

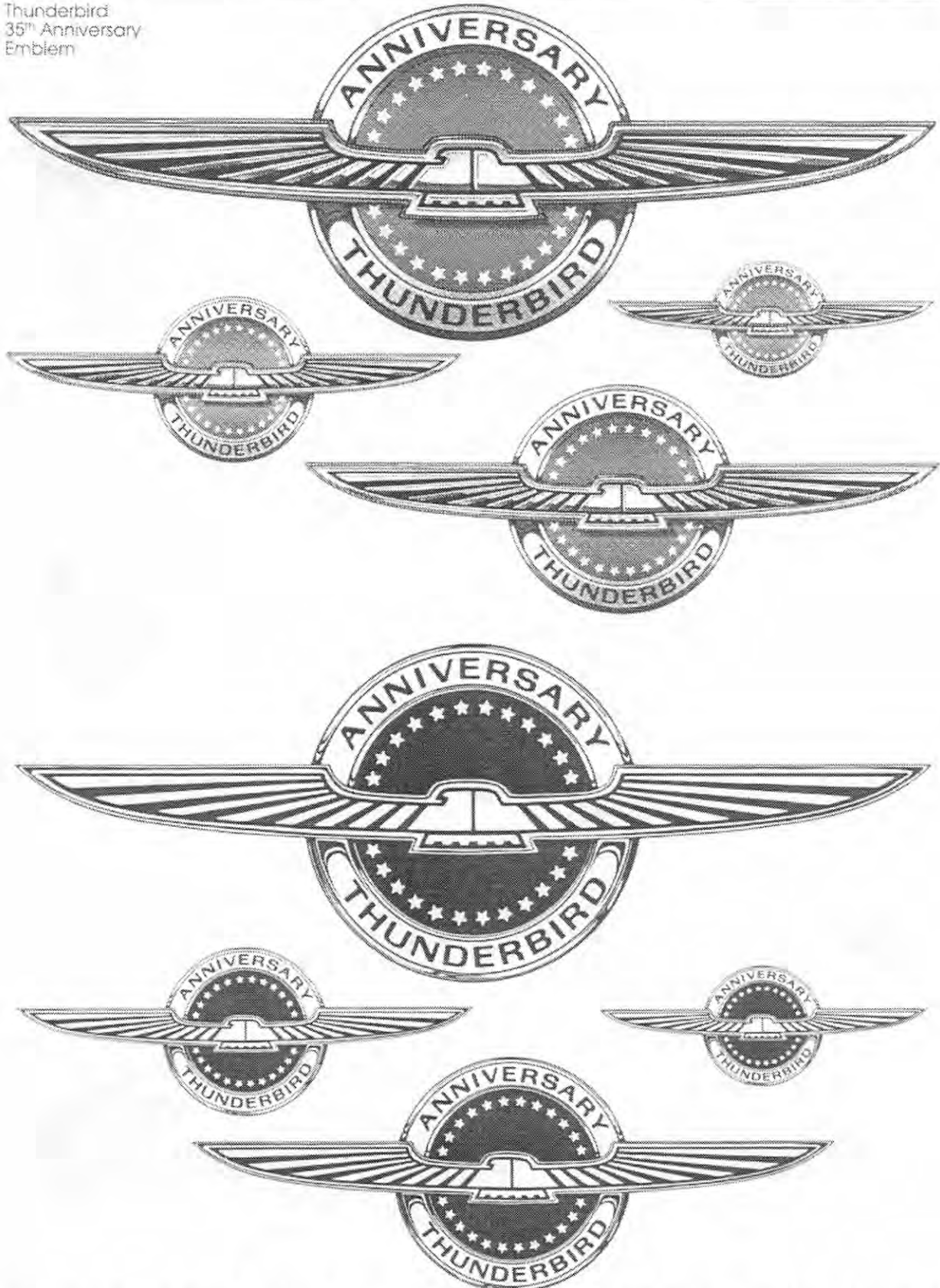
WEAR A THUNDERBIRD!

