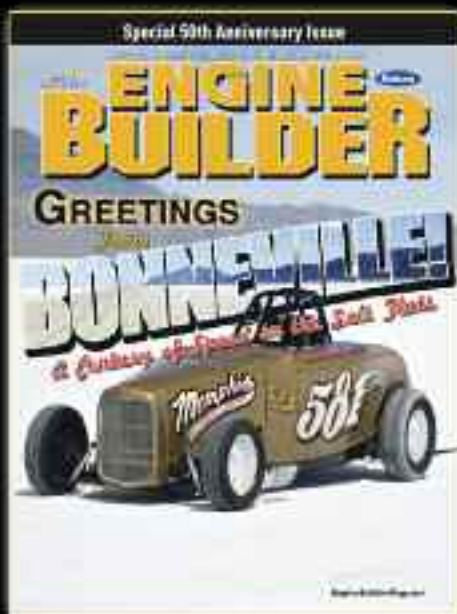
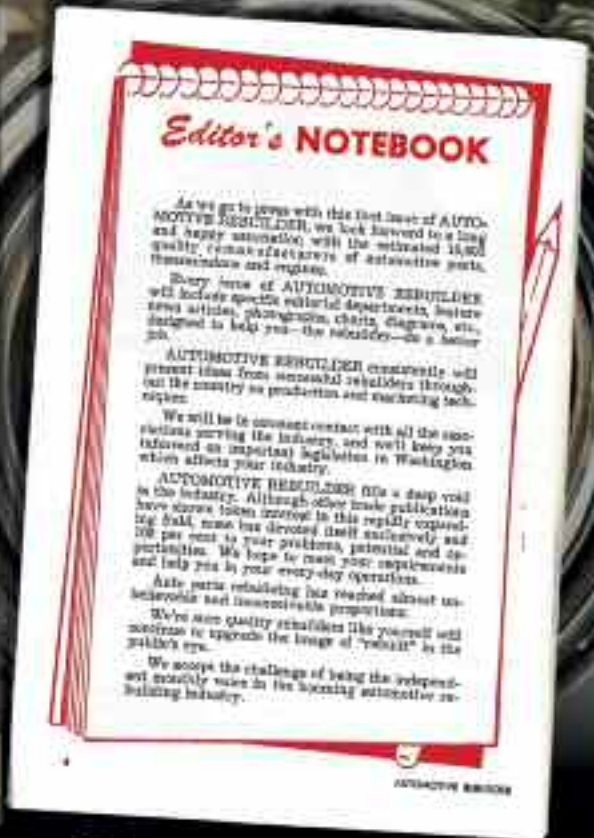
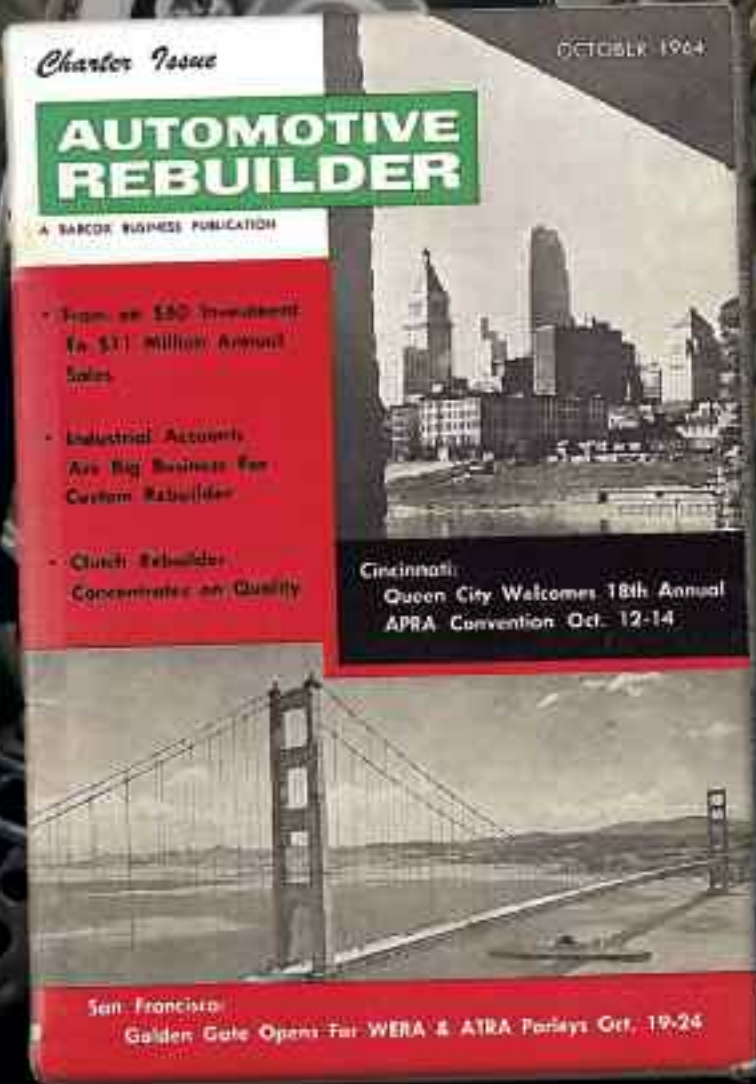


