

Second Strike

The Newsletter for the Superformance Owners Group

October 31, 2002

Volume 5 Number 1

THE SEARCH FOR THE ULTIMATE WINDSOR



Superformance owners take a Sunday afternoon break to pose for a group portrait at the Second Strike / Olthoff Racing Spring 2002 Track Event at Virginia International Raceway. The search for "The Ultimate Windsor" began in earnest here.

The Quest

The "Small Block vs. Big Block" debate rages on. Both have their advantages. Both have their staunch supporters. But what if you could have both – big block power in a small block package?

By quite a stroke of good fortune, I find myself in an excellent position to address that question. I need a new engine myself. And more to the point, I live in the absolute center of the universe in terms of pushrod V8 engine development and construction – NASCAR country. Virtually every NASCAR team has their shop within 40 miles of where I sit writing this. Surely I can find the *Ultimate Windsor* here.

I begin the journey with some reflections on the reason why I need a new engine and a few words in parting for what must be considered an old and dear friend.

Requiem for an Old Friend

The engine is the heart of any high performance car. SP218 was born with a stout heart. We did a lot together, this chunk of cast iron and I. We have been to the mountains and the beaches, on vacation and a great succession of road trips,

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sometimes alone and sometimes with Pat. Sun in the face, wind in the hair, and the melodic rumblings of the loping engine in the ears. We have run fast and hard on some great tracks. Airborne at 100 mph at Lime Rock. Sideways at 130 mph on the high banking at Charlotte Motor Speedway. Power slides out of Oak Tree at VIR. Jamming gears at the drags. It always ran with the wind. It always took me where I wanted to go. It always brought me home.

The Olthoffs built it as a 6000 rpm tractable daily driver engine with the milder A332 Motorsports cam and Performer (not RPM) dual plane manifold. But its performance exceeded its specifications. Hand crafted by masters, it was machined, balanced, blue printed, ported, and carefully fitted together using skills honed in decades of putting Windsors in the winners circle. It would have lived forever with a 6000 rev redline, but its heart was elsewhere.

Like a racehorse, it loved to run. It ran past 6000 revs like it was just getting started. The power never dropped off. An impromptu stop light bash with a 460 powered Superformance was a dead heat to 85 mph. That sprint to 7800 in second (no kidding) forced the installation of a rev limiter. The Olthoffs installed it with a 6000 rpm chip and were most clear about leaving it alone. My mind understood. But my heart didn't. Shutting it off when it was just getting started just didn't feel right. *Revus interruptus*. I changed the chip to 6500. I spent a lot of time there. And in the end it bit me.

By the time I arrived a VIR for the Spring 2002 event, SP218 had 27,000 miles on the clock including 9 track events and 1,500 miles at speed. That's a lot to ask for a 415 horsepower engine with stock crank and rods. I had planned to refresh it over the winter, but newsletters and the new owners manual took precedent.

The morning was filled with organizational activities and it was late afternoon before I had a chance to get on the track myself. SP218's dual roll bars made it a logical choice for instruction, so it had already spent an hour on the track in the hands of instructor Cliff Cooksey (SP912) who was providing on track rookie instruction. Some sixth sense compelled me to ask him to hold the revs to 5000 and he did. A good idea as it turns out.

The event was working nicely. A lull in the afternoon gave me the chance to get on the track. Knowing how adrenaline affects my sense of restraint, I changed the rev limiter chip from 6500 to 6200. The pace car led for a lap and pulled in. We were off. I rounded the Bitch and accelerated down the chute to the Spiral. I glanced at the tach and I was passing 6700 revs. The chip was not working. Some non-electronic personal intervention between adrenaline and reason would be required on my part.

I took South Bend in third and accelerated for Oak Tree. Just as I passed 6000 revs, about 100 mph, I heard a series of loud thuds and felt a significant power drop off. I quickly killed the ignition and pushed in the clutch. Fearful of driving through

the oil slick that my mind's eye could see spreading under the car, I held the car straight until I could slow enough to exit the track safely. A flashback recalled another driver blowing an oil line in this exact spot last year and driving through his own oil slick as he left the track. I did not want to repeat his spectacular ballet nor his subsequent trip back to the Holiday Inn to change his underwear. Amazing what goes through your mind under duress.

I waited until the yellow came out at Oak Tree, and then got out of the car. The roll back came and collected SP218. As the tilting bed leveled out, the engine again puked substantial oil out of the holes in the oil pan. This could only mean that the tilting action of the roll back had dumped more water into the oil pan. Not a good sign.



SP218 on the trailer for the first time in its life. VIR Spring 2002. A heart transplant will be needed. But who can say where "the pathway to happiness" leads?

Bob Jordan offered his trailer to tow SP218 back to the Olthoffs. What would life be without good friends? Late Sunday afternoon after we closed the event, I drove his 427 Windsor powered SP181 back for him. Every time I stopped, folks wanted to know if it had a 427 in it. They went nuts when I told them it did. An unexpected learning experience that would temper my future decisions.

The following week, the Olthoffs pulled the engine and we did an autopsy. The culprit was a broken rod bolt. At 100 revolutions a second, no matter how quick you shut it down there is going to be substantial collateral damage. And there was. The debris from the first rod lodged between the block and the second rod and sheared it off the crankshaft. The rotating crankshaft flung the two now free floating pistons hard against the heads. A flying chunk of metal took a two-inch section out of the camshaft and drove it through the wall of the block. A mortal wound. Without the cam working the valves in synchronized harmony with the pistons, the pistons now began pushing the valves back up in the heads. There will be no rebuilding this one. Its time has past.

I have no regrets. I made my choices and I accept the consequences.

I learned some things.

1. These cars are wicked fun and will be driven in ways we never expect when we buy them.
2. The engine needs to reflect what we will really do, not what we think we will do.
3. Listen to your engine builder about the little things too – like rev limits.

It was a good five years, among the best in my life. And SP218 has been a big part of it. Now it is time to move on. One door closes and another opens. And so begins another journey, the search for the *Ultimate Windsor*.

The RDI Connection

Based in large part on sales to Superformance owners and feedback from Superformance engine installers, Ford Racing Performance Parts (FRPP) now has a pretty good lineup with six crate engines – a dual plane, single plane, and stroker 351W, and a dual plane, single plane, and stroker 460.

There are difficulties, however. The FRPP engines are still designed for the general public. Some of the parts, such as the oil pan, are not suitable for installation in a Superformance rolling chassis. Some of the necessary parts are not supplied with the engine. And as “off-road” engines, they are sold without warranty.

To address these issues, the Olthoffs began working with Raceparts Distribution Inc. (RDI) in Cornelius, NC to provide upgraded crate motors designed specifically for Superformance installation.

RDI is the FRPP warehouse distributor right here in middle of NASCAR country and is one of the principal NASCAR connections for Ford. Preston Miller of RDI has been working with the Olthoffs to configure and perfect the RDI crate engines for installation in the Superformance chassis.



The RDI 392 crate engine completed, dyno tested, crated and ready for shipment.

To the base FRPP crate engine, RDI installs the accessory package (pulleys, alternator, spacers, brackets, and belt), intake upgrades (switch to dual plane manifold, Holley

carburetor, Carter mechanical fuel pump, air cleaner, fuel line and fuel log, PCV valve and hose), clutch and pressure plate, plug wires, Canton oil pan, adjustable oil pump, and 180-degree thermostat. While the oil pan is off they inspect the bearings and check clearances. After the engine is assembled, it is test run on the dyno. The dyno sheets for the engine are included with the package. The engines are sold with a limited one-year warranty.

The availability of these RDI upgraded FRPP crate engines has significantly improved the marriage of the Superformance rolling chassis to Ford engines to produce the cars we know and love. This standardization improves the quality and ultimately reduces the cost of getting it right for all of us.

As good as the FRPP line up is, there is a gaping hole. The high end is filled only by the 460. Wouldn't it be nice to have the power of a 460 in the lightweight compact 351W package?

This is not a new idea, of course. The Olthoffs have been very successful running a variety of 351W strokers in their racecars from the beginning - up to and including the long stroke (4.200") 427 cubic inch 351W. In fact a long stroke 427 351W was the backup engine used in the Superformance Coupe prototype in the 2000 One Lap of America.

The surge of 351W stroker installations in recent years is strong evidence that it is time to take the next step. At the same time I was “creating an opportunity” for an engine upgrade, RDI was working on the RDI 427, an all aluminum prototype for a new crate engine offering. Bob Olthoff introduced me to Preston Miller at RDI. Preston and I have decided to work together to perfect the design.

We will start with the RDI 427 prototype and use a rigorous engineering design cycle to perfect it. The process includes:

- Establishing the design point
- Selecting components to match both the design point and each other
- Using computer simulation to evaluate alternatives and refine the design
- Construction of the prototype
- Dyno testing to prove the design
- Real world testing on road and track to prove the design
- Design changes, refinement, and retest to get it right

When we get it right, it will be right for everybody with the same goals in mind.

The *Ultimate Windsor* Design Point

The Cobras won the World Manufacturers Championship with 289 cubic inches Windsor and 375 horsepower.

The 427 Cobras (with 427 engines) made 425 horsepower in street form and 485 horsepower in competition form.

The current “king of the FRPP crate engines” is the awesome Ford FRPP C514 – a 460 stroked to 514 cubic inches and

producing 600 horsepower. And while shooting for 600 horsepower in a street capable Windsor may be a bit of a stretch, shooting for a similar weight to power ratio with the lighter Windsor is not out of the question.

The goal for this engine design point is then to exceed the power of the competition 427's and to approach the weight to power ratio of the C514 in a package that is both tractable and durable – competition performance in an engine that can be comfortably driven on the street. With the improvements in block, cylinder head, and camshaft design in the last 40 years, this should be possible.

After working through the considerable math, the general design point is:

- 351W base engine
- 427 cubic inches
- 10:1 compression ratio
- 500 to 525 horsepower at 6000 rpm
- 6500 to 6800 rpm redline
- Engine weight around 400 pounds
- Car weigh around 2400 pound
- Weight to power ratio around 4.5

This engine will be designed as a dual-purpose engine. As such it has to be designed as a street engine that can be driven at times on the track. This is an important distinction. Trying to detune a track engine so that it can be driven on the street usually leads to bad manners and disappointment.

The Boss 429 is an example of this. The engine was designed for NASCAR. To detune it for the street, Ford cut back on the cam and carburetor. So just as the heads were starting to work, the cam and carburetor were giving up. The specs created a legend that the car did not live up to. What should have been the ultimate muscle car was a disappointment.

Performance parts are designed for a particular power, displacement, and rpm range. The key to balanced performance is matched parts – selecting all the parts to meet the same design point.

This includes the mechanical bits as well. Picking a cam that is just getting into its rev range when the guts are stressed to the limit is a sure formula for unhappiness.

The Windsor Advantage

The 351W is lighter and smaller than either the 427 or 460 engines. In the weight to power range we are looking at, every 100 pounds of weight reduction is worth an additional 22 horsepower. It adds up.

The 351W is narrower than the 427 or 460. In the Superformance engine compartment, this means a smoother turn in the headers coming out of the exhaust port. The 351W is shorter than either the 427 or 460, which gives you more manifold and air cleaner choices. A little bit here and a little bit there and the gap between small and big block closes.

The real advantage is the treasure trove of performance parts for the 351W spawned by the NASCAR and Mustang 5.0 programs. This rich mother load of performance parts means that it is possible to find the right set of matched parts for virtually any design point, mild to wild, at an affordable price.

You don't have to sacrifice cubic inches either. With the advent of big bore blocks and stroker packages, it is possible to take a Windsor all the way to 454 cubes. So 427 cubes is well within the bounds of reason. And it has a nice ring to it.

The Bottom End

To run a redline of 6500 to 6800 rpm and provide reliable street duty for road trips, the bottom end for the *Ultimate Windsor* will have to be bullet proof. Using the NASCAR class of components in the *Ultimate Windsor* will provide the bottom end durability needed.



Tough guts for the Superformance Coupe Prototype. Aluminum block, four bolt mains, forged crank, forged H-beam rods, forged pistons.

In the trade-off between durability and cost, durability wins here. I know I will wind it up. It is cheaper to pay for the right parts the first time than to pay for the replacement parts when it blows up.

The FRPP/RDI Z351 aluminum block gets the nod for this design point for several reasons.

- It is 83 pounds lighter than the four-bolt iron block. That is worth 20 horsepower.
- It has four-bolt mains on all 5 caps.
- The 4.125" bore capacity provides 427 CID with a shorter 4.000" stroke.
- It can be bored to 4.155" so there is room for rebuilding with a 4.125" bore.
- The iron cylinder sleeves can be replaced if damaged.
- The block can be welded if damaged.
- I would be remiss if I failed to mention "bragging rights" advantages of an aluminum block.

To this are added a forged steel crank, forged steel H-beam rods, and forged aluminum pistons to complete the bottom end.

The Top End - Airflow Is Horsepower

The top end includes the airflow items; air cleaner, carburetor, intake manifold, heads, and cam.

Horsepower is airflow. Pressure losses in the airflow stream from air cleaner to valve translate directly into horsepower losses.

In reality, performance parts do not “make horsepower”. In large part they allow you to keep the horsepower the engine is capable of making by reducing horsepower losses associated with pressure losses.

Pressure losses are caused by turns, bumps, and obstructions in the airflow passages. Pressure losses go up with airflow speed squared.

You can improve the airflow capacity by improving the design (reducing turns, bumps, and obstructions) or by increasing the cross sectional area of the flow passages, thereby reducing the flow speed.

Huge flow areas decrease airflow speed, decrease pressure losses, and decrease horsepower losses. But there is a tradeoff. Airflow speed also rams the intake charge into the cylinder and holds it in while the intake valve is closing. So bigger flow areas are better for maximum horsepower at high engine speeds, but low-end power and tractability suffer.



Noted automotive expert David Vizard and the author discuss large displacement Windsors at a NASA event at Lowe's Motor Speedway this fall. In the foreground is SP218. Just behind is Bob Jordan's SP181 with the One Lap 427 Windsor.

For example, the Boss 302 achieved big power from huge ports – almost as big as the similar 460 ports! The competition Boss 302's made big power at upwards of 9000 rpm. But they couldn't make enough low-end power to pull the Trans-Am Mustangs up on the trailer.

The secret is to achieve good airflow with straight, clean ports and modest port sizes. As the design of Boss 302/351 heads have progressed in NASCAR over the years, the ports have actually become smaller but the airflow has improved significantly due to better port design.

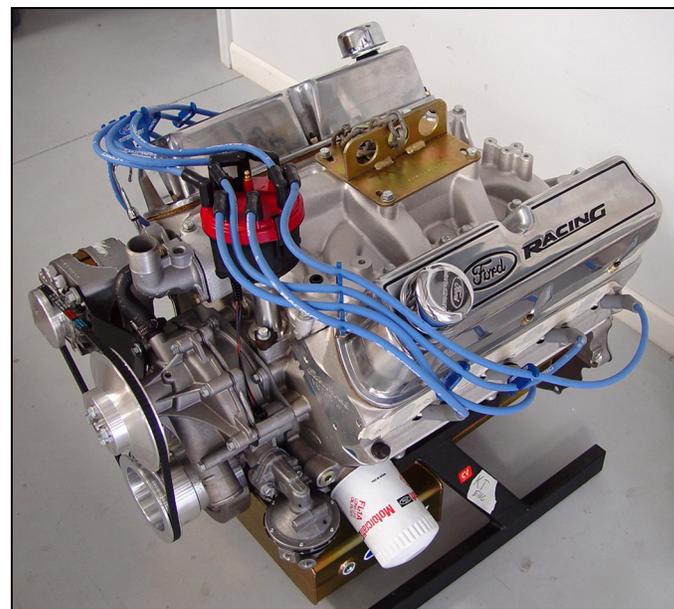
Again, good engine design requires balance between low end and top end requirements. The balance point depends on the design point of the engine.

The design process began with sorting through the large number of high performance components and selecting those with the same design point as the *Ultimate Windsor*. In the words of Goldilocks, “Not too big, not too small, just right.” This sorting process included a good bit of math, charts, graphs, and experiential knowledge. It was complex.

