EDUCATION at FULL SPEED

SAM GRADUATES ARE WINNING THE RACE TO PROFESSIONAL CAREERS IN MOTORSPORTS

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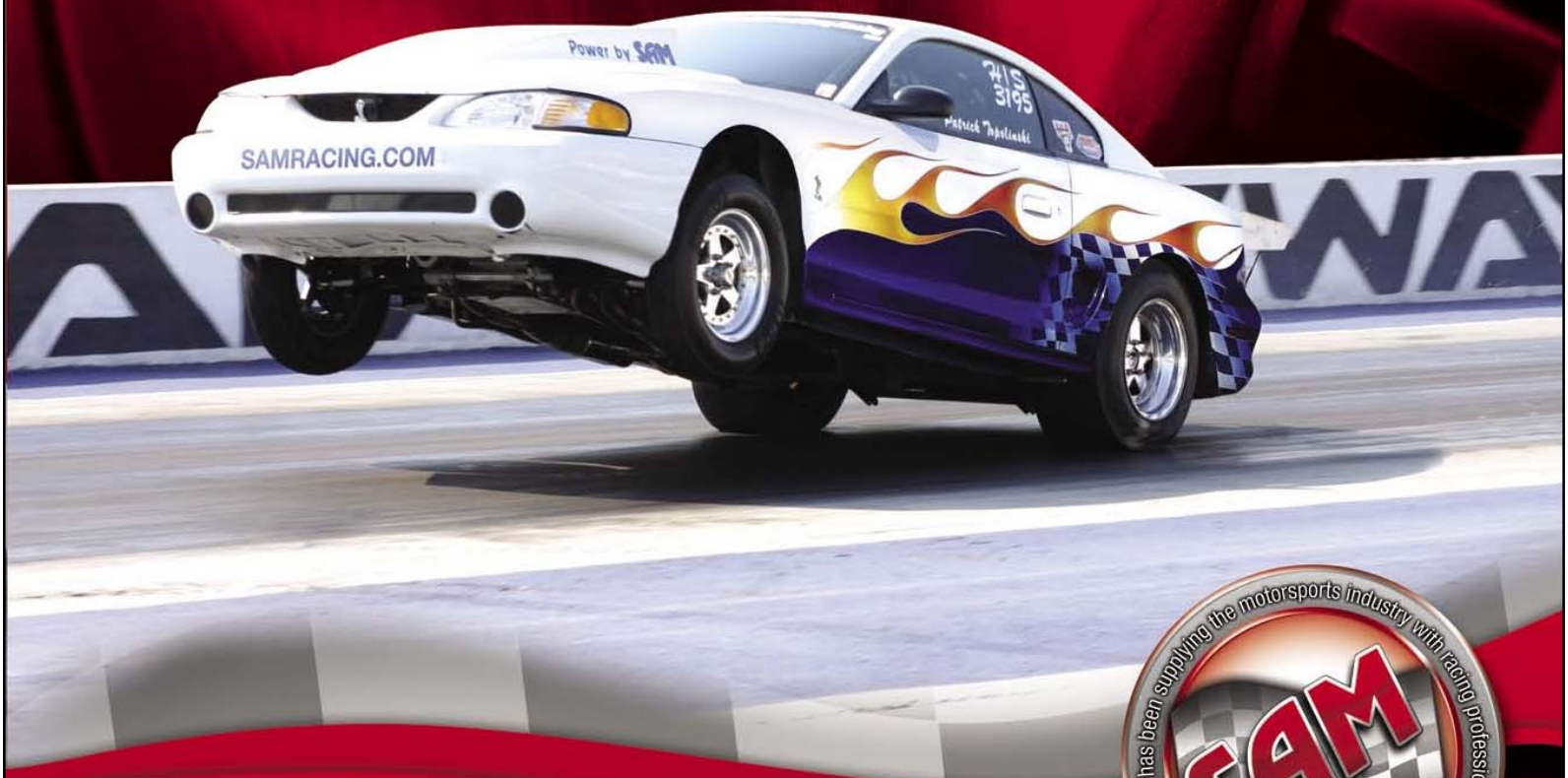


SAM has been supplying the motorsports industry with racing professionals

SAM

Since 1985

SAM School of Automotive Machinists

1911 ANTOINE • HOUSTON, TEXAS 77055
TEL (713) 683-3817 • FAX (713) 683-7077

WELCOME to your first comprehensive look at the School of Automotive Machinists. Our entire faculty and staff are extremely proud of what we can offer you as a prospective student looking for a career in the automotive racing industry. Our unique curriculum focuses strictly on race engines, encompassing advanced theory, cutting-edge design principles, and most importantly, hands-on experience.