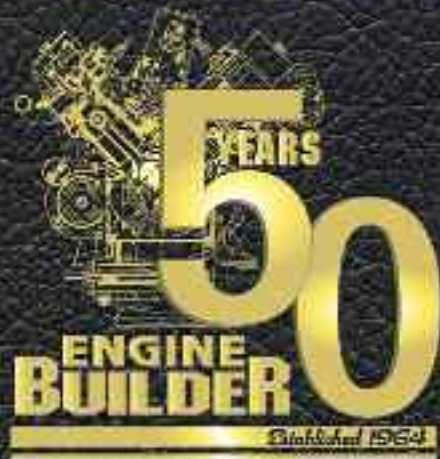
CELEBRATING

50 YEARS OF REBUILDING HISTORY



CELEBRATING

50 Years



BY DOUG KAUFMAN, PUBLISHER

The next time you're on a TV game show or playing trivia with friends, and the question is, "What is the most significant month in the history of the transportation industry?" let me suggest that you answer, "October 1964."

May I present the evidence for my argument?

October 1, 1964: The world's first high-speed rail system opens between Tokyo and Osaka in time for the 1964 Olympics. The trains ran at 130 mph.

On the same day, at an official ceremony across the Pacific Ocean in San Francisco, cable cars were named a National Historic Landmark. These vehicles travel at a much more sedate 9.5 mph.

On **October 15, 1964**, "The Spirit of America" piloted by Craig Breedlove sets the world land speed record at the Bonneville Salt Flats. Breedlove hit 526 mph on his return run before losing his braking parachutes and going out of control and crashing into a lake. He survived the crash and captured the world record, only to lose it again a few weeks later. He also achieved a less well-known record on this day – the nearly 6 mile skidmark Breedlove left during his crash is listed as the longest in history by the Guinness Book of World Records.

And in **October 1964**, Babcox Publications printed and mailed Volume 1, Issue 1 of *Automotive Rebuilder*, starting a 50-year history of serving the automotive parts rebuilding industry.

No one can say the trip has been easy. Like the San Francisco Cable Cars, we've had a lot of history, some of which has been up and down. Like the Japanese Shinkansen, or bullet trains, that now can travel upward of 185 mph, we're moving a lot faster today than when we first started. And like the Spirit of America, we've left some long trails in this industry.

I've been with this magazine for nearly 15 years. My predecessor, Dave Wooldridge, served as editor and publisher for 30 years. Both seem like a long time, but at trade shows, on phone calls, in conferences and letters, I have heard from many of you that you've been subscribers even longer.

Back in January, I asked readers to look through your shop's archives to find the oldest copy of this magazine you could. The oldest issue? 10 years? 22 years? 35? Not even close.