The most promising parts were then evaluated in various combinations and permutations to determine the combinations that worked well together and produced the desired results. The Dyno2000 Advanced Engine Simulator computer software was used to perform this evaluation.

The most promising combinations from the engineering work and computer simulations will then be built and tested to determine the best overall combination for this design point.

The First RDI 427 Prototype

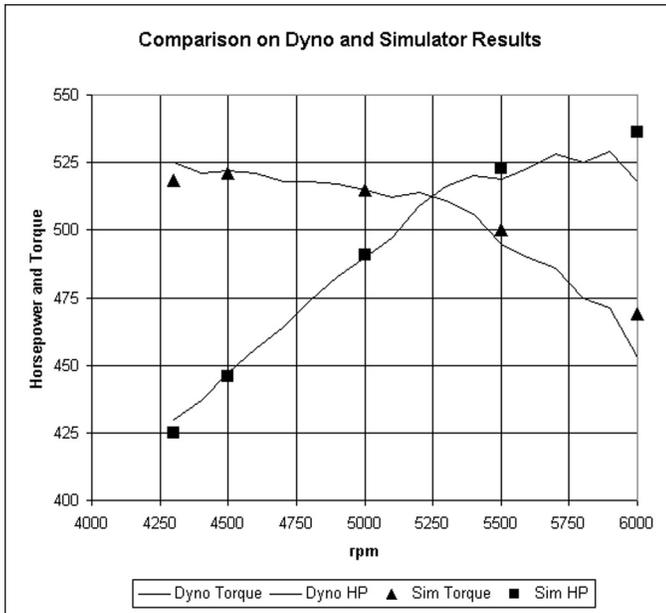


The RDI 427 crate motor prototype. It was dropped into SP218's engine bay and backed by a TKO II and 3.08 rear. This testing is hard work but somebody has to do it.

The first engine to be constructed for testing is the RDI 427 prototype based on the FRPP/RDI aluminum block with ported big port heads, a rather stout custom hydraulic roller camshaft with 254 degrees of intake duration and 264 degrees of exhaust duration, a dual plane intake manifold, and a Holley 750 cfm vacuum secondaries carburetor.

The Dyno2000 simulator estimated the RDI 427 prototype at 536 horsepower. The actual dyno test showed 529 horsepower. As the chart shows, the simulator and dyno results are quite close, providing a degree of confidence in the simulator as a design tool.

The RDI 427 prototype meets the design goal of 500 to 525 horsepower. Maximum power is achieved in the target 6000 rpm range.



With the aluminum Z351 block, the engine weight is slightly under the 400 pound goal, dropping the car weight to 2500 pounds with a full tank of gas. The car is 244 pounds or 10% lighter than the 460/514, so the RDI 427 compares favorably with the 460/514 in terms of car weight to power ratio.

Engine	Engine Weight	Car Weight	Weight Dist	Power	Weight /Power
RDI 427	390	2500	45/55	529	4.73
460/514	634	2744	47/53	600	4.57

These numbers are so close that other items such as a cleaner installation (header and air cleaner fit problems with the 460) and better weight distribution might actually tip the performance advantage to the RDI 427.

Now to see how it works in the real world. Working with the much needed and much appreciated assistance of the Olthoffs, the RDI 427 prototype engine was installed in SP218 for some real world installation and driving experience. The testing will include chassis dyno tuning, several thousand miles of road testing for tractability and fuel consumption, as well as some serious work at the drag strip and track events.

The big question is tractability. The design tools used were a reasonable predictor of full throttle performance. But tractability will have to be evaluated in real world driving.

The testing will result in changes to the heads, cam, intake and carburetor. The results of this testing and subsequent improvements to the design will be reported in future issues of Second Strike.



The RDI 427 prototype made its public debut at AutoFair Fall 2002 at Lowe's Motor Speedway installed in SP218. It will return shortly for track testing. That is Larry Miller's SP619 in the background. Larry has a long stroke 427/351W.

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5TH ANNUAL OWNERS SURVEY

Registrations

When you register your car with Second Strike, the Superformance Owners Group, the registrations are entered and tracked in a database system at Second Strike headquarters. Every year in the first issue we slice and dice the data in that data base to give you a profile of the owners and their cars.

This is the fifth annual survey and is based on the 1,209 cars registered as of July 7, 2002. The quantities are based on cars rather than owners because some owners have two cars. Really. One owner has three – two 427’s and a S1. The totals will not always be 1,209 because some cars have incomplete data.

Pre-production Cars

The numbers 001 through 031 were assigned for engineering prototypes. Cars 001 through 025 were built. Cars 024 and 025 were built as test vehicles and are listed in factory records as scrapped, but both survived. Cars 026 through 031 were not built.

Cars 001 and 002 remained at the factory. Cars 003, 004, 005, and 008 went to Canada. Cars 007, 022, and 023 went to the USA. Car 007 went to Germany. Car 016 went to Botswana. The other 14 remained in South Africa.

The engineering prototypes differed from the later production cars in details such as drive train, dashboard layout and instrumentation. Some had 9-inch Ford live axle rear ends and some had Jaguar independent rear ends, for example.

Ten of the prototypes were red, followed by six blue, four silver, and single examples of maroon, black and white. The colors of the two factory cars are unknown.

Of these twenty-five early cars, five have been located and registered – 011 in Germany and 007, 011, 015, 024, and 025 in South Africa.

Production Cars

Production started with car number 032, Guardsman Blue/White with side pipes. John Capell of Worcester, Massachusetts, owns car 032. John and 032 were at Lime Rock for SAAC-25 and were featured in the article in Second Strike Volume 3 Number 3 (November 15, 2000). Car 032 arrived in the USA in early 1993.

There have been a number of engineering changes over the years, but 032 overall is remarkably similar to the cars being produced today. Like all early cars, it has the flat floorboard, old style seats, and steel wheels with Halibrand style covers. About the only things unusual about 032 are that it has round taillights and does not have the now standard reverse wound speedometer.

The highest car number in the registry is 1427, a special order. Guess why. The next highest number is 1418.

Registrations

By looking at chassis numbers and sale dates, it is possible to get an approximation of the maximum car number produced for the first three years.

Year End	Max Car Number
1994	042
1995	083
1996	191

Year End	Max Car Number	Registered Cars	Percent Registered
1997	299	22	7%
1998	443	58	13%
1999	725	343	47%
2000	1002	622	62%
2001	1252	866	69%

The registry was started in 1997. A reasonable measure of the cars sold since 1996 can be made by looking at the highest car number in the registry at the end of each year.

These two charts give an approximation of the production and sales by year. It is only an approximation since the cars are neither produced nor sold in exact car number sequence.

In 1997 and 1998 the registry included primarily Olthoff Racing customers in the Southeast. In 1999 at the request of Jimmy Price it was expanded to include all dealers worldwide. By the end of 2001 approximately 69% of all cars were registered.

In the past year, we have made substantial progress in locating and registering older car. The dealers have been most helpful in this effort. The online registrations for Second Strike and SCOF have helped owners find us. We now have about 90% of the cars through car 1299 registered with strong representation across the board.

Car Number	Cars	Percent
001-025	5	20%
032-099	59	87%
100-199	81	81%
200-299	89	89%
300-399	87	87%
400-499	85	85%
500-599	90	90%
600-699	95	95%
700-799	94	94%
800-899	92	92%

Car Number	Cars	Percent
900-999	93	93%
1000-1099	88	88%
1100-1199	89	89%
1200-1299	91	91%
1300-1399	45	45%
1400-1499	3	3%
Total	1,186	

In addition to these cars, we have eleven S1's, the prototype Coupe, and another eight cars where we are working with the owner to determine the car number.

Registrations drop off after 1299 because many of these cars have either not been produced or not been sold yet.

In terms of resale, there are 145 cars that have had more than one owner. Thirteen have had three owners.

There are approximately 6 private owners (non-dealers) who own two cars. One owner has three, including an S1.

Country and State

We have owners in eleven countries and one US possession. The great majority of the cars are in the USA. South Africa is ranked second with 33 cars.

Country	Cars	Percent
Belgium	1	0.1%
Canada	8	0.7%
Columbia	1	0.1%
France	1	0.1%
Germany	4	0.3%
Italy	1	0.1%
Puerto Rico	1	0.1%
South Africa	33	2.7%
Switzerland	1	0.1%
The Netherlands	7	0.6%
U.A.E.	1	0.1%
USA	1147	95.1%
Total	1206	100.0%

Within the USA, California continues to lead with 251 cars, followed by Ohio, Michigan, and North Carolina.

State	Cars	Pct
California	251	20.8%
Ohio	116	9.6%
Michigan	98	8.1%
North Carolina	70	5.8%
Illinois	54	4.5%
Virginia	46	3.8%
Florida	44	3.6%
Pennsylvania	43	3.6%
Texas	39	3.2%

State	Cars	Pct
New York	30	2.5%
Wisconsin	30	2.5%
Colorado	29	2.4%
Indiana	29	2.4%
Georgia	23	1.9%
Kentucky	23	1.9%
Louisiana	20	1.7%
Minnesota	16	1.3%
New Jersey	16	1.3%
Maryland	14	1.2%
Tennessee	14	1.2%
Missouri	13	1.1%
Massachusetts	12	1.0%
Nevada	12	1.0%
Oregon	12	1.0%
South Carolina	11	0.9%
Arizona	10	0.8%
West Virginia	8	0.7%
Connecticut	7	0.6%
Idaho	7	0.6%
Iowa	7	0.6%
Washington	7	0.6%
Kansas	5	0.4%
Alabama	4	0.3%
Mississippi	4	0.3%
New Hampshire	4	0.3%
New Mexico	4	0.3%
Utah	4	0.3%
Alaska	3	0.2%
Hawaii	2	0.2%
Rhode Island	2	0.2%
Arkansas	1	0.1%
Maine	1	0.1%
South Dakota	1	0.1%
Vermont	1	0.1%
Total	1147	95.1%

Colors

Color Family	Cars	Percent
Blue	537	45.5%
Silver	232	19.6%
Red	140	11.9%
Black	139	11.8%
Yellow	56	4.7%
Green	48	4.1%
White	26	2.2%
Purple	2	0.2%
Gold	1	0.1%
Total	1181	100.0%

Blue remains the most popular color family choice with 45.5% of the cars being one shade of blue or another. The various shades of silver, red, and black follow at a distance.

In terms of specific colors, Royal Blue is the most popular single color with 24.0% of the cars. Black in second has pushed Guardsman Blue back to third. Titanium has surged into fourth. Red is fifth, followed by Silver, Indigo Blue, Yellow, Malachite Green, and Portofino Blue to round out the top ten.

The original standard colors were Guardsman Blue, Red, Black, Malachite Green, Silver, and Yellow.

Royal Blue was introduced with car 147, Titanium with 706, Indigo Blue with 759, and Portofino Blue with 122.

Colors are ranked by alphabetically by color family, then color. Altogether, there are 67 different colors, up from 48 last year.

Color Family	Color	Cars	Percent
Black	Black	135	11.4%
	Black Metallic	2	0.2%
	Diamond Black	2	0.2%
Blue	Avus Blue	1	0.1%
	Banzai Blue	1	0.1%
	Blue	1	0.1%
	Cloisonne Blue	4	0.3%
	Dark Portofino Blue	1	0.1%
	Ferrari Blue	3	0.3%
	Ford Blue	1	0.1%
	Galaxy Blue	7	0.6%
	Guardsman Blue	130	11.0%
	Hitech Blue	1	0.1%
	Indigo Blue	53	4.5%
	Medium Royal Blue	2	0.2%
	Metallic Blue	1	0.1%
	Midnight Blue	6	0.5%
	Pacific Blue	2	0.2%
	Porsche Blue	1	0.1%
	Portofino Blue	27	2.3%
	Posilipo Blue	3	0.3%
	PPG Blue/Green	1	0.1%
	Quasar Blue	1	0.1%
	Royal Blue	283	24.0%
	Special Blue	1	0.1%
	Stratos Blue	2	0.2%
	True Blue	1	0.1%
	Viper Blue	3	0.3%
Gold	Bronze	1	0.1%
Green	British Racing Green	1	0.1%
	Ford Spruce Green	1	0.1%
	Green	1	0.1%

Color Family	Color	Cars	Percent
	Jewel Green	2	0.2%
	Malachite Green	42	3.6%
	Olive Pearl	1	0.1%
Purple	PH7 Purple	1	0.1%
	Royal Grape Purple	1	0.1%
Red	Acura Red	1	0.1%
	Arena Red	1	0.1%
	Black Pearl Rose	2	0.2%
	Bordeaux	4	0.3%
	Garnet Red	1	0.1%
	Laser Red	10	0.8%
	Magenta to Gold	1	0.1%
	Magnetic Red	1	0.1%
	Monza Red	3	0.3%
	Red	112	9.5%
	Special Red	1	0.1%
	Toreador Pearl	1	0.1%
	Wild Strawberry	1	0.1%
	Wildberry	1	0.1%
Silver	Autumn Mica	1	0.1%
	Pewter Metallic	1	0.1%
	PPG Titanium	1	0.1%
	Silver	97	8.2%
	Titanium	129	10.9%
	Titanium Metallic	1	0.1%
	Viper Grey Pearl	2	0.2%
White	Pearl White	2	0.2%
	White	4	0.3%
	Wimbledon White	20	1.7%
Yellow	Chrome Yellow	1	0.1%
	Perana Yellow	3	0.3%
	Performance Yellow	1	0.1%
	Solar Yellow	2	0.2%
	Yellow	47	4.0%
	Zinc Yellow	2	0.2%
Total		1181	100.0%

In some cases there are two names for the same color. Black Metallic and Diamond Black are likely the same, for example, as are Titanium and Titanium Metallic. I accept the color names specified by the factory and do not edit to consolidate when the name changes.

Altogether there are 67 colors, up 40% from the 48 colors last year.

As to stripes, the most popular stripe color is the same as last year - white at 48.7%, down from 55.4% last year. No stripe at all is increasingly popular at 18.1%, up from 17.2% last year. The other big hitters are still black and silver. Titanium, introduced with car 759, became a big hitter for the first time this year.

Stripes	Cars	Percent
White	575	48.7%
None	213	18.1%
Black	176	14.9%
Silver	53	4.5%
Titanium	50	4.2%
Viper Blue	19	1.6%
Wimbledon White	18	1.5%
Gold	14	1.2%
White/Black Outline	10	0.8%
Indigo Blue	8	0.7%
White Willment	5	0.4%
Blue	3	0.3%
Medium Grey	3	0.3%
Royal Blue	3	0.3%
Special White	3	0.3%
White/Grey Outline	3	0.3%
Black Metallic	2	0.2%
Diamond Black	2	0.2%
Guardsman Blue	2	0.2%
Silver/Red	2	0.2%
Viper Silver	2	0.2%
Woodland Green	2	0.2%
Black Can Am	1	0.1%
Cap Blue	1	0.1%
Dark Blue	1	0.1%
Dark Portofino Blue	1	0.1%
Ivory	1	0.1%
Laser Red	1	0.1%
Lt Prairie Tan	1	0.1%
Metallic Black	1	0.1%
Purple	1	0.1%
Red Willment	1	0.1%
Satin Black	1	0.1%
Total	1180	100.0%

Altogether there are 35 stripe colors, up from 25 last year – also a 40% increase.