The demand for passionate and technically competent engine builders in the industry is strong. Many of our graduates step out of the classroom and directly into the shops of top race teams and leading aftermarket manufacturers throughout the country. The School of Automotive Machinists can provide the tools to help you continue that winning tradition as well.

THE OPPORTUNITY IS YOURS.

ENDLESS OPPORTUNITIES
in the performance and racing industry

We are living in a golden era of performance, top race teams and performance shops are constantly looking to get an edge on the competition. Achieving this requires highly specialized personnel, but the challenge has always been the shortage of qualified candidates. There are plenty of jobs available just waiting for the right person, and the School of Automotive Machinists can help you stand out from the rest of the pack.

Whether you are looking to go to work for the country's elite race teams or dream of operating your own performance engine shop, it all starts with a sound education.

CONTENTS

ACCELERATE YOUR CAREER

With our specialized curriculum, we focus your skill towards the art of engine building as opposed to general maintenance. Our courses cover engine block machining, assembly, cylinder head porting, and CNC machining. The program also covers principles in engine blue printing and building techniques. This teaches you how to extract maximum horsepower for a vast variety of applications with emphasis on durability. Everything from custom designing camshafts to putting just the right finish on a cylinder wall, we've got it covered. SAM's project cars that race in competitive classes give students the experience of maximum performance within a given set of rules. SAM's project engines have set NHRA nationals records and won races on NASCAR Super Speedways in the Super Late Model class.

This is the real deal. With a SAM education you can accelerate your career.

SAM ENTREPRENEUR

RICK SLIWINSKI, President **PRECISION ENGINE AND MACHINE**

Chicago has always been a hotbed of serious car enthusiasts, and Rick Sliwinski got caught up in the action at an early age. His first car, a 350-powered '79 Camaro Z28, saw regular action on the dragstrip and on the street. Following the pioneering spirit of many Midwestern hot rodders before him, Rick taught himself how to build motors and was one of the first in his area to experiment with nitrous oxide in the late '70s. Naturally, his love of racing guided him toward a career in the automotive performance industry. However, despite the solid foundation of knowledge he had already built on his own, Rick decided to back up his street savvy with a formal education.

The first step was studying mechanical engineering at DePaul University. After earning a degree, although Rick appreciated all the advanced laws and theories he learned, he sought to apply that knowledge to building race engines. "Book smarts is one thing, but practical application is another," says Rick. "I did lots of research and realized that the School of Automotive Machinists was the best program out there for my needs. They know just about all the big names in the racing industry, and even if you think you know your stuff, it's good to get out there and pick other people's brains. Overall, the program was a huge confidence builder."

After graduation, Rick moved back home to Chicago and opened up his own shop, Precision Engine and Machine, in the suburb of Sleepy Hollow. In the four years he's been in business, Rick has quickly earned a reputation as one of the top head porters and engine builders in the area. His gamut of customers covers everything from musclecar to turbo Buick enthusiasts, and his engines have gone on to win National NHRA Super Gas events. He credits much of his success to his experience at SAM. "One of the most important lessons I learned was figuring out how to think outside the box," says Rick. "If you're going to the track and trying to copy people, you're already behind the ball. Instead of always giving you a clear-cut answer to various situations, the program teaches you how to think correctly."

While his customers' projects consume most of Rick's time these days, he's not content to just watch from the sidelines. He's currently building a '95 Camaro to compete in NHRA Super Street or Super Gas. Power will come from an LS2-based short-block topped with C5R heads. Rick's goal is to run 8-second e.t.'s at over 150 mph, and the Camaro will be one of the first GM Gen III-powered vehicles to race in either class. Needless to say, Rick is living his dream.

"When I was a kid, I never thought you could make a living doing this kind of thing," he says. "I'm looking forward to expanding my business and to continue doing what I love."

SAM GRADUATES ARE WINNING THE RACE TO PROFESSIONAL CAREERS IN MOTORSPORTS

"The great thing about attending SAM is that you receive a learning experience that prepares you for real life in the industry."