- ❑ Your 1989 SVO Motorsport Catalog has an exciting array of Ford Thunderbird apparel—especially appropriate for this 35th anniversary year are the classic 1956 and 1957 designs found on both t-shirts and sweatshirts (pages 5 and 16). There are also Thunderbird caps, coffee mugs, license plates and frames, polo shirts, sweaters and pins. As a perfect tie-in to a Motorsport promotion, there is an entire line of Bill Elliott Championship Thunderbird apparel available (The Bill Elliott Signature Collection, shown on pages 12 - 15). By offering these custom-made items as giveaways or prizes in a drawing to potential Thunderbird purchasers, you are increasing the awareness of the 35th anniversary celebration and, in turn, of your dealership name.



Repro art is intended to be reproduced at the size provided. Reducing or enlarging the emblems may affect the quality of the reproduction.

Thunderbird
35th Anniversary
Emblem

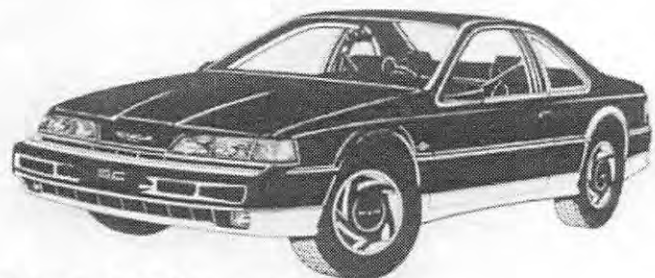
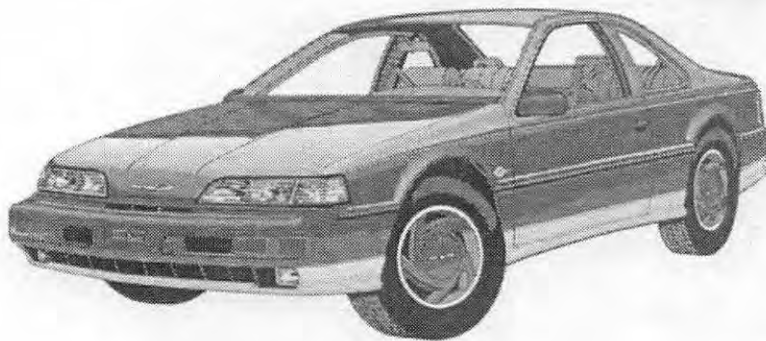
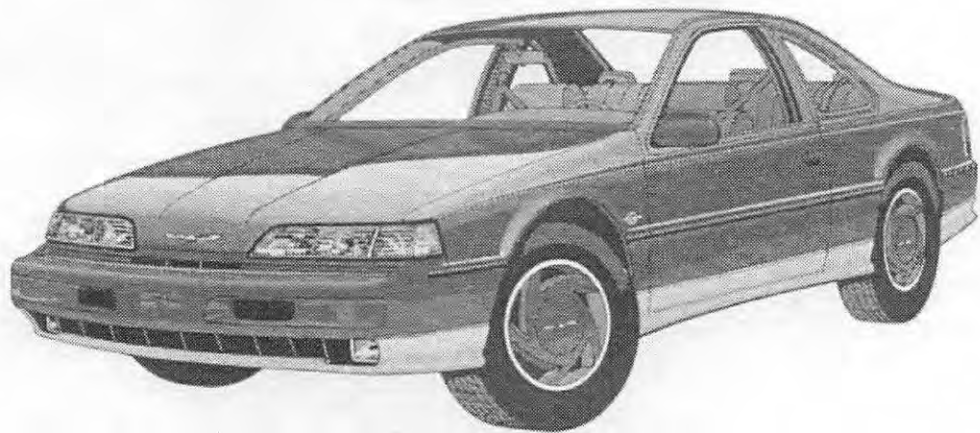
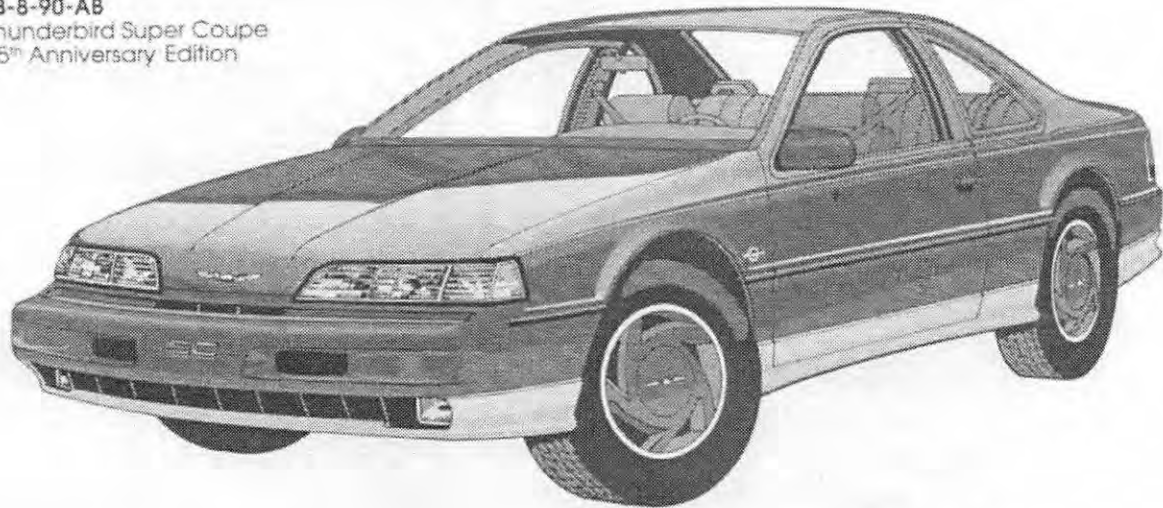