The most popular color/stripe combinations and their percentages for last year and this year are:

Color	Stripes	Last	This
Royal Blue	White	23.9%	21.8%
Guardsman Blue	White	14.2%	10.5%
Red	White	9.3%	7.6%
Titanium	Black	0.2%	6.5%
Black	None	6.2%	6.3%
Silver	Black	7.3%	5.1%

The complete list is:

Color	Stripes	Cars	Percent
Acura Red	White	1	0.1%
Arena Red	Titanium	1	0.1%

Color	Stripes	Cars	Percent
Autumn Mica	Titanium	1	0.1%
Avus Blue	None	1	0.1%
Banzai Blue	White	1	0.1%
Black	Gold	11	0.9%
Black	None	74	6.3%
Black	Silver	30	2.5%
Black	Silver/Red	1	0.1%
Black	Titanium	7	0.6%
Black	White	12	1.0%
Black Metallic	None	1	0.1%
Black Metallic	Silver/Red	1	0.1%
Black Pearl Rose	None	1	0.1%
Black Pearl Rose	Silver	1	0.1%
Blue	White	1	0.1%
Bordeaux	None	1	0.1%
Bordeaux	White	3	0.3%
British Racing Green	None	1	0.1%
Bronze	None	1	0.1%
Chrome Yellow	None	1	0.1%
Cloisonne Blue	White	4	0.3%
Dark Portofino Blue	Dark Blue	1	0.1%
Diamond Black	None	1	0.1%
Diamond Black	Silver	1	0.1%
Ferrari Blue	Wimbledon White	3	0.3%
Ford Blue	White	1	0.1%
Ford Spruce Green	Lt Prairie Tan	1	0.1%
Galaxy Blue	Special White	3	0.3%
Galaxy Blue	Wimbledon White	4	0.3%
Garnet Red	White	1	0.1%
Green	White	1	0.1%
Guardsman Blue	None	4	0.3%
Guardsman Blue	White	124	10.5%
Guardsman Blue	Wimbledon White	2	0.2%
Hitech Blue	White	1	0.1%
Indigo Blue	None	3	0.3%
Indigo Blue	Titanium	35	3.0%
Indigo Blue	White	14	1.2%
Indigo Blue	Wimbledon White	1	0.1%
Jewel Green	Ivory	1	0.1%
Jewel Green	None	1	0.1%
Laser Red	Gold	1	0.1%
Laser Red	None	2	0.2%
Laser Red	Silver	4	0.3%
Laser Red	Titanium	3	0.3%
Magenta to Gold	White	1	0.1%
Magnetic Red	Silver	1	0.1%
Malachite Green	None	9	0.8%
Malachite Green	Silver	3	0.3%
Malachite Green	White	26	2.2%
Malachite Green	Wimbledon White	4	0.3%
Medium Royal Blue	White	2	0.2%
Metallic Blue	None	1	0.1%
Midnight Blue	None	4	0.3%
Midnight Blue	Silver	1	0.1%
Midnight Blue	White	1	0.1%
Monza Red	None	2	0.2%
Monza Red	White	1	0.1%

Color	Stripes	Cars	Percent
Olive Pearl	Gold	1	0.1%
Pacific Blue	Wimbledon White	2	0.2%
Pearl White	Black	1	0.1%
Pearl White	Blue	1	0.1%
Perana Yellow	Black	1	0.1%
Perana Yellow	White/Grey Outline	2	0.2%
Performance Yellow	Cap Blue	1	0.1%
Pewter Metallic	Satin Black	1	0.1%
PH7 Purple	Silver	1	0.1%
Porsche Blue	White	1	0.1%
Portofino Blue	Dark Portofino Blue	1	0.1%
Portofino Blue	None	1	0.1%
Portofino Blue	Silver	2	0.2%
Portofino Blue	White	22	1.9%
Portofino Blue	Wimbledon White	1	0.1%
Posilipo Blue	None	1	0.1%
Posilipo Blue	White	2	0.2%
PPG Blue/Green	None	1	0.1%
PPG Titanium	None	1	0.1%
Quasar Blue	Silver	1	0.1%
Red	Black	3	0.3%
Red	Gold	1	0.1%
Red	None	15	1.3%
Red	Titanium	1	0.1%
Red	White	90	7.6%
Red	White Willment	1	0.1%
Royal Blue	None	14	1.2%
Royal Blue	Purple	1	0.1%
Royal Blue	Silver	5	0.4%
Royal Blue	Titanium	2	0.2%
Royal Blue	White	257	21.8%
Royal Blue	White (SP. PT.)	1	0.1%
Royal Blue	White Willment	3	0.3%
Royal Grape Purple	None	1	0.1%
Silver	Black	60	5.1%
Silver	Medium Grey	3	0.3%
Silver	None	29	2.5%
Silver	Royal Blue	2	0.2%
Silver	Viper Blue	1	0.1%
Silver	Woodland Green	2	0.2%
Solar Yellow	Black	1	0.1%
Solar Yellow	Black Can Am	1	0.1%
Special Blue	White	1	0.1%
Special Red	None	1	0.1%
Stratos Blue	White	2	0.2%
Titanium	Black	77	6.5%
Titanium	Black Metallic	2	0.2%
Titanium	Diamond Black	2	0.2%
Titanium	Indigo Blue	8	0.7%
Titanium	Laser Red	1	0.1%
Titanium	Metallic Black	1	0.1%
Titanium	None	38	3.2%
Titanium Metallic	Black	1	0.1%
Toreador Pearl	Silver	1	0.1%
True Blue	White	1	0.1%
Viper Blue	Silver	1	0.1%
Viper Blue	White Willment	1	0.1%

Color	Stripes	Cars	Percent
Viper Blue	Wimbledon White	1	0.1%
Viper Grey Pearl	Viper Silver	2	0.2%
White	Blue	2	0.2%
White	Guardsman Blue	1	0.1%
White	Red Willment	1	0.1%
Wild Strawberry	Silver	1	0.1%
Wildberry	White	1	0.1%
Wimbledon White	Guardsman Blue	1	0.1%
Wimbledon White	Royal Blue	1	0.1%
Wimbledon White	Viper Blue	18	1.5%
Yellow	Black	31	2.6%
Yellow	None	2	0.2%
Yellow	White	3	0.3%
Yellow	White/Black Outline	10	0.8%
Yellow	White/Grey Outline	1	0.1%
Zinc Yellow	Black	1	0.1%
Zinc Yellow	None	1	0.1%
Total		1180	100.0%

There are 133 color/stripe combinations, up from 91 last year – a 46% increase. Of the 133 combinations, 76 or 57% exist on a single car. Obviously, color selection is an increasingly important way of customizing and differentiating our cars.

Engines

A hot topic, full of passion. I haven't seen any fist fights yet, but I would not be surprised. However, I will stay out of the passion behind the big block vs. small block debate and Windsor vs. FE vs. 460 debates and just report the numbers.

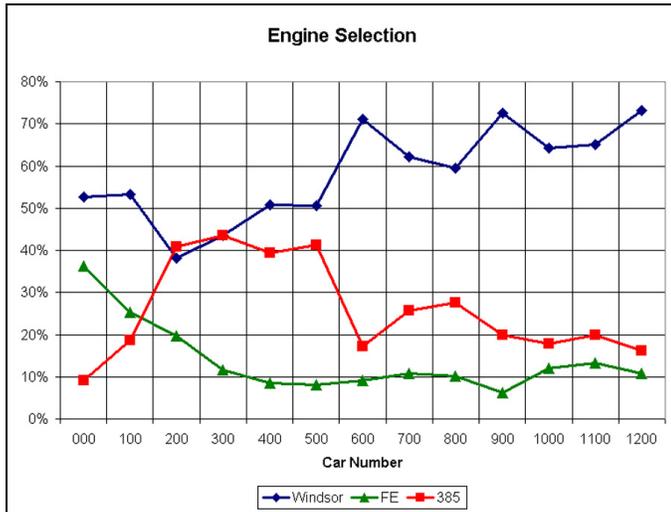
Statistics are presented by engine family.

Engine Family	Engines
Windsor	302, 351W
335	351C
FE	352, 390, 406, 427, 428
385	429, 460
Other	Various Chevrolet

The statistics are presented by car number century, i.e. 000 is 001 thru 099, 100 is 100 thru 199, and so forth. 903 of the cars from 001 through 1299 (70%) of the cars included in the sample and the distribution across centuries in good, so this is a valid sample. There are not yet enough cars above 1299 registered to consider. This data gives a good idea of trends in engine choices.

Century	Windsor	335	FE	385	Other
000	53%	2%	36%	9%	0%
100	53%	3%	25%	19%	0%
200	38%	1%	20%	41%	0%
300	43%	0%	12%	43%	1%
400	51%	1%	8%	39%	0%
500	51%	0%	8%	41%	0%
600	71%	3%	9%	17%	0%
700	62%	1%	11%	26%	0%

Century	Windsor	335	FE	385	Other
800	59%	3%	10%	28%	0%
900	73%	0%	6%	20%	1%
1000	64%	1%	12%	18%	4%
1100	65%	2%	13%	20%	0%
1200	73%	0%	11%	16%	0%
Overall	58%	1%	14%	26%	1%



The FE's started out strong in the initial 100 cars at 36%. However, the FE's declined from their initial strong showing to around 10% by the 300's and have stayed around 10% since. These folks represent the die-hard FE fans for whom nothing but the legendary FE will do.

The 385's started slow but became the most popular choice by the 200's and stayed at 40% through the 500's. The 385's essentially replaced the FE's as the big block of choice during this period.

The 351W strokers were introduced during the 600's and immediately began replacing the 385's as a big block alternative. The 385's declined to the 20% range and have leveled out there from the 900's on.

Except for the 200's and 300's where they were neck and neck with the 385's, the Windsors have ruled as the engine of choice. Their dominance has steadily increased from the 600's on. The various stroker versions have made the Windsor small block/big block a viable alternative to the FE's and 385's as the big block of choice as well.

When the registry was started, displacement was not part of the data requested. As a consequence, actual displacements have not been fully reported. So the percentage of engines that are strokers cannot be accurately reported. However, a look at the number of engines with increased displacement give a good idea of what folks are doing.

Even with incomplete reporting, 317 owners report increased displacement – 30% of the owners reporting engine type. Clearly, strokers are a popular item.

Engine Family	CID	Cars
335	392	1
	396	1
	408	1
385	466	1
	468	1
	486	1
	504	1
	514	37
	520	5
	522	2
	527	1
	533	1
	540	1
	545	3
557	1	
577	1	
FE	436	1
	452	2
	454	1
	461	1
	477	1
	484	2
	496	1
	511	1
Windsor	347	1
	375	1
	377	1
	383	2
	392	86
	393	19
	394	1
	396	68
	400	1
	406	2
	408	33
	410	1
	418	14
427	17	

For the 385's the Ford 514 crate engine is a clear choice for mountain motors.

The 351W in the 392 to 396 CID range has emerged at the most popular strokers with 174 reported. The 4.030 bore by 3.850 stroke configuration is variously reported as 392, 393, and 396 cubic inches. It is actually 392.9 cubes

The larger 351W displacements – 408, 418, and all the way up to 427 are making a strong showing as well. The 427 cubic inch version rings the magic number bell loud and clear.

The absolute displacement king is Rodney Hedeem's SP1060 with 577 cubic inches. (Can I have the local tire franchise please?)

The king of the FE's is Ulysses Knotts' SP439 with 511 CID.

The king of the 302's is Doug Kraai's SP1022 with the 347 stroker so popular with the Mustang crowd.

The king of the Windsors is shared by 17 owners at 427 cubes.

Transmissions

In the beginning, you could have a Tremec 3550 Standard 5-speed, a top loader, or one of the very rare automatic installations. A lot has changed since then. Tremec announced the 3550 TKO, identical to the 3550 Standard except for the increased spline count, which gives it a higher torque capacity. Tremec then announced and finally delivered the 3550 II gearboxes with the shorter 0.82 fifth gear ratio. The registry is now collecting data on Tremec TKO and II transmissions, but it is not complete and not shown here.

Transmission Technologies Corporation (TTC), the manufacturer of the Tremec transmissions, purchased the Borg Warner transmission operations, which means that the T-5 5-speed used in the Mustang and the T-56 6-speed used in the Viper, Corvette, Aston Martin, and Mustang Cobra are now Tremec transmissions as well.

Transmission	Cars	Percent
4-Speed Manual		
Ford Toploader (4-Speed)	16	1.8%
Renker	1	0.1%
5-Speed Manual		
Tremec (5-Speed)	863	96.3%
Tremec T-5 (5-Speed)	10	1.1%
Cressida 5-Speed	1	0.1%
Cosworth (5-speed)	1	0.1%
Doug Nash (5-speed)	1	0.1%
6-Speed Manual		
Richmond Nash (6-Speed)	1	0.1%
Tremec T-56 (6-Speed)	5	0.5%
Automatic		
Ford AOD (Automatic)	3	0.3%
Ford Automatic	2	0.2%
Ford C-4 (Automatic)	2	0.2%
Ford C-6 (Automatic)	2	0.2%
Borg Warner Automatic	1	0.1%
FMX Automatic	1	0.1%
GM 700-R4	2	0.2%
Lintic 3+OD Automatic	1	0.1%
Total	913	100.0%

The Tremec 5-speed remains the most popular transmission choice by far, increasing its percentage from 93.6% last year to 96.3% this year.

The percentage of Toploaders 4-speeds dropped from 2.5% to 1.8%.

The Renker is a competition 4-speed "crash box" installed in SP245, the sole existing Competition model now owned by the Ostrowers.

The Cressida 5-speed backs up a 302 in SP965 in South Africa.

The number of T-56 6-speeds jumped from 1 to 6 or 0.2% to 0.7%.

The percentage of cars with automatics dropped slightly from 1.8% to 1.5%.

Drivetrain Combinations

Last year there were 36 engine/transmission combinations. This year there are 56 engine/transmission combinations reported, not including displacement variations. For simplicity the table shows engine family and transmission.

Engine Family	Transmission	Cars	Percent
335	Ford AOD (Automatic)	1	0.1%
335	Ford Toploader (4-speed)	1	0.1%
335	Tremec (5-Speed)	9	1.0%
335	Tremec T-5 (5-Speed)	2	0.2%
385	Automatic	1	0.1%
385	Doug Nash (5-speed)	1	0.1%
385	Ford C-4 (Automatic)	1	0.1%
385	Ford C-6 (Automatic)	2	0.2%
385	Ford Toploader (4-Speed)	1	0.1%
385	Lintic 3+OD Automatic	1	0.1%
385	Tremec (5-Speed)	229	25.1%
FE	Borg Warner Automatic	1	0.1%
FE	Ford Toploader (4-Speed)	14	1.5%
FE	Tremec (5-Speed)	104	11.4%
FE	Tremec T-5 (5-Speed)	1	0.1%
Windsor	5-Spd Cressida	1	0.1%
Windsor	Automatic	1	0.1%
Windsor	Cosworth (5-speed)	1	0.1%
Windsor	FMX Automatic	1	0.1%
Windsor	Ford AOD (Automatic)	2	0.2%
Windsor	Ford C-4 (Automatic)	1	0.1%
Windsor	Renker	1	0.1%
Windsor	Richmond Nash (6-Speed)	1	0.1%
Windsor	Tremec (5-Speed)	519	56.9%
Windsor	Tremec T-5 (5-Speed)	7	0.8%
Windsor	Tremec T-56 (6-Speed)	3	0.3%
Other	GM 700-R4	2	0.1%
Other	Tremec (5-Speed)	1	0.1%
Other	Tremec T-56 (6-Speed)	2	0.2%
Total		912	100.0%

Not surprisingly, the Windsor/Tremec 5-speed combination is the most popular.

As an interesting sidelight, the number of cars with an "original" combinations, an FE with a Toploader, is very small – 14 cars or 1.5%

Communication via Internet

Fifty seven percent or 690 of the folks in the registry have reported an email address, up slightly from fifty four percent last year. Since the number of folks in the registry has about doubled in the past year, the new additions are supplying email addresses at about the same rate as the established members.

This certainly indicates that about half the members have routine access to the Internet. Given the demographic of the owners (you figure out what I mean by that), this is not a big surprise.

What this means to Second Strike is that the US Mail (snail mail) will continue to be the primary method of reaching our members.

In Conclusion...

The most significant change in the past year has been the growth in number of cars in the registry and the growth in membership in Second Strike. Last year's survey taken on March 19, 2001, was based on 673 cars representing about 62% of all cars sold. This years survey taken a little later in the year on July 7, 2002, is based on 1,209 cars representing about 90% of all cars sold. The Second Strike membership has almost doubled in the past year.

Superformance has expanded its presence into 5 new states and 3 new countries in the past year.