Justin Bryson, **SAM Graduate, Keith Dorton Racing Engines**

SAM TEAM MEMBER

JOE CONCATO, Crew HENDRICK MOTORSPORTS

"Passion, dedication and a SAM education helped me live my dream of working with a top team."

As someone with a passion for engines, Joe Concato could quite possibly have the best job in the world. He spends his days in the R&D lab at Hendrick Motorsports dyno testing the most radical small-block V-8's around. We're talking about tiny 358 cubic inch Nextel Cup motors pushing close to 900 horsepower, and Joe's job is to figure out ways to increase that output even further, a couple of ponies at a time. It's hardly easy, but it's never short on excitement, either. His efforts push the cars of one of NASCAR's premiere teams to the front every race weekend, and have resulted in consecutive Daytona 500 victories in 2005 and 2006. How many people can say that?

Growing up as a kid in Massachusetts, his Father's love affair with cars had a profound influence on him. "My Dad always took me to drag races, tractor pulls, and monster truck races," says Joe. "If there was anything that had an engine in it, we were there." An inquisitive youngster, Joe constantly took things apart just to see how they worked. Those around him noticed that he was mechanically inclined at an early age, and his talents developed even further after he bought a '65 Nova project car with his dad.

Driven by his love of engines, and after researching several vo-tech programs, Joe enrolled at the School of Automotive Machinists to learn all that he could about building motors for power and durability. He went in with an open mind, and although he thought he knew a thing or two about engines, he was immediately humbled. "The very first day I was at the school, one of my new friends there was already talking way over my head," he says. "I knew right away that I had my work cut out for me." After finishing the program, equipped with skills learned at SAM Joe went to work for an engine shop in Illinois that did lots of work for the late NASCAR star Alan Kulwicki.

Afterwards, Joe set his sights on the epicenter of NASCAR. "I was going to move to North Carolina no matter what because I wanted to be in the center of NASCAR country," says Joe. "I didn't set out to work for a highly respected team like Hendrick, but things just kind of fell into place." He started dropping off his resume at Top Cup teams and got a call back from Hendrick Motorsports.

Eight years later Joe and nearly a dozen fellow SAM graduates have worked hard to keep the four Hendrick's race cars running consistently in the top ten each weekend and have a great shot at winning the race. Obviously, building competitive race cars is a full team effort, but adding extra horsepower to the mix never hurts. "About 30 percent of the time we're performing endurance testing on the dyno, and the other 70 percent of the time we're looking for more power," says Joe. "Every single component on an engine can be modified somehow, and I still learn something new everyday. That's what's great about my industry and my job, and that's what makes it so exciting. It's constantly evolving and no two days are ever the same."

LEADING THE STAMPEDE

SAM STUDENTS RACE TO THE LEAD OF THE **HOT STREET** FIELD



SAM GRADUATES ARE WINNING THE RACE TO PROFESSIONAL CAREERS IN MOTORSPORTS

'95 MUSTANG TECH SPECS

Engine & Drivetrain

BLOCK
FRPP iron R451 9.200-in deck
(4.185-in bore x 3.620-in stroke)
DISPLACEMENT
398 ci
CYLINDER HEADS
Edelbrock Victor (PN 77099) ported as a SAM class project
CAMSHAFT
Comp Cams solid roller
INTAKE MANIFOLD
Edelbrock Super Victor ported as a SAM class project
POWER ADDER
N/A
EXHAUST
SAM custom Headers and Exhaust with
Flowmaster Mufflers
FUEL SYSTEM
Magna Fuel Pro Star 500 with Aeromotive Regulator
CARBURETOR
Holley Pro Series 1000 by Braswell Carburetion
TRANSMISSION
Rossler Turbo 400
REAREND
Moser 9-in Ford, Strange aluminum spool,
4.86 gears, 35-spline Moser axles

Suspension & Chassis

FRONT

K-MEMBER
Racecraft Tubular
A-ARMS
Racecraft Tubular
SPRINGS
Santhuff Engineering
STRUTS
Santhuff Engineering
WHEELS
Bogart R/T
TIRES
Moroso DS2
BRAKES
Lamb