Reproduction art of the various 35th Anniversary logos that was offered to dealerships.



Repro art is intended to be reproduced at the size provided. Reducing or enlarging the vehicles may affect the quality of the reproduction.

TB-8-90-AB
Thunderbird Super Coupe
35th Anniversary Edition



More reproduction art of the car itself.



The Anniversary Thunderbird is a very special, limited edition Super Coupe, built for special customers who will take pride in owning this exclusive performance automobile. It captures the spirit, adventure and performance of an automotive classic. It's the culmination of 35 years of design and technical excellence, crafted in a sculpture of black-and-titanium beauty. The unique features and options listed here make this vehicle an important contribution to the Thunderbird heritage.

UNIQUE FEATURES OF THE 35TH ANNIVERSARY THUNDERBIRD

INTERIOR

- Suede and leather seats including split fold-down rear seat
- Commemorative emblems on door trim panels

EXTERIOR

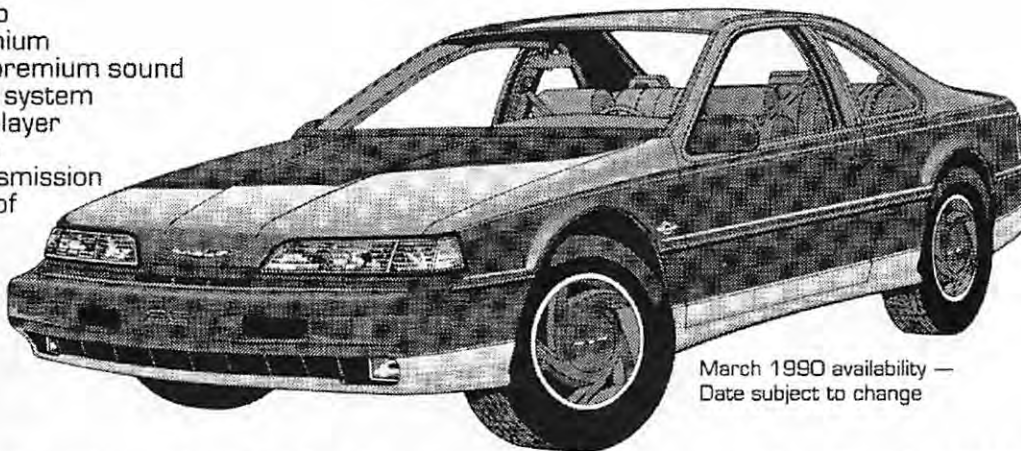
- Two-tone paint and unique stripe treatment
- Black painted road wheels
- Commemorative fender badges
- Unique Thunderbird taillight and hood emblems

PREFERRED EQUIPMENT PACKAGE 157B

- Speed control/tilt wheel
- Rear window defroster
- Power lock group
- Electronic AM/FM cassette radio
- Power driver seat

AVAILABLE OPTIONS

- Keyless entry
- Anti-theft system
- Light convenience group
- Illuminated entry
- Cornering lamps
- Autolamp group
- Electronic premium cassette with premium sound
- Ford JBL audio system
- Compact disc player
- Power antenna
- Automatic transmission
- Power moonroof
- P225/60R16 97V Eagle GT+4 all-season performance tires
- Front license plate bracket
- Cold weather group



March 1990 availability —
Date subject to change

This rare information about the 35th Anniversary dealership promotional material is all compliments of George Davenport.