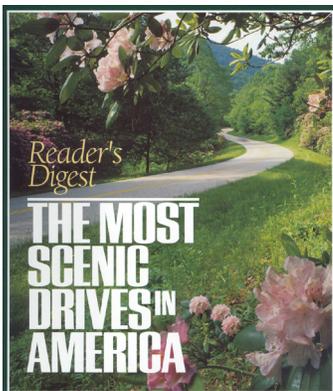
	2001	2002
Membership	673	1,209
Percent of Cars	62%	90%
USA States	39	44
Other Countries	8	11

The story of Superformance, the best of the classic replicas, continues to grow, as does the story of Second Strike, the best owners group, and the best owners in the world.

ROAD TRIP GUIDES

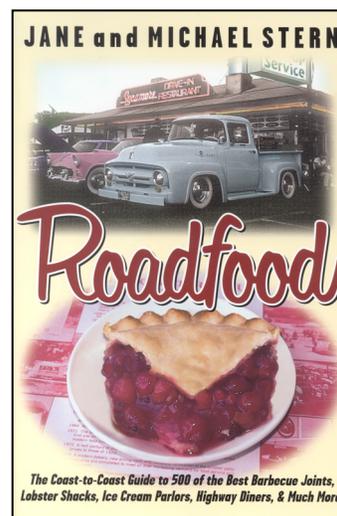
Car shows are great. Track events are awesome fun. But there is something really special about road trips. Top down, loafing along, cruising down the two lane byways of America, side trips through the countryside, the sights, the sounds, the smells of this good earth, sun in the face, wind in the hair, the burbling of the exhaust music to my ears, the woman I love at my side, the destination not as important as the journey. Life is good on road trips.

Pat and I have found two excellent guides for road trips. Combining the two in one trip makes it double fun. Pick the route, then find the roadfood restaurants along the way.



The Most Scenic Drives in America is published by Reader's Digest. It provides maps and detailed descriptions of 120 spectacular road trips including points of interest along the way. Every state has at least one. The Blue Ridge Parkway is of course included. It is considered by many to be the best open car/motorcycle road in the

USA. California 1 through the Big Sur coast region is considered the tops on the West Coast. Pat and I have individually and together had the pleasure of taking a number of these drives and can attest that their inclusion in this excellent book is well deserved.



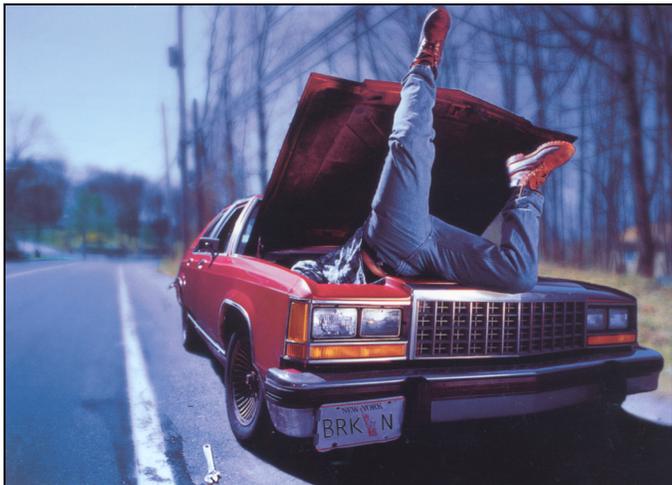
Roadfood, by Jane and Michael Stern, is an obvious labor of love by a couple from Connecticut who have eaten their way around the country. Their coast-to-coast guide includes 500 of the best barbecue joints, lobster shacks, ice cream parlors, drive-ins, and highway diners. Their choices are not contenders for a Michelin five star rating. Pat and I have sampled the wares at a surprising number of them and find that for the most

part they are local restaurants with a well-deserved reputation for colorful atmosphere and excellent food at a reasonable price. In other words, outstanding stopping points along the way on a serious road trip.

The Most Scenic Drives In America, Richard Scheffel, editor, The Reader's Digest Association, Inc, Pleasantville, NY, 1997, 400 pages.

Roadfood, Jane and Michael Stern, Random House, New York, NY, 2002, 493 pages.

DEEP SOUTH COBRA CLUB AT BILL PARHAM'S



Bill! How many times do I have to tell you that you have to wait until the car is stopped before you go after the engine!

When the Deep South Cobra Club held its 2002 convention on the weekend of April 13 and 14, what better place than the shop of Bill Parham in McDonough, Georgia. McDonough is certainly in the Deep South and Bill Parham is certainly a legend with Superformance and other replica owners who want nothing but an FE in their pride and joy.

Bill's association with the famous FE engines goes back to his racer days when he competed with Chevy small blocks with his 352 CID FE's and big blocks with his 427 CID FE's.

Bill is duly famous for finding vintage FE's in the most unlikely locations. When I met him years ago at the Olthoff's shop, he drove up in his van, threw the side doors open, and exclaimed, "Look what I found!" To the uneducated eye, it was an ancient engine covered with decades of baked on dirt and oil sludge. To the trained eye however, it was a 427 side-oiler. Bill found it in a wrecker truck that used to belong to a NASCAR team. When the original engine gave out, the team mechanics replaced it with a race engine that missed making the grade by a few ponies. It had lived on under the hood of the wrecker ever since.

Over the years, Bill has amassed what must surely be the world's largest collection of vintage FE parts. From the rather common 390 FE blocks and heads up to the 427 side-oiler blocks and very rare single overhead cam (SOHC) 427 heads – Bill has it all.

The party started Friday night with an impromptu gathering in the motel parking lot. The Cajun contingent lead by Doug Reed and his long suffering brother Ron, got it started with the Thibodaux stories. Out came the lawn chairs and the coolers and it was off to the races. Traffic was rerouted. This was serious BS. The session went on long past midnight.



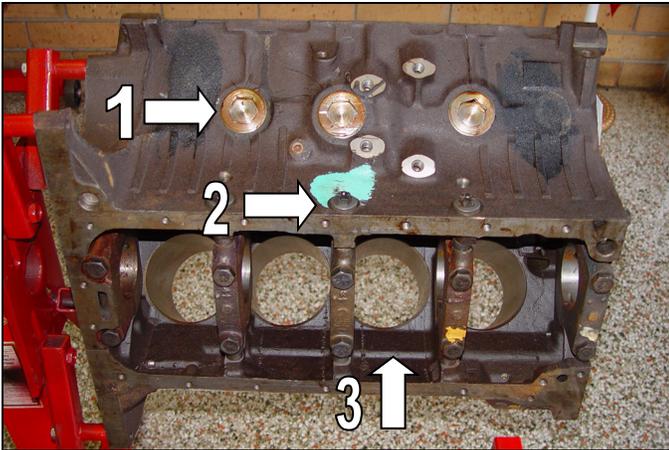
What a bunch of comedians. The crowd grew until it blocked traffic. If the stories weren't so offensive as to run off the weak of stomach, it might have been bigger.



Events got underway early Saturday at Southern Automotive.



Saturday morning dawned overcast and wet. The planned Poker run was cancelled, but the car show went on. Many replica makes were represented. It was a good opportunity to see what the rest of the world looks like.



A good bit of the rainy Saturday was spent perusing Bill's substantial stock of rare and wonderful FE parts. This 427 block shows the side-oiler trademarks. (1) screw in freeze plugs, (2) cross bolted mains, and (3) the cast in side oil galley.



Wedge FE heads showing differences in intake ports. Combustion chambers and exhaust ports were that same for all. From the left: Cast iron Cobra Jet, aluminum medium riser, cast iron high riser, and aluminum tunnel port.



The aluminum over head valve (OHV) medium riser head with inline valves (top), and the hemi single overhead cam (SOHC) head with opposed valves.



The Saturday night banquet served up ample portions of good food and tall tails.

Saturday was filled with the car show, a barbeque lunch, a tour of Bill's shop, and inspection of the many rare FE parts with Bill ever ready to explain the differences or offer up a bit of history. Dennis Olthoff gave a seminar on high performance driving. The Bilstein representative provided a timely update on Bilstein shock technology.

Saturday evening everyone congregated at the hotel for happy hour and the banquet. Not to be outdone by the other storytellers, Bill Parham told this story and swears it is true. You be the judge.

Bill and his crew showed up at a small track for a Saturday night of racing only to find that the racing gas truck had not made its delivery. The engines would not survive on street gas, so they could either go home or go scrounge up some race gas. Bill heard rumors of a legendary local figure who "brewed" his own special race gas. The directions took Bill down a long dirt road into the deep woods. Intimidated by the surroundings and the growing darkness, Bill nevertheless knocked on the door. The brew master appeared and a deal was struck. Bill opened the gas can to size up the brew and green noxious fumes spilled out. Bill poured some into a plastic cup to look it over and the cup melted in his hands. "This might work", Bill said to himself.

Back at the track, he carefully poured the potent liquid into his fuel tank, being careful not to spill any on himself. In the first heat race he discovered that his car was so much faster than the field that he had to back pedal some to keep from raising suspicion. He worked his way to the final and was scorching the field when the pistons liquefied. His engine sure ran fast enough, but not long enough. Bill never found out what the mystery fuel was. But it sure was good.

The "usual crowd" gathered in the parking lot again after the banquet. Out came the lawn chairs and coolers again. The stories went on well into the morning. After breakfast on Sunday, everyone said farewell and headed home. A great weekend with great folks doing fun things together. Another great road trip.

SPRING SNAKE ROUNDUP AT DYNAMIC



Snakes on the lawn for SSR at Dynamic Motorsports

Story and photos by Mike Stenhouse
Photos and facts by Randall Thomas
Photos by Jim Levenson

SSR, the Spring Snake Roundup, was put together by SCOF, the Superformance Owners Forum, and Dynamic Motorsports, the Midwest Superformance dealer, as a combination owners gathering and customer appreciation event. The weekend event began on Thursday, April 25, and ran through Sunday morning.

The Journey There

A great excuse for a road trip! It is about 460 miles from Charlotte to Cincinnati and a few more to Ross. To catch the Friday afternoon events, it was necessary to be on the road early. It was downright chilly when I rolled SP218 out of the garage into the pre-dawn dark. The road would lead through the Great Smoky Mountains and over the Eastern Continental Divide. So it would be downright criminal to put the top up just for warmth. A hooded sweatshirt under my bomber jacket and leather gloves would be enough to start. The right side tonneau cover was snapped into place. Hit the starter and pull out before the raucous exhaust awakens the neighbors.

West on US 74 to I-26 where the mountains begin. The terrain is already so steep it is impossible for the road to meet the interstate highway grade standards. Cars and trucks in particular labor upward. SP218 burbles past in 5th with nary a strain. The temperature was dropping, but the scenery was just too beautiful to cover with a top. I stopped to swap the bomber jacket for a hooded parka.

It was with great anticipation that I picked up I-40 in Asheville and headed west for the Smokies. I was not disappointed. The highway was cut through the side of the mountain with massive mountains rising up on one side and deep valleys plunging on the other. And spring, though quite cold, had brought the mountain flora to full bloom. It was difficult to keep focused on the road. But the four lanes climb and dive and twist and turn, not unlike flying through a mountain pass. Some considerable attention to the road was required and this too brought a sense of elation. A total assault on the senses. Only in an open sports car can this be truly experienced and appreciated.

I-40 Thru The Smokies

As a young engineering student in the 1960's, I worked as a draftsman for the North Carolina Highway Commission. One of the projects I worked on was I-40 between Asheville and Knoxville. At the time it was the most ambitious section of interstate highway yet attempted.

Among other things, good highway design involves balancing the "cuts" (dirt removed to make the roadbed) and "fills" (dirt added to make the roadbed). A perfect design in this regard is "balanced", no shortage or surplus of dirt.

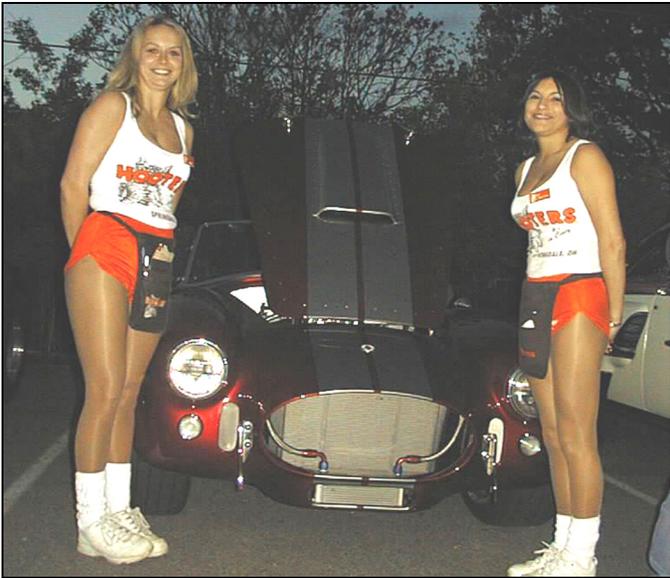
In those ancient pre-computer times, the cuts and fills were calculated by hand. The surveyed cross-sections of the existing topography were plotted by hand. The roadbed, cuts, and fills were then drawn in. A planimeter was used to calculate the cross sectional areas of the cuts and fills. One end of the planimeter was pegged to the drawing and the other end was moved precisely around the perimeter of a cut or fill. The enclosed area was read from the dial just like magic. Because of the steep terrain, the cross sections were too large to be plotted on the standard single 24 x 36 inch drawing. Two and sometimes three sheets had to be taped together. The areas were beyond the span of the planimeters and everything had to be done piecewise.

Every time we did something, we hit a new obstacle. The project was so massive that the scale of everything was beyond the methods and tools that had proved adequate since the dawn of highways. But we finished. They built it. It is spectacular.

Turning north in Knoxville, I-75 flattened out. The skies and the scenery turned grey. The beauty of the surroundings no longer offset the cold. Up went the top. Warm at last.

The Event

On Thursday evening, the early arrivals gathered at Hooters after the cruise in for sustenance and a car show. Hooters generously provided some door prizes. The Hooters girls selected a few awards for the group.



Tom Carbone's SP919 won "Cutest Car".

The scheduled events began Friday afternoon with a "guided" cruise lead by Bill Wertz. The term "guided" is used reservedly since "guided" and "gear head" seem to be mutually exclusive. The crowd dissipated to several area restaurants for nourishment before gathering in the hotel parking lot for a casual car show and mutual information sharing session – a "you show me yours and I'll show you mine" hoods up BS session, to be precise



Jim Levenson, ever the fashion plate, demonstrates the latest in cool weather top down attire. Leather bomber jacket and fleece lined bomber helmet. The ball cap worn under the helmet keeps the sun out of his eyes during daytime operations. The clip mounted flashlight on the bill of the cap improves night operations vision, providing around the clock capability. Really attractive too, Jim. I mean really.

Saturday dawned cool and overcast, but it didn't dampen anyone's spirits. The Poker Run was off on schedule. I was fortunate to have the talented Bill Doolittle as my navigator. The fact that we missed the first turn can only be attributed to Bill having the directions upside down. Once we got back on track, we were locked in and on target.

In addition to the inscrutable directions, the Poker Run made three stops – a pool hall, a skeet shooting range, and a bowling alley. At each stop additional cards could be earned by performing feats of excellence. In addition to his superb navigational skills, Bill Doolittle earned our team extra cards in all three events. What a man!



Doolittle shows how it's done on the skeet range.



The Saturday afternoon car show was held under the "Big Top", a circus scale tent at Dynamic.