REAR

SPRINGS
Hypercoil
SHOCKS
Strange double-adjustable
LADDER BARS
Comp Engineering
WHEELS
Bogart R/T
TIRES
Mickey Thompson
28x10.5x15 ET Drag Slicks
BRAKES
Strange
CHASSIS
Funny car style roll cage by
Specialty Metalcraft

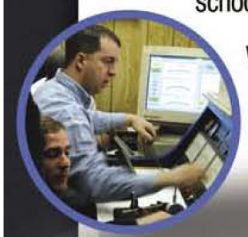
Electronics

DATA ACQUISITION
Edelbrock QWIKDATA
IGNITION
MSD Digital-7 ignition, MSD Pro Power HVC coil,
Moroso Ultra 40 plug wires, NGK plugs
GAUGES
Auto Meter Ultimate Playback tachometer;
Autometer Ultra Lite Gauges

Anyone can say they teach the art of building race motors, but if you do not actually go racing, you are not building real race motors. On the contrary, racing has always been a part of the curriculum at the School of Automotive Machinists. Whether they limit cubic inches, compression ratio, or carburetor size, racing in classes with strict rules force students and instructors to come up with creative solutions to work around those restrictions and build maximum horsepower. This same type of outside-the-box thinking is what distances elite race teams and performance shops from the cars that can't even qualify on race day.

One of our most recent projects is a '95 Ford Mustang that battles it out in the NMRA's extremely competitive Hot Street class. With a drivetrain designed and built by SAM students and instructors, the 2006 season started with our fastest pass, an 8.86 at 152.46 mph. It is just the third car in Hot Street to run in the 8's, which isn't too bad considering that milestone was accomplished in only its first year of competition. At the World Ford Challenge at Gateway International Raceway in 2005, the Mustang won its first race of the season with an 8.92 at 151 mph pass. The car also notched its second win of the year at the Ford Motorsport Nationals in Reading, Pennsylvania by edging out 2004 class champ Charlie Booze, and also set the highest trap speed of the day.

At 3,050 pounds, it takes a lot of power to make the Mustang run that hard. Getting the job done is a 400 cubic-inch small-block Ford V-8 putting out over 860 hp. It features a 4.185-inch bore and a relatively short 3.620-inch stroke, allowing it to rev freely to nearly 10,000 rpm. Most of that impressive power is attributable to the Edelbrock Victor aluminum heads and Super Victor intake, both ported at the school as a class project. Other performance enhancers include a 278/292-at-0.050 cam and 15.5:1 compression Wiseco pistons.



With constant research and development the SAM Mustang looks to improve upon it's already impressive performance.

INJECTING HORSEPOWER

SAM STUDENTS BUILD A **FUEL INJECTED** FRONT RUNNER



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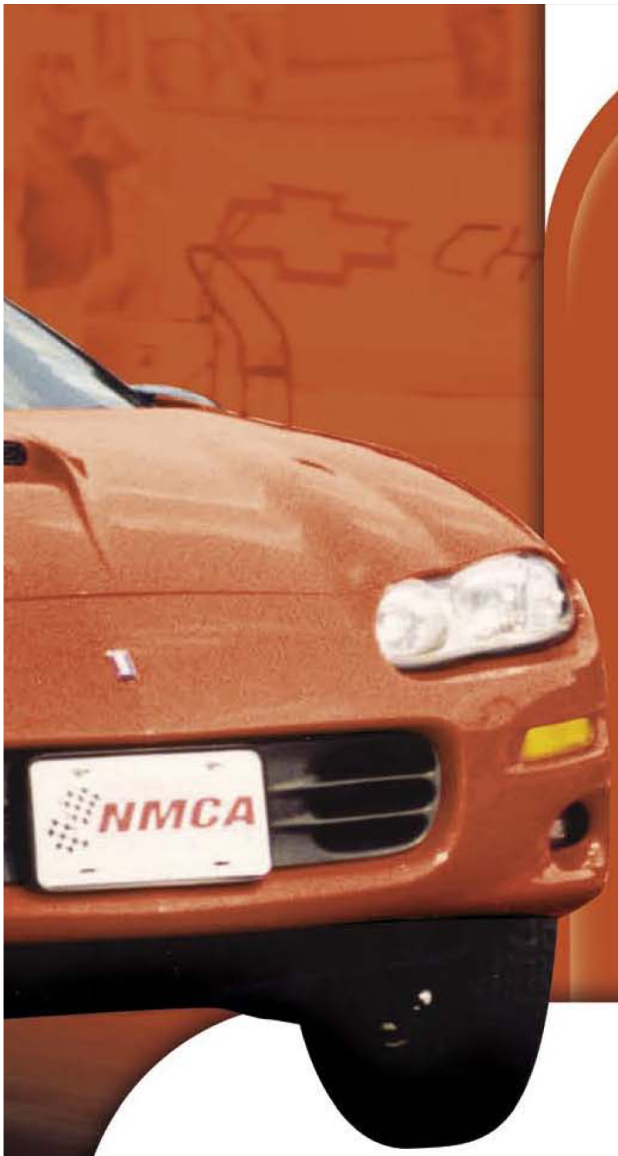