I'll bet you didn't know that there were 35th Anniversary watches available! These have got to be ultra-rare and desirable to the Anniv. enthusiast.



**LIMITED
EDITION**

*35th Anniversary
Thunderbird Medallion Watch*



1993 "A" Plan Tbird/Cougar pricing. This pricing is 3% below dealer invoice and is the pricing that a Ford employee is able to buy a car for.

This information is compliments of Scott Shockley

1993 FORD THUNDERBIRD PRICES
(VEHICLE, REGULAR, AND LIMITED PRODUCTION OPTIONS)
PRICE LEVEL CODE 310 EFFECTIVE 09/17/92

RPD SPC CDE ----		"A" PLAN PRICE -----	MONTHLY LEASE FEE -----
	49 STATES -----		
	BASE VEHICLE PRICES -----		
P62	THUNDERBIRD LX	13585.00	235.46
G62	CALIFORNIA THUNDERBIRD LX	13191.00	228.63
P64	THUNDERBIRD SUPER COUPE	18065.00	313.12

1993 FORD THUNDERBIRD PRICES
(VEHICLE, REGULAR, AND LIMITED PRODUCTION OPTIONS)
PRICE LEVEL CODE 310 EFFECTIVE 09/17/92

RPD SPC CDE ----		"A" PLAN PRICE -----	MONTHLY LEASE FEE -----
	PREFERRED EQUIPMENT PACKAGES =====		
	LX PREFERRED EQUIPMENT PACKAGE -----		
155A	PACKAGE 155A (TOTAL PACKAGE PRICE)	605.00	10.48
155A	(TOTAL PACKAGE DISCOUNT)	-605.00	-10.48
155A	(NET PACKAGE PRICE)		
155A	PACKAGE 155A (W/O 91H) (TOTAL PACKAGE PRICE)	535.00	9.27
155A	(TOTAL PACKAGE DISCOUNT)	-535.00	-9.27
155A	(NET PACKAGE PRICE)		
	SUPER COUPE PREFERRED EQUIPMENT PACKAGE -----		
157A	PACKAGE 157A (TOTAL PACKAGE PRICE)	1150.00	19.93
157A	(TOTAL PACKAGE DISCOUNT)	-1150.00	-19.93
157A	(NET PACKAGE PRICE)		
	ENGINES -----		
994	3.8L SEFI V6 (STD ON LX)	STD	STD
99R	3.8L SEFI SUPER CHARGED V6 (STD SUPER COUPE)	STD	STD
99T	5.0L HO SEFI V8 (OPT LX)	891.00	15.44
	TRANSAXLE -----		
44T	AUTOMATIC 4-SPD OVERDRIVE (STD LX)	488.00	8.45
44S	MANUAL 5-SPD (STD SUPER COUPE)	STD	STD
	AREA -----		
422	CALIFORNIA EMISSIONS SYSTEM REQUIRED AND ONLY AVAILABLE ON UNITS REGISTERED IN CALIFORNIA. NOT AVAILABLE WITH 428 HIGH ALTITUDE EMISSIONS SYSTEM.	82.00	1.42
428	HIGH ALTITUDE EMISSIONS SYSTEM REQUIRED ON UNITS SOLD FOR PRINCIPAL USE AT ELEVATIONS ABOVE 4,000 FEET. NOT AVAILABLE WITH 422 CALIFORNIA EMISSIONS SYSTEM.		