IN THE TOWNSHIP OF ROSS IN BUTLER	
COUNTY (NO. 09), STATE OF OHIO AND COMMITTED THE FOLLOWING OFFENSE(S):	
<input checked="" type="checkbox"/> IMPROPER TAKEOFF: On public property	<input type="checkbox"/> ORC <input type="checkbox"/> ORD <input type="checkbox"/> T.P.
<input type="checkbox"/> Doughnuts <input type="checkbox"/> Bootlegs <input type="checkbox"/> Smileys	
<input checked="" type="checkbox"/> Repeated and excessive tire markings on public highway equal to or greater than 150 feet.	
<input checked="" type="checkbox"/> PUBLIC SPECTACLE: Creating traffic obstructions, minor / major accidents and or inciting public disturbances caused by owning / operating vehicle listed above.	<input type="checkbox"/> ORC <input type="checkbox"/> ORD <input type="checkbox"/> T.P.
<input type="checkbox"/> 1st Offense <input type="checkbox"/> 2nd Offense <input checked="" type="checkbox"/> Repeat Offender	
<input checked="" type="checkbox"/> PROBABLE HABITUAL HIGH SPEED OFFENDER: After an exhaustive review of the defendant's records based on vehicle type/condition and socio-economic status; it has been determined that the above stated defendant should be classified as a probable habitual high speed offender. Violations are likely to include: Willful disregard of posted speed limits, Failure to recognize posted speed zones, Repeated and Excessive (100 mph over posted limit) speeding for no reason, W/airp factor 3 in a 55 mph zone, Excessive speed resulting in the creation of a parallel universe, Excessive vehicle speeds resulting in a disruption of the spacetime continuum, damage to other vehicles (including removal of doors and fenders) created by increase of air flow when overtaken by above stated vehicle, etc. . .	<input type="checkbox"/> ORC <input type="checkbox"/> ORD <input type="checkbox"/> T.P.

Randall Thomas got a special award from the local police, a ticket for PROBABLE HABITUAL HIGH SPEED OFFENDER. He was handcuffed and removed.



One of the real hits of the show was Bill Well's 1960's style Paxton supercharger installation in SP156.

After the Poker Run, it was time for a most excellent lunch back at Dynamic. Burgers and other fine foods on the grill. The "Big Top" erected for the Car Show spared us the heavy rain on Saturday afternoon. Judging such a show would be a difficult job since all the cars were drop dead gorgeous, of course. Awards were given in a number of categories for cars and engines and also for participation – greatest distance to get there and the like. Alas, there are no records and the winners are known only to themselves.

The events of the day finished with a banquet at Dave and Buster's courtesy of the Rosens. Ron Kruger and Ron Rosen were featured speakers and gave their insights into the introduction and growth of Superformance in the USA. Randall Thomas, Mike Stenhouse, and Dean Rosen teamed up to give out the door prizes – and there were a ton. I think everybody got one! If you missed one, you must have been either in the can or under the bar when your name was called out.

It was a great weekend. It all, there were about 56 cars and 103 people from 13 states. Bill Doolittle came the greatest distance, flying in from California. Tom Carbone from Minnesota came the greatest distance with his car.

Many thanks to the people who put it together.

- Randall Thomas, creation and organization of the event
- Bill Wertz, setting up hotel, cruise, poker rally, poker stops and security
- Robert Armstrong, supplied identification name tags
- Craig Aylsworth, hotel security liaison and car id tags
- Wes Rozan And Frank Forestiere, car show display and safety inspection
- Bill Wells, John Manix, Norm Cummings and Frank Forestiere, barbeque chef extraordinaire
- Ron & Jackie Daveley, hospitality and welcoming committee
- Bob Minton, special photography and photo CD creator

And to the event sponsors and contributors:

- Dynamic Motorsports, use of their beautiful facility for Saturday's events, seminars, tours, door prizes, food and the afternoon barbeque and some super surprises!
- Performance Unlimited/Cobra Valley, funding for the event preparation, paperwork & website, door prizes
- Kiatta's Saloon, poker run check point
- Franklin County Conservation Club, poker run check point
- Moe & Pam's Cedar Grove Tavern, poker run check point
- Southern Automotive, door prizes
- Second Strike, door prizes
- Jim Montag, door prizes
- Brian Henriksen, door prizes
- Gratefully anonymous, the dreaded "P" stickers

Homeward Bound

The promise of an impending storm caused most to leave buttoned up on Sunday morning. On the encouragement of several participants, I headed back on the northern route – the Double A highway west to I-64 then connect with I-77 to Charlotte.

A few miles south of Cincinnati, the weather improved and the top came off. Double A wound its way beside a tributary of the mighty Ohio River. It had overflowed its banks and at times it came within a few feet of the road. But the rain held and the drive through the rural countryside was beautiful. I stopped at the I-64 intersection and a local suggested the slower but more interesting US 52 through West Virginia. Good idea. Maybe. But when I reached the US 52 exit, the sky to the south was dark and foreboding. I continued on I-64.

Within a few miles, the sky darkened ahead as well and rain began to fall. Hoping beyond all reason that it was a local sprinkle, I motored on. The sprinkle quickly turned to a driving deluge. It was several miles before an interstate bridge offered shelter. It was an underpass, so I had to pull off to get under it. The wind was blowing so hard that I had to pull twenty feet beyond the bridge to find a somewhat dry spot to erect the top. Since I normally drive with the tonneau in place, I quickly covered the interior with the tonneau and then erected the top over the tonneau. I got wet, which was going to happen anyhow, but the interior stayed dry. I motored on. The rain passed and the skies cleared a bit, but this time the top was staying up.

Then I hit the wall – a massive and foreboding black wall blocking the highway - stretching to the horizon in either direction and reaching all the way up into the heavens above. Lightning licked the upper regions. An awesome and frightening thing it was. When I hit it, I thought I had driven under a waterfall. I could not see beyond the hood. The dark rain was "too thick to breath, but just a little to thin to swim in". Something was pelting the car like rifle bullets. After a short time, the span of which I could not even guess, I ran out the other side. The countryside was blanketed in white. It

couldn't be snow. It was too warm and too late in the spring. And it wasn't. It was a thick carpet of hailstones. Hailstones are not unlike ball bearings. Cars were sliding. One car slid down into the deep valley in the median and continued on at speed until reaching the crossover road, which acted as a launching ramp. The car cleared about a hundred feet in the air, executed a 180 and landed on its roof. The occupants climbed out unhurt with the assistance from other folks exiting their stalled cars. Did anyone offer a change of underwear, I wonder?

The weather continued this pattern of fair weather interlaced with violent storms all the way home. I hit another wall north of Charlotte on I-77. This time I knew the pelting to be hailstones and again I motored on through to shorten the time I was being pelted. When I pulled through the other side, the median and shoulders were littered with cars that had blindly wandered off the road and were now sitting in deep mud. The local wrecker companies would be in a bonus situation today.

The two biggest hailstorms I have ever been in – both in the same day. I have checked SP218 over carefully and can find absolutely no damage whatsoever from the hail. Amazing this car of mine.

I know from conversations on the SCOF site that I was not the only one to hit bad weather on the way home. And a trailer was no safer than driving. Ron and Jackie Daveley, buffeted by high winds, snagged the corner of their trailer on a concrete divider.

I must also report that other than some dampness on the carpet, SP218 remained dry and comfortable throughout the trip. In response to a number of requests from other participants, I am including an updated version of the weather proofing articles in **Bits and Pieces** in this issue.

VIR SPRING 2002

The Second Strike / Olthoff Racing Spring 2002 Invitational Track meet at VIR was our fourth trip to the famous track nestled in the bucolic Virginia countryside. Our adventures there in the fall of 2000 were chronicled in detail in Second Strike Volume 4 Number 1. We pick up the story there.

In the fall of 2000 and spring of 2001, our events were open events with about half of the participants being non-Superformance owners – typically Mustangs and other Ford powered high performance cars. For the most part it was great fun running together and there was a great sense of Blue Oval camaraderie. However, due to differences in engines, suspensions, weight, and tires, the speeds of the different types were different on different parts of the course. This led us to wonder if it was a good idea to have different types on the course at the same time.

Fall 2001

Dates at the good racetracks are as hard to come by as dates at good beach houses. If the current renter comes back, he gets to keep the date next year. The fall date was "owned" by Jim Harrell, the Rock Hill, South Carolina, Shelby American dealer and we sublet it from him for 2000. Rather than sublet the date to us for fall 2001, he wanted to join with us to put on a joint event.

The event was huge with 96 cars registering. But Second Strike registered the overwhelming majority of cars. And Second Strike members did the great majority of the work in planning and executing the event.

Cobra replicas

50	Superformance
4	Shelby CSX 4000 and 7000
3	Factory Five
1	Contemporary



Rounding Oak Tree, a Superformance S1 (aka Garden Snake) tries in vain to catch its big brothers.



The ladies group continues to grow in size and proficiency. Twenty one of the one hundred forty one registered drivers were ladies.

Others

24	Mustang
5	Corvette
4	Porsche
1	BMW
1	Camero
1	GT 350
1	Saleen
1	Viper

The most common comment about the joint nature of the event was, "We may have to put up with Shelby snobbery at SAAC, but we don't have to put up with it at our own events." This would be our last joint venture with the Shelby crowd.

Spring 2002

For the spring 2002 event, we decided to return to our roots. The focus of the event would be:

- Safety
- Driver education
- By Superformance owners for Superformance owners

The spring 2002 event was designed as an invitational event with priority in registration being given to Superformance owners, then other Cobra replica owners, then other Ford powered high performance cars. This produced a far more compatible mix of cars with all but 6 of the 92 registered cars being Cobra replicas. It also produced the largest gathering of Superformance cars in history.

Cobra replicas

76	Superformance
6	Factory Five
2	ERA
1	ANC
1	Contemporary

Other

2	Superformance S1
2	Mustang
1	GT 350
1	Winston Cup Taurus

And it was a spectacular event. The weather could not have been better. It rained briefly in the early morning and again during lunch.

Saturday began with the mandatory drivers meeting. Everyone then climbed aboard the open trailers for on-course instruction at every corner by the masters, Bob Olthoff and Mac DeMere. Afterward, the rookies went of to the skid pad and the experienced drivers hit the track.

Organizational skills honed through years of prior events paid off as the run groups were staged and launched quickly and with precision. We also used VIR corner workers this time. As a consequence we only had one corner worker break in the morning and one in the afternoon. The result was a lot of



Joe Rodamista and his ERA FIA. Joe and the other members of Club Cranky brought ERA, Contemporary, ANC, and Factory Five replicas to the event. Their presence is symbolic of the growing sense of camaraderie among replica owners who want to break away from Shelby and SAAC and form an organization of our own.



Cliff Cooksey was one of the many fine instructors providing in car instruction to all who requested it.



Saturday night found honored guests Jim Price (right) and Ron Kruger (center) dining with Bob Olthoff (left) and a long table of Superformance owners.

track time for everyone in spite of the record 92 cars and 140 drivers. The run groups were full early on, but as the day wore on the groups dropped to about 15 cars. This provided plenty of space for everyone to really stretch his or her legs.

After lunch, our instructors provided in-car instruction to the rookies returning from the skid pad and everyone else who requested it. Since VIR required a full width or double roll bar for instruction, Bob and Dennis Olthoff used their cars for instruction, and Cliff Cooksey and Mac DeMere drove cars generously volunteered for instruction. Riding as a passenger in a car as fast as ours with a driver as good as our instructors is better than the best carnival ride you will ever go on. The looks on the faces of the returning passengers said it all. Wow!

The point, however, was instruction. And that was delivered in spades. Many returning passengers commented that they never really understood where the line was or how important it was to getting around quickly. Others pointed out that they didn't know it was possible to go that fast. Now they have a goal to shoot for.

We had a number of honored guests for the event. Jim Price, owner of Hi-Tech Automotive, manufacturer of the Superformance Mk III and S1, came all the way from South Africa to join us. Ron Kruger, head of Superformance International Inc., the marketing and distribution arm of Superformance in the USA, came in from Newport News. Preston Miller from Raceparts Distribution Inc. (RDI) joined us from Cornelius, North Carolina. Preston was impressed (overwhelmed) by the size and organization of the event and by the enthusiasm of the owners and our dedication to our sport.

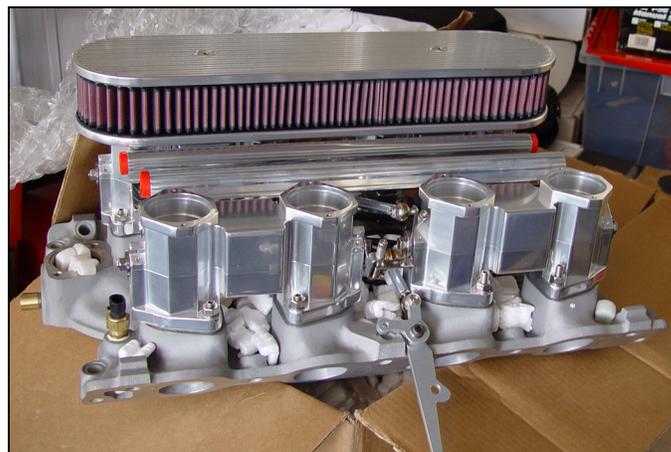
A great weekend doing great things with a growing number of great cars and great friends. Life can be sweet at times.



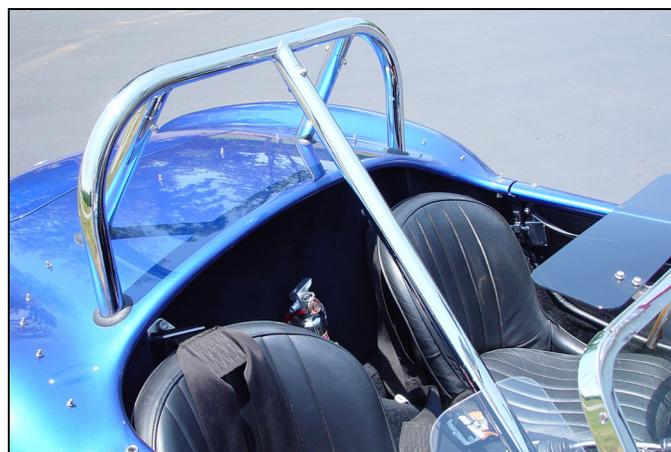
The "Tenacity Award" went to Jeff "Crash" Kraengel, aka "The Deer Slayer". Jeff hit a deer after only two weeks on the road and just before he was leaving for VIR. To add insult to injury, guess what the "mud" on the front fender is. After some discussion about the extent of damages, Jeff did a NASCAR style duck tape job on the injured snake and joined us. Way to go Jeff.



Gerry Poynter won the "Exxon Valdez" award hands down. His harmonic damper came apart and punctured his oil pan. Not so bad, but it was a lap and a half before we could get him pulled over. The EMS boys had to go back to the barn for more kitty litter. But Angie is still smiling. Lucky boy, Gerry!



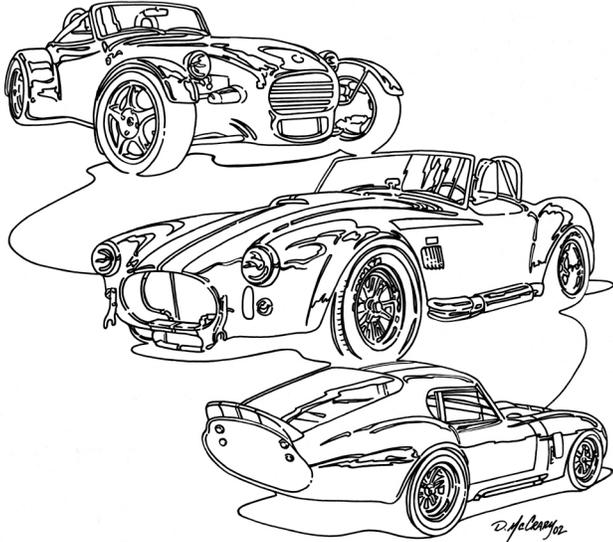
The winner of the "Best Toy" award. A set of cast aluminum Weber look alike fuel injection throttle bodies mounted on a 460 intake. The triumph of lust over reason.



The sign of things to come. Five point full width roll bar on Jim Witty's SP144.

LOWE'S MOTOR SPEEDWAY FALL 2002

Story and photos by Mike Stenhouse
Photos by others folks as well



Dan McCrary, noted automotive artist, designed the stunning Second Strike logo printed on the back of the event shirts. Dan also did much of the artwork in the gear head oriented Wingate Inn, which served as base of operations for the event.

After the Spring 2002 event at VIR, there were a number of questions that caused the event planners to rethink the venue.