'99 CAMARO TECH SPECS

Engine & Drivetrain

BLOCK
Darton Sleeved LS1
(4.125-in bore x 4.000-in stroke)
DISPLACEMENT
427 ci
CYLINDER HEADS
Chevrolet LS6 ported as a SAM class project
CAMSHAFT
LSM solid roller
INTAKE MANIFOLD
Custom sheet metal by Beck Mechanical
POWER ADDER
N/A
EXHAUST
KOOKS 2 / 2 1/8 Stepped Headers and Exhaust with Flowmaster Mufflers
FUEL SYSTEM
Complete Aeromotive System with 55lb fuel injectors
THROTTLE BODY
Holley 105mm
TRANSMISSION
Jerico 4-speed
TRANSMISSION
McCleod long style
REAREND
Moser 9-in Ford, Strange aluminum spool, 4.86 gears, 35-spline Moser axles

Suspension & Chassis

FRONT

K-MEMBER
BMR Fabrication Tubular
A-ARMS
BMR Fabrication Tubular
SPRINGS
Santhuff Engineering
STRUTS
Santhuff Engineering
WHEELS
Bogart R/T
TIRES
Moroso DS2
BRAKES
Aerospace

REAR

TORQUE ARM
BMR Fabrication
SPRINGS
BMR Fabrication
SHOCKS
AFCO double adjustable
SWAY BAR
BMR Fabrication
WHEELS
Bogart R/T
TIRES
Mickey Thompson
29.5x10.5x15 ET Drag Slicks
BRAKES
Aerospace
CHASSIS
Roll cage by
Specialty Metalcraft

Electronics

DATA ACQUISITION
Edelbrock QWIKDATA
IGNITION
MSD Digital-7 ignition / Big Stuff 3 with tuning assistance from Don Bailey
GAUGES
Auto Meter Ultimate Playback tachometer; Autometer Ultra Lite Gauges

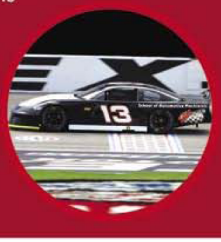
Chances are you have already seen the School of Automotive Machinists' Hugger Orange '99 Camaro SS. The Camaro's astonishing performance achievements through the years have earned multiple feature stories in Hot Rod, Car Craft, and Chevy High Performance magazine. Purchased brand new with the sole intent of serving students as a project car, the Camaro was one of the first LS1-powered fourth-gen F-bodies to squeak into the 10's and the 9's naturally aspirated. The car's most recent engine combo was a 427 with LS6 heads that ran 9.17 at 154 mph, which in early 2005 was the fastest factory LS1-powered vehicle in the country that still retained the factory block and heads. Making that feat all the more impressive, the Camaro weighs 3,180 pounds and relies on a conventional manual transmission. The key to making 800 hp were cylinder heads that students massaged for countless hours. In the end, they hit 380 cfm on the flowbench, unheard of for factory GM castings.

SAM regularly campaigned the Camaro in the NMCA EFI class with 2 wins and 2 runner-ups in 2001. The car also won the NFRA EFI Challenge in 2001 and the Thunder Racing shoot-out in 2002. The Camaro won the Year One race in 2005. Nonetheless, students and instructors are hard at work putting together a new engine combo to reclaim the crown of having the fastest naturally aspirated LS1 vehicle in the country. This new no-holds-barred motor will again measure 427 cubic inches while utilizing a C5R block and cylinder heads. Actuating the valves will be a 278/290-at-0.050 solid-lifter cam with monstrous .915/.820-inch lift. Perhaps the most impressive figure of all is the 408 cfm of flow that students and instructors coaxed out of the cylinder heads. With the help of 14.2:1 compression and a custom sheetmetal intake manifold, students are shooting for 900 hp and 8-second e.t.'s. All that with a stock-style suspension and 10.5 tires.