The oldest issue was submitted by Don Fedak, a retired performance expert and *Engine Builder* contributor from Brantford, Ontario. Don still has a mint condition copy of Volume 1, Issue 1.

For those of you who don't still have that first issue, let me remind you of what we promised back then:

"Every issue of *Automotive Rebuilder* will include specific editorial departments, feature news articles, photographs, charts, diagrams, etc., designed to help you, – the rebuilder – do a better job.

"*Automotive Rebuilder* consistently will present ideas from successful rebuilders throughout the country on

production and marketing techniques."

I think we've done a great job keeping those promises, but we couldn't have done it without a commitment from the readers, writers and advertisers over the years. Big thanks to all of you!

Several companies that advertised in that first issue are still in business and remain partners with *Engine Builder* as we move into our next 50 years. Some of these long-lived veterans told us they wanted to offer their perspective on how they've seen this industry change over the first 50, so this special supplement was born. I hope you enjoy the photos and comments to follow.

I'd like to thank the industry friends I've made during my time on the magazine as well as a fantastic team here at Babcox. Managing Editor Greg Jones and Graphic Designer Nichole Anderson have done a great job writing and creating this section. Editor Ed Sunkin and Advertising Services Manager Tina Purnell made sure everything fit together perfectly.

You'll be able to see even more photos in a special anniversary section on our website at **EngineBuilderMag.com** – I encourage you to check it out.

We said it then and we mean it to this day: "We accept the challenge of being the independent monthly voice in the booming automotive rebuilding industry." Things may be different, but our commitment to this business hasn't changed. ■

Ever since the first engine was placed in an automobile, people have been devoting time to making it better. In the past 50 years specifically, advancements in technology have helped develop the engine and its many working parts into a machine capable of much more than was ever thought possible in the 50 years prior. In this issue, Engine Builder's 50th anniversary, we highlight several companies that have helped advance the engine and the aftermarket industry over the past 50 years.

BY GREG JONES, MANAGING EDITOR

The Rebuilding Industry's Key Innovations

When asked about what innovations in the past five decades that have been key to the industry's growth and success, there was a trend in favor of an all-encompassing answer – technology. While technology is the umbrella answer, there are numerous aspects of technology and its advancements that have made the industry what it is today.

"The internal combustion engine is a marvel of engineering, with manufacturing tolerances becoming tighter every year," says **Bob Davis**, global communications manager at Sunnen. "The engine rebuilding industry has had to continually improve the precision and efficiency of

the rebuilding equipment to keep pace. Innovations such as computer controls, touch-screen displays, ball screw technology and automated systems have allowed engines to be rebuilt to the ever-more-stringent factory specs."

Scott Stolberg, president and CEO of A&A Midwest, which owns Engine Quest, echoes those remarks that the industry has survived due to its ability to adapt to changes in technology. "Over the years, there have been challenges that experts thought would be the end of the industry and we simply figured it out," Stolberg says. "For example, fuel injection was predicted to kill the industry. It caused short-term pain, but that is now behind us. People wonder what hybrids will do to our industry. I

predict we will find a way to capitalize on these drive trains also."

Matthew Meyer, general manager at RMC, points to advancements in CNC machines, cutting tools and other reverse engineering equipment as innovations that have helped us get where we are today. "Computers are present in most shops and are used in conjunction with most of the new equipment today," he says. "We also believe that the Internet has helped many businesses in marketing and advertising products and services, and allows the consumer to be able to shop around for competitive pricing on parts, services and other products. In the same manner it has probably hurt just as many companies that couldn't keep up with advancing technology."

The Internet has changed the

GETTING STARTED...

A&A Midwest, Engine Quest

Scott Stolberg's father, Aaron, and Uncle Alex, got their start buying war surplus after WWII. They then had the opportunity to sell engines to rebuilders. They bought them in the Midwest where car bodies didn't last and sold them on the west coast where the industry really grew up.

Amsoil Inc.