Super Coupe Club of America

Page 35

RPD SPC CDE ----		"A" PLAN PRICE -----	MONTHLY LEASE FEE -----
47J	ILLUMINATED ENTRY (STD LX)	67.00	1.16
155	INSTRUMENT CLUSTER, ELECTRONIC AVAILABLE ON LX ONLY.	221.00	3.83
144	REMOTE KEYLESS ENTRY SYSTEM	228.00	3.95
144	KEYLESS ENTRY SYSTEM (LX) INCLUDES 47J ILLUMINATED ENTRY SYSTEM. REQUIRES 903 POWER LOCK GROUP.	161.00	2.79
677	DUAL ILLUMINATED VISOR MIRRORS	82.00	1.42
59R	LIGHT GROUP (LX ONLY) INCLUDES INSTRUMENT PANEL COURTESY LIGHT AND ENGINE COMPARTMENT LIGHT.	38.00	.65
903	LOCK GROUP, POWER (SC ONLY) INCLUDES POWER DOOR LOCKS, REMOTE CONTROL ELECTRIC DECKLID RELEASE AND FUEL FILLER DOOR RELEASE.	255.00	4.41
52H	SPEED CONTROL& TILT STEERING (STANDARD ON LX)	303.00	5.25
13B	MOONROOF, POWER (155A, 157A W/677)	636.00	11.02
13B	INCLUDES 677 DUAL ILLUMINATED VISOR MIRRORS MOONROOF, POWER	718.00	12.44
	INCLUDES 677 DUAL ILLUMINATED VISOR MIRRORS		
	<u>RADIO SYSTEMS</u> -----		
588	HIGH-LEVEL AUDIO AM/FM CASSETTE W/CLOCK INCLUDES PREMIUM SOUND FEATURE. REQUIRED W/916 JBL SOUND AND 917 CD PLAYER.	250.00	4.33
916	FORD JBL AUDIO SYSTEM REQUIRES 588 HIGH-LEVEL AUDIO. AVAILABLE WITH 917 CD PLAYER. INCLUDES UNIQUE AMPLIFIER AND 9 SPEAKER SYSTEM. N/A W/ 58Y RADIO DELETE CREDIT.	431.00	7.47
917	COMPACT DISC PLAYER REQUIRES 588 HIGH-LEVEL AUDIO.	403.00	6.98
91H	ANTENNA, POWER N/A WITH 58Y RADIO DELETE CREDIT.	70.00	1.21

Her husband had been slipping in and out of a coma for several months, yet she had stayed by his bedside every single day. One day, when he came to, he motioned for her to come nearer.

As she sat by him, he whispered, eyes full of tears, "You know what? You have been with me all through the bad times... When I got fired, you were there to support me.

When my business failed, you were there.

When I got shot, you were by my side.

When we lost the house, you stayed right here.

When my health started failing, you were still by my side...

You know what?"

"What dear?" She gently asked, smiling as her heart began to fill with warmth.

"I think you bring me bad luck."

1993 FORD THUNDERBIRD PRICES
(VEHICLE, REGULAR, AND LIMITED PRODUCTION OPTIONS)
PRICE LEVEL CODE 310 EFFECTIVE 09/17/92

RPD SPC CDE ---		"A" PLAN PRICE -----	MONTHLY LEASE FEE -----
58Y	RADIO CREDIT OPTION N/A WITH 58Y RADIO DELETE CREDIT.	-328.00	-5.68
21A	SEAT, 6-WAY POWER DRIVER'S	250.00	4.33
21J	SEAT, 6-WAY POWER PASSENGER (W/ 21A)	250.00	4.33
21J	SEAT, DUAL POWER	500.00	8.66
884	SEAT TRIM, LEATHER (LX)	422.00	7.31
88P	SEAT TRIM, LEATHER (SUPER COUPE) INCLUDES 219 SPLIT FOLD-DOWN REAR SEAT AND REQUIRES 21A 6-WAY POWER DRIVER'S SEAT, 21J POWER PASSENGER, AND 903 POWER LOCK GROUP ON SC.	531.00	9.20
573	TEMPERATURE CONTROL, ELECTRONIC AUTOMATIC INCLUDED IN 155A AND 157A.	133.00	2.30
146	VEHICLE MAINTENANCE MONITOR INCLUDES LOW FUEL, LOW WASHER, LOW OIL, LOW COOLANT, AND OIL CHANGE INDICATORS.	73.00	1.26
64I	WHEELS, 15" CAST ALUMINUM (W/155A) INCLUDES T37 P215/70R15 BSW TIRES.	181.00	3.13
M52	LEATHER-WRAPPED STEERING WHEEL CREDIT	-79.00	-1.36
153	FRONT LICENSE PLATE BRACKET INSTALLED IN ALL STATES WHERE FRONT LICENSE PLATES REQUIRED. NOT AVAILABLE IN OTHER STATES.		
	OTHER CHARGES -----		
DAD	DESTINATION/DELIVERY CHARGE	495.00	8.57
C09	PRICED DORA CHARGE IS \$0.50		
K42	CALIFORNIA NEW MOTOR VEHICLE BOARD FEES CHARGE IS \$0.65		



George Davenport's beautifully resurrected & improved Short Wheelbase Bird.