First and foremost was the issue of roll bars raised by the VIR safety staff. The period correct single hoop roll bars no longer meet the increasing stringent VIR safety standards. Changes in seat design make the driver sit up higher. Changes in helmet design make helmets taller. For a large number of drivers, their helmet is now higher than the roll bar. The practical implication for event scheduling is that only drivers with the taller full width roll bar, short drivers, or drivers who were willing to modify their seats would be able to participate in the fall event if it were held at VIR. Under the circumstances, there would not be enough drivers to make the event viable.

The roll bar situation is not unique to Superformance, of course. It applies to other replicas with period correct roll bars as well as to the current BMW, Porsche, and other open sports cars.

The second concern was restrictions on instruction. The VIR rules do not allow in-car instruction without double or full width roll bars, even if the driver is an instructor. So rather than use the student's car for instruction, the instructors and staff have to provide their own cars for instruction. This limits the amount of instruction that can be offered. And we cannot ask the staff and instructors to put this wear and tear on their personal cars on top of donating their time and talents.

The third concern was exposing the large number of rookies to such a high-speed track on their first time out. Fully 48% of the registered drivers were rookies. This is good, because driver education is what the event is all about. But we are not achieving that goal if the track is too intimidating to support that goal.

With these thoughts in mind and VIR not a viable option for the fall event, we looked for another facility. We were lucky to be able to acquire the Lowe's Motor Speedway infield facility on such short notice.

Lowe's is widely recognized as one of the finest motor sports facilities in the world. In light of our requirements, Lowe's has some significant advantages.

The short 0.7 mile infield track limits maximum speeds to 100 mph, a safer maximum speed for rookies. As an added advantage it is easier on the cars. This proved to be the case. Nobody hit anything and nobody grenaded their engine.

With the lower maximum speeds, we were able to offer in-car instruction in the student's car all weekend long.

The expansive parking area allowed us to add autocross to the events. This intermediate step between figure-8 and the track was not only an excellent instructional event, but was a lot of fun as well. It was very well received and very successful. It was described by some as, "the most fun you can have with your clothes on", whatever that means.

So we gave up something on the bucolic and challenging VIR course and gained in other areas.



The event was dedicated to the kids at Thompson Children's Home in Charlotte. Second Strike has made contributions to Thompson from the proceeds of past events. Many of the kids proudly wear their Second Strike event shirts and a bunch more will after this event. The kids sent thanks to all of us and asked for a group picture. So here it is.



Dawn breaks...



And the instruction continued...



Getting ready for the day in the NASCAR garage. This is hallowed ground, home to some of the best drivers and fastest cars in the world. Hey, who got Rusty Wallace's spot?



And it continued...

What I heard was, "If you do good, you will get a *special* reward."



The instruction started early on the Figure-8...



Some folks just can't wait!

(The Millers took "Greatest Distance – Driving" honors for driving up from their vacation home in Florida. With all that practice, you wouldn't think extra instruction was necessary.)



Do I want to go fast...



Angie gives nauseous Teddy comfort!



Or have fun...



Scott Bigham took FTD (fastest time of the day) in Autocross on Saturday and overall for the event. In all 46 of the 70 register drivers tried their hand at autocross, posting 167 runs over the two day event.



Ace instructor Bob Jordan gives Teddy some instruction.



Steve Niebauer took FTD in autocross on Sunday. He also won the award for most miles in the past year. SP1116 is a little over a year old and has 20,000+ miles. That's Steve's car with Amanda driving in the Figure-8.



Carol "Ma" Barker took FTD in autocross for the ladies.



At the end of the straight are a series of three increasingly tighter right hand turns. The last right and the following left provided the greatest "entertainment" for the fans.



Amanda Niebauer at the wheel on the NASCAR banked oval. Amanda took second in Autocross for the ladies. She also took the "Where were the girls like this when I was a teenager" award.



The excellent staff of instructors provided in car instruction to all who requested it. Here Bob Olthoff shows Charles Mansfield the correct line through this challenging turn. Charles is showing Bob how fear can enable an ordinary man to poke grip holes in the dashboard with his bare hands.



Lowe's Motor Speedway. Felt by many to be the best motor sports facility in the world. The Track Event was held on the infield oval portion of the road course. The 0.7 mile track (dotted line) has 8 turns and a short 100 mph straight. Average speed for the fleet of foot was a quick 60 mph.



Thrill seeker Mari Mansfield signed up for the "Richard Petty Driving Experience" - three hot laps around the banked oval in a NASCAR stocker at speed. She then left the event for a while and came back with a fresh set of clothes. What a fashion plate!



Chris Copple shows good form here. Note that the outside tires are well planted and the inside tires are just skimming the track. Later in the day a deep off track penetration into the tall grass won him the "Greatest Agricultural Accumulation" award. With a little water and fertilizer, he could have started a turf farm on the hood and trunk lid. Hal and Chris have 40,000+ miles on SP672.



Nobody can push the envelope of adhesion like Dennis Olthoff. This time it gave him the opportunity to push a broom as well - removing his spin residue from the track. Dennis went home with the "Golden Broom" award for his efforts.



"Best Rig" went to Bob Davis



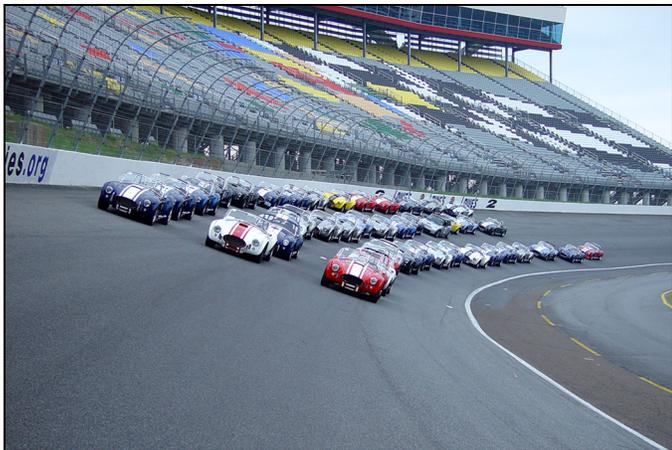
"Greatest Distance - Towing" went to Steve Hamm from Edina, Minnesota!! Alas, when I went to take his picture, Scott Sommer from Bristol, Wisconsin drove in front of him and blocked the shot. But what the heck. Wisconsin is just about as far away.



Three of the 17 registered 427 CID 351's have a family meeting in the NASCAR garage.



Bob and Diana Walker set the style with matched driving suits...



Sunday started with several parade laps around the NASCAR banked oval. The red, white, and blue cars on the front row all have Willment stripes and are about the only cars that do.

Red- Bob Jordan SP181

White - Bob Olthoff - SP171

Blue - Larry Miller SP619



Well Pat, is it steep?



NASCAR Turn 4 at speed

(Photo by Pat Stenhouse hanging off the back and really talking about it! I mean a lot! And loud!)



Snakes in the mist...

It should be noted that staff members were not included in the Autocross times. Including staff, Dennis Olthoff had fastest time and Bob Jordan was second.

I regret to report that I was unable to find a picture of "Best Sunburn". I think my hand was shaking.

Altogether we had 48 cars and 70 drivers from 13 states. Many came with their spouses and families. The families and fellowship were a big part of the weekend. As we looked at the spouses and significant others, it was pretty clear that Superformance owners marry way over their heads – just like they drive.

Thanks to the event staff:

Tonya Barga	Autocross Marshall
Hal Copple	Track Marshall
Mac DeMere	Instructor
Terry Freck	Track Marshall
Bob Jordan	Instructor
Larry Miller	Track Marshall
Alison Olthoff	Autocross Marshall
Bob Olthoff	Instructor
Dennis Olthoff	Instructor
Chris Phelps	Instructor
Mike and Pat Stenhouse	Event producers
Jerry Witt	Jack of all trades
David Yeager	Video photographer

Special thanks to Bob and Dennis Olthoff for all they do to make these events possible and to Pat Stenhouse for all the gourmet delights at the Friday and Saturday night social events. And for the Second Strike "Boutique in a Jeep".

Postscript

The kids from Thompson were excited about the event and new event shirts. So the next Friday I went by for lunch with an armload of shirts. The little ones pulled the shirts on over their clothes – they were big enough for nightshirts. As they lined up to go back to class, they were laughing and looking at the cars on the back and waving the long sleeves at each other. Some days... Some days are just flat beautiful.

CAR AND DRIVER SUPERCAR CHALLENGE

2001

Back in September 2001, Car and Driver ran a “Supertuner Challenge” and invited a number of supertuners to give it their best shot. A “supertuner” as you know is a company that modifies standard production cars for enhanced performance. Yes, its true, every shade tree mechanic in the country does the same thing, but the supertuners do it to other peoples cars as a business.

There was a big problem last year – a problem brought forcefully and eloquently to the fore by Doug Reed. The winner of the 2001 Car and Driver One Lap of America Supertuner class was not invited. Let’s see. Same magazine. Same “supertuner”. Do these guys talk to each other?

2002

Dennis Olthoff piloting SP740 at MIS. Car and Driver photo.

This year the situation was rectified, resulting in a name change from “Supertuner Challenge” to “Supercar Challenge”. Dennis Olthoff brought the Olthoff Racing Laser Red and Silver demonstrator and represented us well indeed.

For 2002, the event was held at Michigan International Speedway. The course begins with a standing start sprint 2300 feet down the back straight, then a turn into the infield road course for a 0.9 mile loop, back onto the oval at turn 3, accelerate to 150 mph, and brake to a stop. The only score was total time, lowest being the winner. Each car made several runs. The lowest overall time for each car was used for scoring.

The event is covered in detail in the September 2002 issue of Car and Driver and the reader is referred there. Additional detail and photos are provided on www.CarAndDriver.com under “Supercar Challenge”.

What we will do here is put the event in some perspective.

The Competitors

Although not officially classified this way, the 15 entries fell into three distinct groups.

Vintage Sports Cars

The Superformance and the Beck are replicas of sports cars from what many of us consider the Golden Age of Sports Cars – the 1950’s and 1960’s. They are lightweight, high-powered, open roadsters with great emphasis on performance and little emphasis on amenities. The Superformance is a dual-purpose sports car with features that make it suitable for the road as well as the track. The Beck is in reality so Spartan that it should be considered a track only car.

Exotic Cars

The Mosler is a limited production exotic car designed and priced to compete with the limited production European exotic cars. Unlike the European exotics, however, the Mosler is powered by a pushrod Detroit V8.

Supertuner Specials

The other twelve entries are modified versions of current production cars. Like their production counterparts, they are encumbered with all manner of amenities and gadgets. The goal seems to be “go fast in luxurious style”. Certainly not sports cars. Grand touring cars, perhaps.

In addition, three stockers were tested for comparison.

So the contest within the contest was the lean and mean vintage sports cars vs. the modern supertuner specials. The question from a performance perspective is this: Have the fastest of the fast gotten any faster in the past 40 years? Sure, they have added a lot of amenities – air conditioning, gazillion speaker stereo systems, computers to run everything, and of course cup holders. But these are not the essentials of a performance car. The real questions are: Are they any faster? Are they any more fun to drive?

Performance

On overall time, the two vintage sports cars placed in the top half of the finishers, pretty darn good when you consider that they were the only cars in that group under \$100,000.

Segment	Superformance	Lingenfelter
0-60 mph, sec	3.51	4.53
0-100 mph, sec	7.76	8.15
1/4-mile, sec	11.72	12.29
1/4-mile, mph	124.51	132.35
100-150, sec	12.15	7.43
150-0, feet	758.15	673.34
Road Course, sec	57.742	56.919
Overall Time, sec	105.75	98.80

Comparing the detailed segment performance of the Superformance to the winning Lingenfelter Corvette provides some interesting insights. The times shown are the best of all runs, not the times for the best run, by the way.

Dennis' best 0-60 time of 3.51 seconds was the best of the finishers. The 0-100, 1/4 mile, and road course segments were near the top as well. The one thing that kept the Superformance out of the top three and maybe even the top spot was the thing we love most about our cars – the ever so beautiful, but ever so blunt 1960's shape. The Superformance lost 4.7 seconds on the 100-150 mph acceleration segment. The lack of aerodynamic down force added 84 feet, or about 1 full second, to the 150-0 mph braking segment. Now you know why they built the Daytona Coupe.

Under 100 mph, the lighter and leaner vintage sports cars kick major butt. Above 100 mph, the sleeker aerodynamics of the supertuner specials kick in. So where do I plan to drive?

Reliability

Both vintage sports cars completed the event. Two of the twelve supertuner specials did not. This was better than last year, when seven of the ten supertuner entries failed to finish.

The highly modified Lingenfelter Sonoma truck blew its transmission on the road course. The turbocharged Farrell IS300 fried a piston. The lesson is this - applying big horsepower to big objects breaks parts. Light and lean means lower stress on the moving parts. You have to finish to win.

Cost

This is an easy one. The supertuner specials are characterized by massive modification budgets – for six of the twelve, the

modification budget alone exceeded the total cost of the Superformance entry. They were also heavy – typically weighing a half a ton more than the Superformance entry. Maybe it takes serious money to make a fat car move fast.

It seems simple to me. The lean and mean open sports car is still the way to go. If I want a fast, fun car without robbing a bank to do it, the Superformance is the winner here. If I had the money for one of the supertuner specials and wanted the amenities they offer, I would buy a stocker instead and use the savings to buy a Superformance to satisfy the need for speed and sheer driving fun. Then I would take a vacation in Hawaii with the change.



The Beck Lister was the low cost entry. But Beck did fudge a bit, claiming \$5,000 for his engine package. Heck, the sexy cross ram fuel injection setup cost more than that. Maybe Beck will give you the rest of the engine for free if you ask him. Car and Driver photo.

The Challengers

Place	Score	Supercar	Base Car	Base Price	Modifications	As Tested	BHP	Weight
1	98.8	2000 Lingenfelter Twin-Turbo Corvette Stage II	Corvette	\$44,281	\$69,179	\$113,460	650	3484
2	99.7	2002 AutoThority Stage V 911 Twin Turbo	Porsche 996	\$121,656	\$89,900	\$211,556	720	3492
3	100.6	1997 Beck Lister	Beck Lister	\$40,000	\$5,500	\$45,500	550	2180
4	100.9	1997 Hennessey Venom 800 Twin Turbo	Dodge Viper	\$72,396	\$101,000	\$173,396	800	3578
5	103.5	2002 Mosler MT900S Photon	Mosler MT900S	\$214,070	\$0	\$214,070	425	2189
6	103.8	2001 Apex Lethal 750 Dodge Viper	Dodge Viper	\$87,920	\$58,884	\$146,804	750	3600
7	105.8	1997 Olthoff Superformance Sport	Superformance Sport	\$37,100	\$31,950	\$69,050	540	2589
8	107.5	2003 RENNtech SL55K	Mercedes SL500	\$74,055	\$70,270	\$144,325	575	4208
9	109.4	1997 Mallett 435 Corvette	Corvette	\$40,627	\$98,605	\$139,232	759	3443
10	111.6	1999 Specter GTR	Corvette	\$50,325	\$62,499	\$112,824	550	3405
11	114.6	2001 TNT Serpent 555	Dodge Viper	\$80,640	\$36,678	\$117,318	580	3482
12	116.1	1997 Comptech NSX-T	Acura NSX	\$92,943	\$62,613	\$155,556	460	3185
13	116.7	2001 RENNtech SLK38K	Mercedes SLK	\$50,402	\$61,535	\$111,937	440	3207
14	DNF	2002 Peter Farrell Supercars IS300 Turbo	Lexus IS300	\$32,855	\$29,995	\$62,850	600	3527
15	DNF	2000 Lingenfelter 427 Twin-Turbo AWD Sonoma	GMC Sonoma	\$21,777	\$115,250	\$137,027	700	3831

The Stockers

Place	Score	Stocker	As Tested	BHP
1	109.3	2002 Porsche 911 Turbo	\$123,626	415
2	109.5	2002 Dodge Viper GTS ACR	\$91,603	460
3	110.4	2002 Chevrolet Corvette Z06	\$51,433	405

BITS AND PIECES

Submissions

Bits and Pieces is an owner's forum and includes modifications made by individual owners to their Superformance cars to improve the performance, reliability, individuality, and/or drivability of their cars. Maybe it's just puttering. The decision to use any idea and the proper installation and operation of any idea is entirely the responsibility of the owner who uses the idea.