Aside from blistering performance, cars like the Camaro give students the opportunity to acclimate themselves to the fast-paced world of late-model EFI performance. Though most of the principles of building performance motors are universal throughout the board, fuel-injected engines require specific needs that can only be learned through hands-on training. With projects like these, students can learn everything from tuning factory and aftermarket engine management systems to using their ingenuity to address weakness in new OE engine designs that the aftermarket is yet to solve. Thanks to the Camaro, SAM graduates finish the program at the forefront of late-model performance.

Do not let our project cars fool you. Building drag racing engines is just a fraction of the curriculum at the School of Automotive Machinists. Our lessons in the classroom and in the shop encompass the entire spectrum of motorsports ranging from road racing to circle track racing. For example, take the TWW Motorsports Chevy Lumina that competes in the USRA Super Late Model series. Powered by an engine built by SAM, car owner and driver Wade Welch won the first Superspeedway race of his career at Texas Motor Speedway on June 11, 2005 after qualifying on the outside Pole. With a chassis set up by crew chief Denny Burton, the car ran flawlessly to take the win.

As the only race in the series that requires a restrictor plate to keep speeds below 160 mph, building a specialized engine combination provided an extra set of challenges. With the series' rules limiting displacement, compression, and carburetor size to 358 cubic inches, 9.0:1, and 390-cfm respectively, students and faculty put in many extra hours building and testing this combination. The team started with a Bowtie-block-based screamer equipped with 18-degree Bowtie heads, an Edelbrock Super Victor intake manifold, a solid roller cam, and a dry sump oiling system. Fully uncorked on the dyno, the engine put out 600 horsepower while bolting the restrictor plate into place dropped that figure to 255. Knowing there was more to be had, two months of intensive dyno testing increased output to just under 300 horsepower. Throughout the season, Wade proved he was not just a one-race wonder and missed winning the championship by just one point. As long as there are SAM students and instructors researching ways to make even more horsepower, Wade looks to continue running up front.



WE PUT YOU **in Victory Circle**

Reputation is everything in this business. Although billions of dollars exchange hands each year in the automotive performance and racing industry, it is still an incredibly small and tightly knit community where word of your reputation spreads fast. As a respected name in motorsports education, premier race teams know where to come to find top-notch employees. SAM has established our stellar reputation in the industry without the luxury of million dollar advertising budgets.

You will find SAM graduates in every major form of racing, including NASCAR, CART, NHRA, IRL, off-shore power boat, off-road racing and road racing. Household names like Hendrick Motorsports, Warren Johnson Enterprises, John Force Racing, Dale Earnhardt, Inc., Roush-Yates Racing, Cosworth and champions in other forms of racing rely on SAM graduates day in and day out.

The personal attention you receive at the school extends outside of the classroom as well. Small class sizes lend a family-like environment, which means we're passionate about helping you land the career of your dreams. Our job placement assistance actively tracks down job leads and puts race teams and performance shops in touch with students. Furthermore, our vast network of graduates already in the industry continues to spread the word about our program to prospective employers.

If you are hesitant about the program because you planned on earning an engineering degree, keep in mind that SAM has a number of mechanical engineers who attend to gain practical race experience. We also have graduates who go on to obtain their engineering degree.

Granted there are many potential paths that lead to a successful career, but starting with an education at the School of Automotive Machinists will put you on the fast track. Whether you aspire to heading the engine department at a top race shop or want to lead the charge in the performance industry, you have come to the right place.