Oxygen Sensors: A Key Component of Your Vehicle's Performance

Robert Bosch Corp. Literature

With the sophistication of today's increasingly computerized automobile engines, it's become difficult for the do-it-yourselfer to service or tune-up the engine on his own vehicle. And along with this computerization come new parts that are crucial, both for optimal engine performance and also to stay within the bounds of environmental laws regarding engine emissions.

The oxygen sensor is one of those crucial components. They're roughly the size of clothes pins, yet many people don't even know they exist. But they play a pivotal role in monitoring engine exhaust, one of the most common causes of air pollution.

The first oxygen sensor was introduced into automotive engines in 1976 (on a Volvo 240) by The Robert Bosch Corporation.

The oxygen sensor is a measuring probe for determining the amount of oxygen in the exhaust. It continually monitors exhaust gases and signals the engine computer to adjust the air/fuel ratio to ensure that gasoline combustion is as complete as possible, thus reducing harmful emissions while also improving engine performance and fuel efficiency.

In fact, replacing a degraded oxygen sensor with a new one will increase fuel efficiency by 10 to 15 percent.

Oxygen sensors also play a key role in ensuring that vehicles pass the new emissions inspection programs that will be required in many states due to the Federal Clean Air Act.

"Studies show that two thirds of all vehicle emissions test failures are a result of worn out oxygen sensors," explained Chuck Ruth, Bosch general product manager. "Those numbers are staggering when you consider that oxygen sensors are easy enough to replace and that the vast majority of them are also inexpensive, costing roughly \$20 to \$50."

"Even if you're not a do-it-yourselfer, it's a good idea to have a professional service technician check your oxygen sensor on a regular basis: every 30,000 to 50,000 miles for an "unheated" 1 or 2 wire sensor or every 60-100,000 miles for a "heated" 3 or 4 wire sensor. When the oxygen sensor is degraded, you can very quickly recoup its low replacement cost from the fuel savings of up to \$100 a year resulting from complete combustion and a smoother running engine."

How can you tell if you need a new oxygen sensor? Common symptoms of a worn out sensor include excessive fuel consumption, high emissions, engine surging or hesitation, or premature failure of the catalytic converter. When examining the sensor, a shiny deposit on the sensor's heat shield or any gummy deposits indicate it's time to check and/or replace the sensor.

Mustang Magazine Auto Show SPECTACULAR 2001

gateway international raceway



Featured at



Come join us and over 40 thousand of your closest Ford Friends for the **Mobil 1 World Ford Challenge 2001** featuring the Mustang & Fords, Mustang Monthly Magazine Auto Show Spectacular. Where over 1,500 Fords will be on display showing and strutting their stuff.
COME ENJOY!



- Designated parking for Auto Show Participants.
- First 300 registered cars will receive the Mustang & Fords, Mustang Monthly Magazine Auto Show Spectacular Commemorative full color acrylic dash plaque free.
- The Auto Show Consists of over 70 judged classes for All-Ford cars and trucks from 1903 all the way up to the most current models.
- The show will be broken into Stock, Modified, Super Modified and Special Interest Sections.
- Each of the 70 classes will pay out first, second and third place trophies.
- There will also be a Best Of Show, Best Engine Compartment, Best Paint, and Best Interior Awards handed out at the awards ceremony.
- The Auto Show is expected to draw over 800 cars and trucks of the utmost quality and detail.

Thursday May 17, 2001

Gates open.....9:00 AM
Auto-Show pre-registration.....9:00 AM to 5:00 PM

Friday May 18, 2001

Gates Open8:00 AM
Auto-Show Registration
Classification and Show & Shine ..9:00 AM to 5:00 PM

Saturday May 19, 2001

Gates Open8:00 AM
Auto-Show Registration
Classification, Judging
and Show & Shine9:00 AM to 5:00 PM

Sunday May 20, 2001

Gates Open8:00 AM
Auto Show Final Judging
and Show & Shine9:00 AM to 1:00 PM

Auto-Show trophy presentation

and Awards ceremony3:00 PM

For information dial: 305-436-0996 or

visit us @ www.worldfordchallenge.com

STOCK CLASSES:

1903-1932 Full Size Cars
1933-1951 Full Size Cars
1952-1959 Full Size Cars
1960-1970 Full Size Cars
1971-1989 Full Size Cars
1990-2001 Full Size Cars
1960-1965 Falcon, Fairlane & Meteor
1966-1971 Falcon, Fairlane, Torino, Talladega
1960-1971 Comet, Cyclone, Spoiler, Montgo
All years Cougar
1970 & Up Maverick, Capri, Comet, Zephyr, Granada
Monarch, Fairmount
1954-1966 Mustang
1967-1968 Mustang
1969-1970 Mustang
1971-1978 Mustang
1979-1984 Mustang
1985-1993 Mustang
1994-1998 Mustang
1999-2001 Mustang
1965-1971 Shelby & Boss
All years Saab, SV0, SHO, Merkur
1955-1960 Thunderbird
1961-1971 Thunderbird
1972-1982 Thunderbird
1983-1988 Thunderbird
1989-1997 Thunderbird & Cougar
(93-98 Mark VIII)
1903-1952 Trucks
1953-1956 Trucks
1957-1968 Trucks
1967-1979 Fullsize Trucks
1980-2001 Fullsize Trucks
1993-1995 Lightning
1999-2001 Lightning
All years 4X4 Trucks
1957-1979 Ranchero
1960-2001 Sports Utility
All years Compact Trucks

MODIFIED CLASSES:

1981-2001 Comet, Cougar
1962-1967 Fairlane & Meteor
1968 & Up Fairlane, Torino
1969 & Up Compacts
1903-1951 Fullsize Cars
1952-1964 Fullsize Cars
1965-2001 Fullsize Cars
1955-1976 Thunderbird
1977-1988 Thunderbird
1989-1997 Thunderbird & Cougar (93-98 Mark VIII)
1964-1966 Mustang
1967-1968 Mustang
1969-1970 Mustang
1971-1978 Mustang
1979-1984 Mustang
1985-1993 Mustang
1994-1998 Mustang
1999-2001 Mustang
1903-1948 Fullsize Truck
1949-1956 Fullsize Truck
1957-2001 Fullsize Truck
1960-2001 Compact Trucks
1993-1995 Lightning
1999-2001 Lightning
All years 4X4 Trucks

SUPER MODIFIED CLASSES:

1903-1948 Street Rods (Cars)
1949-1964 Street Machines (Cars)
1965-2001 Street Machines (Cars)
All year Trucks

SPECIAL INTEREST CLASSES:

All years Factory Sport
(Cobra, Bricklin, Pantera, Tiger, Griffith, etc.)
All years Special Interest
(Kit Car, homemade T-Bolt, AFX Comet or Falcon)
All years Drag or Round Track Vehicles

MAY 17-20 2001

GATEWAY INTERNATIONAL RACEWAY



CARLISLE

Events Nationwide

ATLANTIC CITY CONVENTION CENTER ATLANTIC CITY, NJ

COLLECTOR CAR EVENT PLUS
ANTIQUES AND COLLECTIBLES

February 9-11, 2001

ROBERTS STADIUM EVANSVILLE, IN

AUTOFEST NATIONALS
October 20-21, 2001

2001 GIVE-AWAYS



CARLISLE

Events

(717) 243-7855

www.carsatcarlisle.com

1000 Bryn Mawr Road, Carlisle, PA 17013-1588

FAX: (717) 243-0255

PA Hotel/Motel call toll free (888) 560-7666

Make your plans now to attend the 2001 Carlisle All Ford Nationals June 1, 2 & 3, 2001. The SCCoA will again be staying at the Super 8 Motel at 100 Alexander Spring Road in Carlisle. There has been a slight change of plans regarding our group reservations. The motel now has a computerized booking system and they claim they cannot book a group of rooms without having all the names of those staying in advance. So this puts the responsibility back in our laps. Make your reservations under your own name as the hotel canceled the "SCCoA" booking.

As of late March, the hotel had a few rooms still available, so **MAKE YOUR RESERVATIONS NOW** or I guarantee you will be out searching for a room on your own later. One can always cancel reservations a few days before the show if you can't make it at the last minute, but I know this place will be sold out very soon. Better to be safe (with a reservation) than sorry.