Weatherproofing

If Sherlock Holmes used the weather systems and heating systems of 1960's vintage English roadsters to determine the location of the country that they were produced in, he would have concluded that it was somewhere in the Sahara Desert. The Superformance roadster is a very accurate reproduction of a 1960's English roadster, right down to the leaks.

I originally planned to never drive my car in the rain. However, my desire to drive my car frequently has made that an impossible objective. My car lost its virginity, so to speak, on the way to the Beach Mountain Hill Climb in the spring of 1998. The water was deep by the time I got the top erected. However, it got deeper as I drove. By the time the rain stopped, it was deep enough in the floorboard to breed guppies.

My primary objective is to be able to drive in a heavy rainstorm at 70+ mph without my passenger or me or my gear getting wet. The fixes need to be invisible when installed. So far so good. I have logged thousands of miles in driving rain, including the deluge on the way back from SSR reported elsewhere in this issue. Passengers and trunk contents stay dry. The carpet gets damp, requiring some air-drying time, but no sump pump, to get the water out.

A number of key areas have been identified for work. I will classify these as "soakers", "dribblers" and "spitters". Soakers will soak you and the car. Dribblers leak enough to wet the rug. Spitters spit water at you and things in the car while driving at speed, but won't require a wet-dry vac to clean up. Each of these is addressed in the balance of this article.

Soakers

1. Windshield end posts
2. Top of doors at front
3. Gap between top and body

Dribblers

4. Top of windshield
5. Gas cap into trunk

Spitters

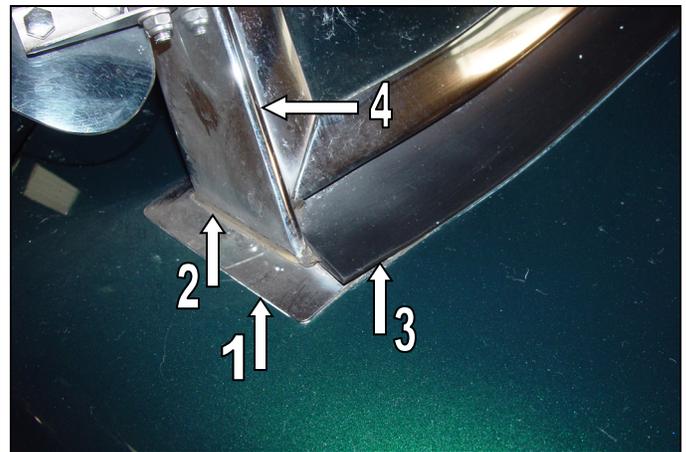
6. Windshield cowl flap
7. Center gap, top of windshield
8. Top of doors at rear
9. Seams in the top

For most of the tasks I used Action Weatherstrip from Auto Zone. It is dark grey, flat, self adhesive, and comes in a 10' roll. The size is noted in the text. It isn't as classy as the custom molded weather stripping, but it is flexible and adaptable. And it is soft so that it doesn't mar the finish.

Remember that I am an engineer, not an artist. I did install all the weather stripping so that it is invisible with the doors closed and with the top up.

The other primary tool is a good clear silicone sealer.

1. Windshield End Posts



Sources of windshield post leaks:

- (1) Between the windshield post flashing and the body
- (2) Between the windshield post and the flashing
- (3) Under the cowl flap where it sits on top of the flashing
- (4) Between the windshield post and the windshield frame

While in motion, water flows down the valley between the fender and the hood and passes over the flashing at the bottom of the windshield post. If the flashing is not sealed, water passes under the flashing, down the windshield post, and onto the floor.

This problem typically exists only on earlier cars and has been corrected at the factory on later cars. Since most cars do not have this problem, check it out first. Pour water on the area where the windshield post enters the body and then look under the dash at the windshield post mounting for water. If none, skip this one.

Some folks have gone so far as to remove the windshield to add silicone sealant to correct this problem. This is not a solution recommended for the owner. The windshield has to be properly aligned for the top to fit correctly and removing the windshield disrupts this alignment.

Use clear silicon sealer. Use a small diameter hole in the applicator tip, the smaller the better.

Clean the body, flashing plate at the base of the windshield post, windshield post, windshield frame, and rubber cowl flap before starting. Dirt will muck up the appearance of your work. Waxing the surfaces helps to remove excess sealer, but use a toothbrush to remove any excess wax from the cracks before starting.

The steps apply to both sides of the windshield, of course.

Leak (1): Acquire some flat wooden stirring sticks from your local coffee shop. Shave the end of several to a flat point or wedge. Wedge them ever so slightly between the body and the flashing plate at the base of the windshield post. Into the slight gap you have created, squeeze a small amount of clear silicon sealer. You will probably have to work your way around the flashing plate, doing an inch or so at a time. Remove the wedges and clean up any excess.

Leak (2): Force a bead of sealer into the gap between the windshield post and the flashing plate. The flashing plate is thin, so it will be necessary to leave a tiny bead above the surface. The sealer along the side of the post should be all but invisible. The gap at the front is larger and sealer will be visible, but not obtrusively so if you work the sealer to a flat surface.

Leak (3): Lift the cowl flap at the corner and put sealer on the body and flashing plate under the flap. Lower the flap to form a seal. The cowl flap requires sealing for only an inch or so.

Force a bead of sealer between the end of the cowl flap and the windshield post if there is a gap. Again, the sealer will be visible, but not obtrusively so if it is neat.

It may also be useful to trim a very small amount from the side of the cowl flap to help it lay flat.

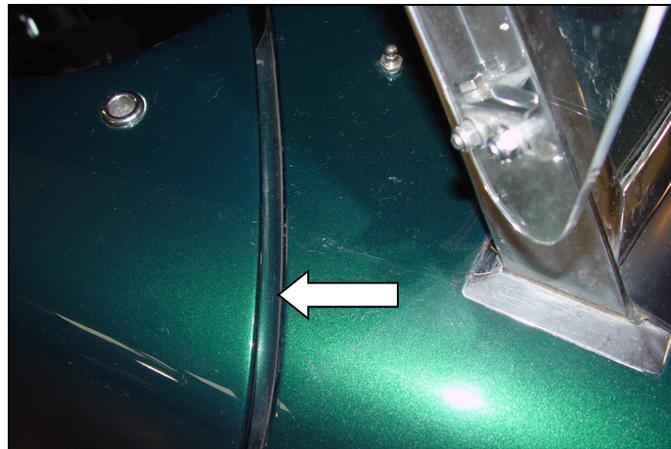
Leak (4): Force a thin bead of sealer into the crack between the windshield post and the windshield frame. Start at the bottom and go up about four inches. Wipe off any excess. The sealer should be in the gap and not visible on the frame or the post.

These fixes require patience and a steady hand to keep from leaving a mess or fouling the finish of the car. Take your time. The good news is, they work.

2. Top Of Doors at Front

Source of leak: The same stream of water that passes over the windshield post flashing then passes over the gap between the body and the door. There is no weather stripping under this gap and the water that did not run down the windshield post now enters the car through this gap. The valley between the front fender and the hood is the drain for the entire front of the car when it is in motion. The amount of water is significant. Think of it as a river.

Open the door. Look at the front edge of the door and you will notice that the weather stripping stops before the top of the door. This is why the water flowing over the crack flows into the car. Newer cars carry the weather stripping further up than older cars, but it still may not be enough.



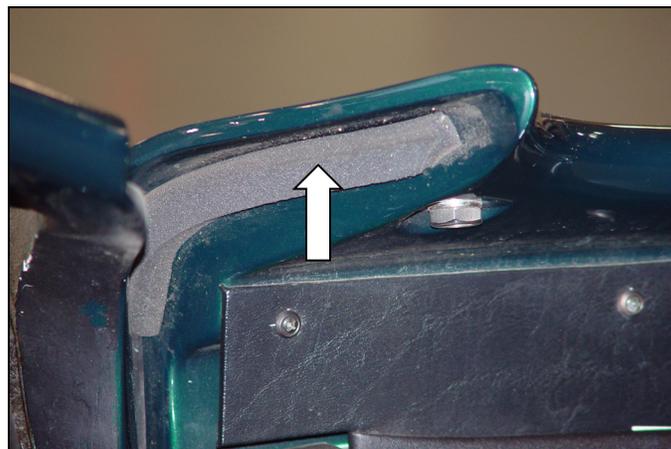
The fender line channels water into the door crack.

For the doors I used Action 8534 (5/16" thick by 3/4" wide). Cut two 7.5" strips for the left door. Attach one strip on top of the other strip to form a piece 10/16" thick.

Cross Section Through Door



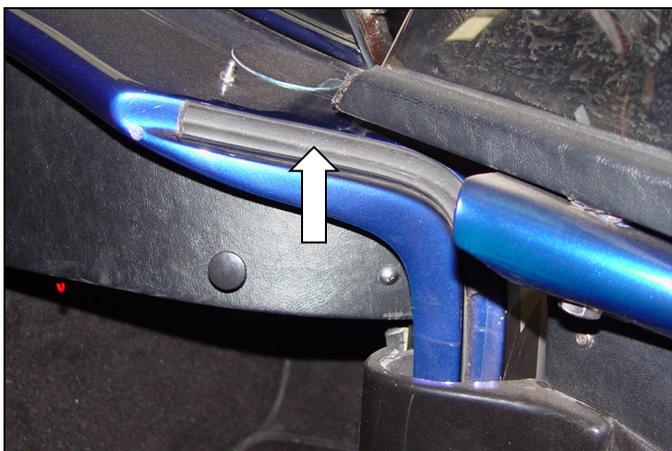
Rather than attaching it to the lip of the door as the factory weather-stripping is, attach it to the body of the door as shown above.



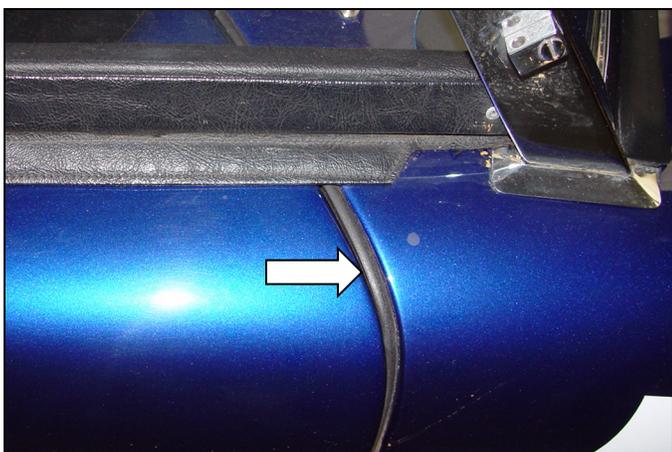
Top of door showing weather stripping in place.

Trim the end at the top of the door as required to hide the weather-stripping. Repeat on the right door. When the door closes, the new strip is in compression rather than shear, and is less likely to pull off or scuff the paint. With this technique, the weather stripping cannot be seen when the door is closed.

There are other techniques that can be use here. The Olthoffs used a different (and more attractive) type of weather stripping and mount it at the top of the gap.



The weather stripping is mounted on the body rather than the door.



The weather stripping is visible when the door is closed, but it provides a good seal even with the side curtain. It works best on darker cars.

3. Gap Between Top and Body

Starting from the door and counting around, there is a large gap between the top and body between the #1 and #2 snaps and another one between #4 and #5 and #6.

The 1-2 gap is a spitter. It will soak your sleeve after awhile.

The 4-5-6 gap spans the valley between the rear fender and rear deck. When the car is parked level or nose down, water runs down this valley, through the 4-5-6 gap, and down behind

the seat. The wind blows significant water in the 4-5-6 gap when traveling at highway speeds in rain.

The 4-5-6 gap is a problem with the tonneau cover as well. For this reason, I try to park my car on a slight incline with the nose uphill if I am expecting rain.

To close these gaps, I used Action 8534 (5/16" thick by 3/4" wide).

Place the top upside down on a clean soft surface that will not scratch the top or window.

The weather stripping is installed around the perimeter of the top where it snaps to the rear deck. The weather stripping has to be inboard of the dot snaps because water runs through the dot snaps. Install the weather stripping on the underside of the top as close to the holes in the dot clips as you can.

The curvature of the body lifts the top in the 2-3, 4-5, and 5-6 gaps. To improve the seal, use additional weather stripping between the dot snaps in these gaps as shown in the photo.



Hal Copple has another solution. He filled two skinny rubber tubes (like bicycle tubes) about a foot long with sand and sealed the ends. When he puts the top up, he lays the tube up against the top in the 4-6 gap area. He drives his car every day to work, rain or shine, so it must work pretty good. I wonder if he has ever "blackjacked" himself slamming on the brakes?

4. Top of Windshield

The force of the wind causes some of the water accumulating on the windshield to climb to the top of the windshield. From there, it finds its way through the channel that fits on top of the windshield and dribbles in your lap.

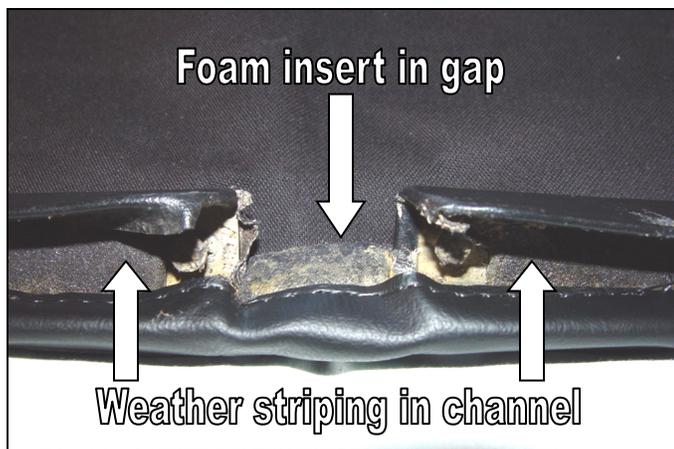
For this I used Action 8534 (5/16" thick by 3/4" wide).

Place the top upside down on a clean soft surface that will not scratch the top or window.

Install the weather stripping in the bottom of the channel with the adhesive side down. (The “bottom” and down” references are with the channel upside down.)

Begin about 2” to 2 1/4” from the end of the channel and put in a continuous strip up to the top locating pin in the middle of the channel as shown in the photo below. Put a strip on each side, of course.

We will get to the gap in the middle in a minute.



Top channels showing installation of weather stripping. Also note flap in center gap.

5. Gas Cap Into Trunk

The Le Mans or Monza style gas cap sits in a well in the right rear fender. Water (and gas if you spill it) collects in the well when it rains. Water will sometimes leak around the mounting plate into the trunk.



This situation can be easily tested by pouring water into the well, then opening the trunk and looking and feeling for leaks around the filler neck. If you have a leak, first try simply tightening the screws so that the mounting plate is snug against the body. Do not over tighten and strip the threads. If that does not work, remove the screws and put a small dab of silicone sealer under each screw head to prevent water leaking around the screw heads.

If that does not work, you will have to remove the gas cap assembly to reseal the mounting plate against the body. Remember that you will be exposing the fuel in the fuel tank when you do this, so it is no job for amateurs. If you have never done gas tank work before, turn this over to a pro.

Remove the screws attaching the gas cap assembly to the car body. Remove the gas cap assembly. Rub a thin film of clear silicone sealant on the gasket surface on the underside of the fixture. Place the gasket on the fixture. Rub a thin film of sealant on the gasket. Reinstall the fixture and replace the screws. The screws screw into a receptor ring under the body recess. Make sure that this ring is in place before screwing the screws in.

6. Windshield Cowl Flap

I was unaware of this relatively small leak until I had completed items 1 and 2. Water runs under the cowl flap and then down through (guess where) the windshield post hole.

Dirt had accumulated under the flap, which impaired the seal. I lifted the flap and cleaned the underside of the flap and body with a damp rag. This seems to have taken care of it.

7. Center Gap, Top Of Windshield

Water spits through the center gap between the channels.