"People that we have employed that had schooling at SAM come in the door with machining knowledge and the passion it takes to work in the custom race engine business."
Ed Michael, **Vice President, Sterling Performance Racing Engines**

"SAM grads can go to work in a race engine shop without having to be trained in what's going on and can move up quickly and become good all over the shop. SAM grads seem to have the passion needed. Many have come and left to advance career positions with a base that has allowed them to grow in ideas, knowledge, and capabilities. We can't fault a man for that."
Ed Potter, **Sales/Technical Assistant, Lingenfelter Performance**

"One of our prime sources for hiring personnel is through the School of Automotive Machinists. We have hired a number of grads and have found them more prepared to serve the Performance Industry compared to individuals from competitive schools. I would highly recommend any individual looking for a path to the Performance Industry to attend SAM."
Warren Frieze, **Vice President/General Mgr., Katech Inc.**

SAM has been supplying the motorsports industry with racing professionals
SAM
Since 1985

"Twelve years ago I made one of the best choices of my life by choosing to attend the School of Automotive Machinists. For almost a decade now I have worked with Jack Roush and Doug Yates. I am very thankful to SAM for the education and the training I received. It gave me the advantage I needed!"
Scott McCormick, **SAM Graduate, Roush-Yates Racing Engines**

"SAM is hardcore…a place where you learn theory and technique that can be used in real world applications. The School has given me an opportunity to be accepted as part of a professional racing team."
Dan Cordier, **SAM Graduate, Dart Machinery**

"I feel that with SAM I am so far ahead in knowledge on how it all works and the theory behind it."
Brian Johnson, **SAM Graduate, Gaerte Engines**

SAM GRADUATES ARE BLAZING THEIR OWN TRAILS THROUGH SUCCESSFUL ENTREPRENEURSHIP.

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CHAPMAN RACING PRODUCTS
DAFFRON MACHINE AND FABRICATION
GCR SPECIALTIES
GIBSON AUTO SUPPLY
GJ PERFORMANCE
GRIMES AUTO SERVICE
GT RACING HEADS
HALL MACHINE
HEADGAMES MOTORWORKS
HK ENTERPRISES
HORSEPOWER ENGINEERING JOHNSONS MACHINE
LATE MODEL ENGINES, LLC
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RACE PROVEN MOTORSPORTS
RACING PRODUCTS & MACHINING
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REVOLUTIONARY PERFORMANCE AND MACHINE
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AIRFLOW RESEARCH
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BRODIX CYLINDER HEADS
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CARRIER BOYZ RACING
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ERNIE ELLIOT INCORPORATED
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HI-VELOCITY CYLINDER HEADS
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JOE GIBBS RACING
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JOHNSON & JOHNSON RACING TEAM
KATECH ENGINE DEVELOPMENT
KEITH CRAFT RACING
KEITH EICKERT PERFORMANCE
KEVIN BLANKS PERFORMANCE
KINSLER FUEL INJECTION
KROYER RACING ENGINES
KUNTZ & COMPANY PERFORMANCE
LARRY MORGAN RACING
LINGENFELTER PERFORMANCE ENGINEERING
LOZANO BROTHERS PORTING
PAT MUSI PERFORMANCE
PATTERSON RACING
PBM PERFORMANCE PRODUCTS
PENSKE RACING
PETTY ENTERPRISES
PROCHARGER
REHER-MORRISON RACING ENGINES
RICHARD CHILDRESS RACING
ROUSH-YATES RACING ENGINES
ROY HILL'S DRAG RACING SCHOOL
S&S PERFORMANCE
SCOGGIN DICKEY PERFORMANCE PARTS
SHAFIROFF RACE ENGINES
SKUZA MOTORSPORTS
SONNY'S RACING ENGINES & COMPONENTS
SPEEDTECH NITROUS SYSTEMS
STERLING PERFORMANCE
STEVE SCHMIDT RACING

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FEDERAL MOGUL CORPORATION
FOYT ENTERPRISES
GAERTE ENGINES
GELLNER ENGINEERING
GRAVE DIGGER MONSTER TRUCKS
GRP CONNECTING RODS
HAMNER RACING ENGINES
HENDRICK MOTORSPORTS
HENNESSEY PERFORMANCE ENGINEERING
LSM SYSTEMS ENGINEERING & MOTORSPORTS
MADCAP RACING ENGINES
MANCUSO HARLEY-DAVIDSON
MARK PAWUK RACING
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NICKENS RACING
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TOTAL ENGINE AIRFLOW
TRICK FLOW
TRI-STAR MOTORSPORTS
WARREN JOHNSON ENTERPRISES INC.
WEGNER AUTOMOTIVE RESEARCH
WESMAR RACING ENGINES
WISECO PERFORMANCE PISTONS
ROUSH-YATES RACING

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WARREN JOHNSON
EMPLOYER OF SAM GRADUATES

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