**Call the Super 8 Motel
TODAY**

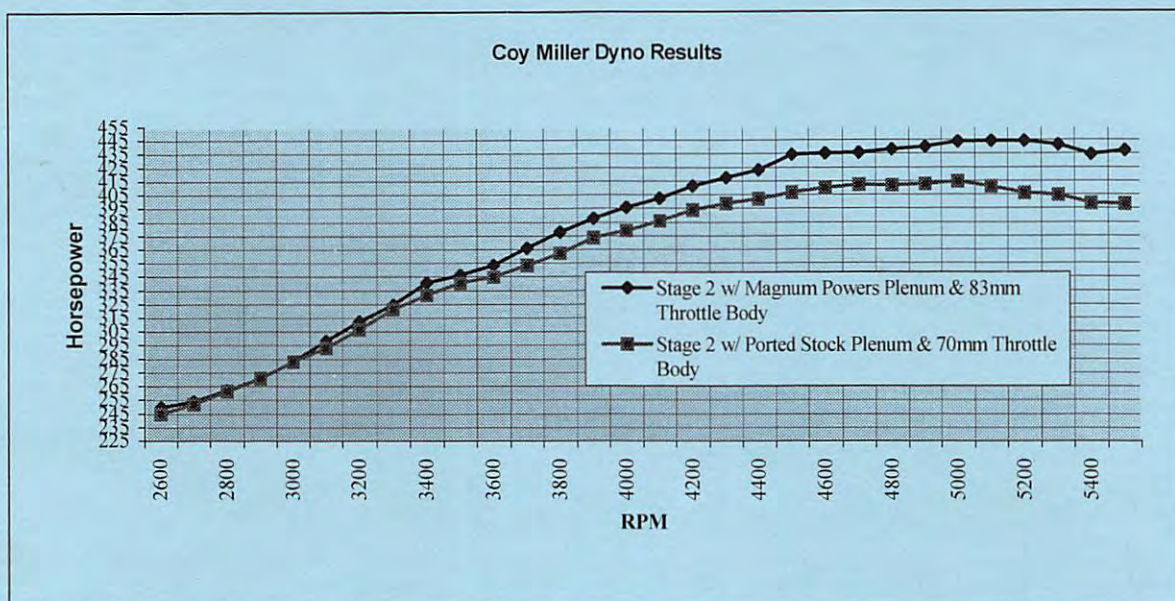
**100 Alexander Spring Rd.,
Carlisle PA 17013
717-245-9898**

Magnum Powers™

Serious Performance Parts for your Thunderbird Super Coupe!

NOW AVAILABLE...the Magnum Powers 83mm Throttle Body. The perfect TB for use with our high output supercharger inlet plenum. Features a custom machined cast aluminum body and polished stainless steel throttle lever for outstanding great looks and longevity.

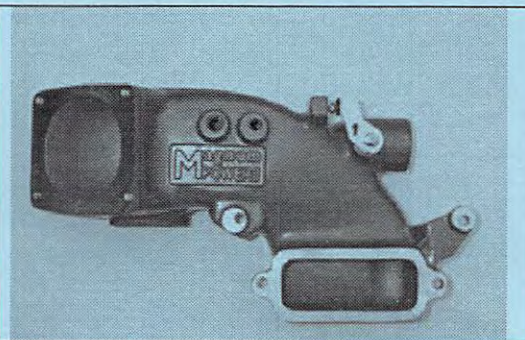
Bolt on an extra 40 horsepower with Magnum Powers (MP) High Performance Inlet Plenum and Throttle Body! That's right, the Magnum Powers Inlet Plenum starts adding HP at 3100 RPM and keeps right on climbing. See the Dyno Chart below.



Many months of engineering, testing, and thousands of dollars of production tooling were required to bring this plenum to you. The results are awesome and we have the dyno charts to prove it!

Cast from heat-treated 356-T6 aluminum and powder coated for a factory look this plenum is a real eye pleaser, featuring:

- Huge 83mm Throttle Body (TB) Flange accepts stock, 75mm or MP 83mm TB.
- Air passage shaped for maximum airflow.
- EGR valve adapter available.
- Polished stainless steel bypass valve, shaft and lever for long life and good looks.
- Powder Coat finish for an OEM factory look
- All necessary hardware included.



Factory Authorized Dealers:

Super Coupe Performance (513) 697-6501
Coy Miller Race Engines (540) 433-0545

Check out our NEW web site!
<http://www.magnumpowers.com>