I had my upholsterer reinforce the fabric in the gap. See photo to the right. At the same time, he inserted a foam flap to seal the gap. I then ran a 5” strip of Action 8334 (3/16” by 3/4”) between the front of the channel and the top fabric to secure the flap. In case of little spits, I keep a 2” by 4” piece of terry toweling in the passengers compartment. If necessary, I roll it up and stuff it into the gap in the middle - from the inside, of course.

8. Top Of Doors At Rear

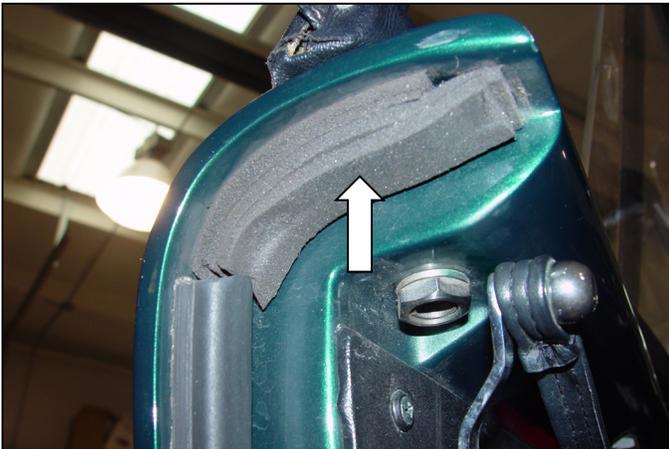


Gap at rear of door. Note also the gap between the side curtain and top.

The top of the doors at the rear are not weather striped at the factory either. But the problem is different.

The junction between the rear of the door, the body, the side curtain, and the top is in a high-pressure area outside the car. Air blows through this hole into the car interior. If it is raining, the air stream carries water with it and spits it on the driver's left shoulder. The same thing happens with the passenger's side.

Once you fix the water falling into the windshield post, it flows on and falls into the front gap in the door. Once you fix that, it flows along the edge of the side curtain and falls into the rear gap on the door. So that spitting action can be quite a bit.



Weather stripping on rear of door to seal gap (partially).

There are two parts to the solutions.

One is to put weather stripping in the gap in the door. That takes care of the stream of water.

That leaves the gap between the side curtain and the top shown in the picture. For this, I think adding a one-inch extension to the side curtain flap would help a lot. In the mean time, I have two other 2" by 4" pieces of terry toweling that I roll up and plug the holes. Not elegant, but it is easy and it works.

9. Seams In The Top

The last and the least of the problems is water coming through the needle holes in the seams. This is not a problem for me, but it has been reported to me.

The solution is the application of tent seam sealer to the leaky joints. It is available at just about any camping store. Apply to the inside for aesthetic reasons.

Don't Forget to Lube the Latch

The weather stripping for the doors will increase the pressure on the door latch. This will subject the latch pin and receiver hole to accelerated wear if you don't do keep the latch pin lubricated. Without lubrication, both the pressure and the wear will make the doors more prone to pop open.

I keep a tube of "Vaseline Lip Therapy" petroleum jelly in the door pocket and put a dab on the pin periodically. Vaseline is clear so it doesn't stain. The applicator on the tube makes it easy to apply. See Second Strike volume 4 Number 2 for more details.

Gearing Calculator

Second Strike Gearing Calculator
 Specify Transmission and Rear Axle Ratio
 Tremec 3550/TKO 5-speed (0.68 5th) Transmission 3.73 Rear Axle Ratio

Specify Rear Tire Size 275/60-15 equals 275 Width, 60 Aspect Ratio, 15 Rim Diameter
 275 Rear Tire Width 60 Rear Tire Aspect Ratio 15 Rear Rim Diameter

Speed (MPH) in Gears at RPM Calculate

Gear	1st	2nd	3rd	4th	5th	6th
Trans Ratio	3.27	1.98	1.34	1.00	0.68	
Overall Ratio	12.20	7.39	5.00	3.73	2.54	
Split		1.65	1.48	1.34	1.47	
Rev/Mile	9,127	5,526	3,740	2,791	1,898	
1500	10	16	24	32	47	
2000	13	22	32	43	63	
2500	16	27	40	54	79	
3000	20	33	48	64	95	
3500	23	38	56	75	111	
4000	26	43	64	86	126	
4500	30	49	72	97	142	
5000	33	54	80	107	158	
5500	36	60	88	118	174	
6000	39	65	96	129	190	
6500	43	71	104	140	205	
7000	46	76	112	150	221	

To assist owners in evaluating transmission, rear end ratio, and tire combinations, an interactive gearing calculator has been added to the Second Strike web site (www.SecondStrike.com).

The calculator is designed to help you analyze contemplated changes and get it right before committing your hard earned bucks. Changing the transmission, rear end, or rim size is not for the faint of heart or thin of wallet.

The calculator features the most commonly used 4, 5, and 6 speed transmissions, the full range of tire and rim sizes, and all the standard ratios available for the Ford 8.8 rear end.

Trans Ratio shows the transmission ratios for the selected transmission.

Overall Ratio is the transmission ratio times the rear end ratio.

Split is the ratio of the previous gear to this gear, a ratio of ratios if you will. For the transmission to "feel right", the split should be the same or drop evenly from one gear to the next. If the split drops from gear to gear then goes back up as with the standard Tremec 3550 ratios, you will notice a "gap" when you shift. The standard Tremec is really a 4-speed with a tall overdrive 5th gear for cruising.

Revs/Mile is the engine revolutions per mile, which is the same as engine rpm at 60 mph. It is the best comparison figure

for overall gearing since it includes transmission ratio, rear end ratio, and tire size.

Speed in Gears at RPM. Following Revs/Mile is a chart of speed in each gear in 500 rpm increments.

The standard gearing and tires work well for all around use for engines under 400 cubic inches. For larger engines and competition use, other combinations might be in order. Picking the best transmission, rear-end, and tire size depends of car weight and geometry, engine, and intended use. These items will be discussed in an upcoming Second Strike article.

Knee Pads

It's a kneepad for the hinge on the driver's door. It serves as a padded knee brace in track events. No more bruised knee. It is also very comfortable as a knee resting place on long trips. They have sold out on the second day of track events every time they have been offered. That should tell you something!

It is another handy little Olthoff invention. SP218 has had the prototype in place for several years for testing and it works like a charm. Sometimes the little things make a big difference.



No tools are required for installation and no modifications are required to your car. It is easily and securely attached via Velcro and a safety strap. The kneepads are hand made by a noted custom automobile upholsterer. The price is \$39.00 including shipping. Order from the Second Strike Store.

IN THE NEWS

SP1110 in Kit Car



Bob Mullaney's Superformance SP1110 was featured in the May 2002 issue of Kit Car magazine. The color is a unique for Superformance PPG 1998 Porsche Midnight Blue.

Bob selected a Dean Woodruff built 351W for power. The engine features an Eagle stroker crank and rods, 10.5 Ross pistons, and measures a healthy 418 cubic inches. It is topped off with Victor Jr. heads and intake, a Holley 850, and a Crower roller cam. The engine makes a stout 504 horsepower and 525 lb-ft of torque. The tranny is a Tremec TKO.

Congratulations to Bob and his dealer, Hillbank Motor Corp., on the coverage. And congratulations to Kit Car on a fine choice for a feature article.

Car and Driver Reports on Court Case

The November 2002 issue of Car and Driver reported on the Shelby case in an article on page 28. The article is entitled "Cobra out of Shelby's grip" and is quoted here in its entirety so as to not misinterpret their comments.

"Carroll Shelby has lost his attempt to stop a kit-car-maker from producing replicas of his Cobra sports car of the 1960s. Shelby had brought suit against Superformance International in December 2000. A federal judge had ordered both parties to work out a settlement, but when that failed, the suit went back to court. Late last August, U.S. District Court Judge Rya Zobel in Boston dismissed Shelby's suit, saying he had failed to "present any evidence that consumers associate the Cobra design with Shelby, and Shelby alone." The dismissal apparently has no effect on agreements Shelby has negotiated with other Cobra kit-car-makers. A Shelby spokesman said an appeal would be filed."



The article closed with a nice Rich Chenet photo of Dennis Olthoff in SP740 at the recent Car and Driver Supertuner Challenge.

Superformance Hits Canadian Prime Time

Superformance along with Leonard and Allan Skok, the father and son Canadian Superformance dealer, were featured on the prime time CBC TV news program *Venture*. CBC (Canadian Broadcasting Corporation) is Canada's national public broadcaster and is equivalent to NBC, CBS, and ABC in the USA. *Venture* is the CBC-TV's weekly eye on the world of business. The program's trademark is its ability to take audiences behind the scenes.

The feature ran on CBC-TV on Sunday, October 27, at 10:30 PM. According to Allan, "...it looked great. I can't keep up with the inquiries."

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NEWS FROM SOUTH AFRICA



Starting from left to right:
Louis van Heerden, Peter Lombard SP477,
Pierre Le Roux SP441, Danie Niemandt SP047,
Clayton Kimber SP401, Jack Walters SP058

Hello Mike,

Long time no hear.

Greg has been working hard and I have not seen or spoken to him for a few months now due to my own work commitments.

Greg however was able to arrange an outing for a few of the Superformance owners resident in the Gauteng area of South Africa. The guys took a leisurely drive (+-250 km) out to Wickerson's Country Lodge in the Eastern Transvaal area in March. Although it was the start of winter, the guys (6 Cobras in total) were brave enough and donned their jackets and caps and had a lovely drive through the scenic area, topped off by an excellent lunch. The weather however was not too kind and some were caught in the rain on their return, but nonetheless all reached their destinations without so much as a missed beat. The other owners who did not attend must have known about the impending bad weather.

Greg will be arranging another outing hopefully around spring day (1st of September), which happens to be on a Sunday, so a few more members should participate and we then hope to also have more photos and info.

Chat to you soon.

Kind regards,
Allan Garrow

Ed: For several years now, Allan Garrow has been working with Greg Erasmus to keep the registrations for the home country Second Strike contingent up to date. Greg runs Auto-G, the South African Superformance dealership. From time to time Allan mentioned that one day he would be sending in his own registration.



In September, Allan acquired one of the two factory prototyping machines, shown here in a photo taken four years ago at the factory.



Our commitment in time and money to a modern, hi-tech 140 000 sq ft factory and more than 380 highly trained and dedicated workers (some of whom are pictured here outside the plant) have made Superformance the largest and best equipped and most professional manufacturer in the world. We also have an Owners' Registry as well as a quarterly Newsletter. Owners have regular get-togethers in all parts of the country, such as the demonstrators, carry stocks of replicas, spares and accessories, and they honor our extensive warranty.

In the Superformance brochure, it is the Blue and White car on the left. We all look forward to hearing more about Allan's unique car in the near future.

SUPERFORMANCE SERVICE BULLETIN



Service Bulletin

Knock Off Style Wheels

This bulletin supplements information provided in the Superformance Owner's Manual Second Edition. Refer to page 29, Wheels and Tires. If you do not have this manual, a copy can be obtained from your Superformance dealer.

Tips for maintenance of knock off style wheels:

- 1) We do not recommend the use of a spinner socket (as sold by accessory shops) to install the spinners on the wheels. This tool can be used for spinner removal. The spinners cannot be properly tightened with this tool.
- 2) Apply anti-seize to the tapered part of the spinner and the wheel and to the threads of the hub.
- 3) Do not over tighten the spinners. This will cause difficulty in removal and possible spinner breakage. Tighten spinners with a deadblow hammer till it will no longer turn. Stop there; do not keep hammering on it.
- 4) Remove the spinner with a lead hammer. Hit one wing then move to another. Keep alternating. Pounding on one wing over and over will cause it to break.
- 5) Check the wheel pins for tightness after the first 500 miles. After that the pins should be checked any time the wheels are removed. Torque pins to 80 lb. ft.
- 6) Do not use an air or electric impact wrench on wheel pins. The hammering of the impact will cause the end on the pins to deform making installation of the wheel difficult if not impossible.
- 7) Spinners should be safety wired and should be examined occasionally for signs that spinners have moved.

Right side wheel spinners are loosened by turning clockwise and tightened by turning counterclockwise. Left side wheel spinners are loosened by turning counterclockwise and tightened by turning clockwise.

June 21, 2002

SECOND STRIKE

THE SUPERFORMANCE OWNERS GROUP

CLUB NEWS

Where Is My Newsletter?

A number of you have called and written to find out if I have fallen off the end of the earth or dropped you from the mailing list. It is neither actually.

The two monster issues at the end of last year – the Ford Windsor V8 Engines issue and the Peter Brock issue – both took a phenomenal amount of research to produce. They were followed immediately by the Superformance Owners Manual Second Edition, and then by the Spring 2002 and Fall 2002 track events, and then the Ultimate Windsor engine project reported in this issue. This newsletter has been in the works since August with so much to report on.

When I realized that nobody at work remembered my name anymore and Pat started giving me those “Do I know you?” looks, I decided that it was time to come up for air and reconnect with life.

In the scheme of things, the new owners manual will take the place of two newsletters this year. So this is Volume 5 Number 1 and there will be one more newsletter this year in December. The answer is, no I did not die, and yes you are still on the mailing list. And thanks for asking.

SCORE

SCORE is the registry of Superformance owners and their cars. The goal is to register every Superformance and track the ownership history. We currently have over 1200 registered members in 44 states and 11 other countries.

Second Strike - The Newsletter

We have a quarterly (more or less) newsletter. This is the first newsletter for 2002.

In “upcoming”, but not necessarily “next”, issues:

- The Ultimate Windsor, The Next Installment
- SP010 and SP011 Located!
- Air Cleaner Sizing
- Carburetor Sizing
- Gearing and Tire Sizes
- Speedometer Gears
- Ball Joints
- Radiator Guard
- Oil Cooler Guard
- Securing The Floor Mats
- Shoulder Belt Bracket For Roll Hoop
- Index of Cobra Articles
- Index of Cobra Books

Submissions Invited

This is your newsletter. All submissions are appreciated and nearly all are used. If you have been to an event of interest, have a tech tip, news about your car, specs for you car, or anything of interest to other owners, please send it in.

Photos are much appreciated as well and have lead to the Photo Gallery, which I hope will become a regular feature.

Electronic submissions are best, but US mail works too. Send to the email or US mail address below.

www.SecondStrike.com

We have a web site. It is updated frequently with articles of interest. It also has an index of newsletters and technical tips and a calendar of upcoming events.

Second Strike Store

For some time now, the Second Strike Store on the web site has offered publications, primarily newsletters and registries. In the weeks and months ahead, the offerings will be expanded to include custom products, apparel items, artwork, and videos. Keep your eyes open.

Track Events

See **VIR Spring 2002** and **LMS Fall 2001** track events reported in this issue. More to come next year.

Publications

Back Issues (price for register owners / all others)

- Volume 1 for 1998 is \$15.00 / \$25.00
- Volume 2 for 1999 is \$30.00 / \$45.00
- Volume 3 for 2000 is \$35.00 / \$50.00
- Volume 4 for 2001 is \$40.00 / \$60.00

Registries (for registered owners only)

- Standard Registry is \$15.00
- Deluxe Registry is \$55.00

Superformance Owners Manual

- Owners Manual Second Edition is \$27.00

Shipping and handling in the USA is included. Add \$5.00 per order for shipments outside the USA. All publications can be ordered by mail and paid by check.

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Davidson NC 28036-6708
Email: Mike@SecondStrike.com
Phone: 704-655-1902

SUPERFORMANCE PHOTO GALLERY



Bob Janda SP1292
Royal Blue and Titanium, 351W/392 CID
Waupaca, WI



Marc Freedman SP909
Black, 460/514 CID, License is plate **600HP**
Ft. Lauderdale, FL



Scott and Vernetta Thompson SP353 in the lead
Nor-Cal SAAC Mini-Nats 16, Sears Point
Yellow and White with Black Outline, 460
San Ramon, CA



Hal Copple SP672
Red and white, 351W/392 CID
Rock Hill, SC



Fred and Carol Schwartz SP417 at Sears Point
Portofino Blue and White, 460
Corte Madera, CA



Bill and Patty Hufnagel SP500 with friends
License plate is **QUIK ASP**
Royal Blue and White, 351W
Placentia, CA