Lubrication is an essential part of the equation when it comes to engine building. Without lubrication the friction would turn an engine into molten metal. AMSOIL President and CEO, Al Amatuzio, founded his company on the same principles that defined his career as a jet fighter squadron commander – excellence, integrity and strong leadership. In 1972, the breakthrough came. AMSOIL 10W-40 Synthetic Motor Oil, the result of years of research and inspired by aerospace technology, became the first synthetic motor oil in the world to meet American Petroleum Institute service requirements. It outperformed conventional oils on all counts, signaling a new age in lubrication science. Today, virtually every other motor oil manufacturer has

recognized the superiority of synthetic lubricants and followed the AMSOIL lead with introductions of synthetic motor oils of their own.

Engine & Performance Warehouse, Inc. (EPWI)

Engine & Performance Warehouse, Inc. (EPWI) was established in 1977. EPWI was an outgrowth of the original business, Heads by Paul, an automotive machine shop established in 1972 that specialized in performance cylinder head work. EPWI was formed to address a void in engine parts supply, and has grown to become one of the largest wholesale distribution companies in the United States that specializes in engine parts and performance components.

Hastings Manufacturing Company

Hastings Manufacturing Co. was born into the automotive industry in 1915. For nearly 100 years Hastings Manufacturing Company has been serving the internal combustion industry with the design and manufacture of high-quality piston rings that improve combustion efficiency and reduce oil consumption.

world, and the aftermarket engine rebuilding industry is no exception, even if it was slower than other industries to adopt it.

“The Internet has been a significant change for us as it made finding obscure vintage automotive parts easier than before,” says **Ernie Silver**, president and CEO of Egge Machine. “Up until the advent of the Internet, the restoration industry was dependent on swap meets and local sources of parts. The Internet made it possible for vehicle restorers to find parts anywhere in the world. The speed at which information is now available opened up whole new markets, and is amazingly helpful to sustaining business.”

More specific to automobile engines themselves, **Sarah Kollar**, marketing manager for Hastings Manufacturing, says varied materials for piston rings have helped grow the industry.

“Ring coatings and surface treatments beyond phosphate, chrome and plasma sprayed have also greatly improved,” she says. “Now, the industry offers additional options such as nitriding, diamond-like coatings and ceramic chrome. These improvements are important with the



Hastings Manufacturing Co. was founded in 1915. For nearly 100 years Hastings has been serving the internal combustion industry with the design and manufacture of high-quality piston rings.

changes in the industry, demanding longer engine life, higher oil economy, lower blow-by, longer life oil formulations and so much more.”

Rick Simko, director, sales and marketing for Elgin Industries, also mentioned piston technology improvements as important innovations.

“**Martin Skok’s** early innovation in piston pin hardening is an excellent example of the important

contributions of the engine rebuilding aftermarket,” Simko says. “Each new generation of component manufacturers and rebuilders has advanced the science of engine performance through critical enhancements in metallurgy, component design and machining capabilities.”

And of course, let’s not forget significant innovations outside the engine, such as oil. “The AMSOIL

SCAT Enterprises

In 1966, SCAT founder, Tom Lieb, saw there was an opportunity making crankshafts. Demand quickly exceeded supply. SCAT invested in equipment and developed a supply line for cores. The rest is history. In 1972, SCAT looked at rod manufacturing and took on that challenge as well.

Melling / Dura-Bond

The Melling story began in 1946 in Jackson, MI, when George Melling Sr. and his son Ben started production of aftermarket oil pumps. In 1952 they introduced the first high-volume oil pump, which revolutionized the automotive aftermarket industry for oil pumps. In 1975, Harry Melling took over the company as the third generation president. Harry’s passion for NASCAR got the company involved in racing in 1979. By 1999, Harry’s two sons, Mark and Matt, took over Melling as the fourth generation of leadership. In 2000, Melling continued to grow with the acquisition of Dura-Bond Bearing Company. Dura-Bond is a world leader in camshaft bearings, powder metal valve seats, valve spring shims, and engine hardware. Between Melling and Dura-Bond the company offers an extensive product portfolio of

replacement and performance parts which have a long track record within the industry.

Sunnen

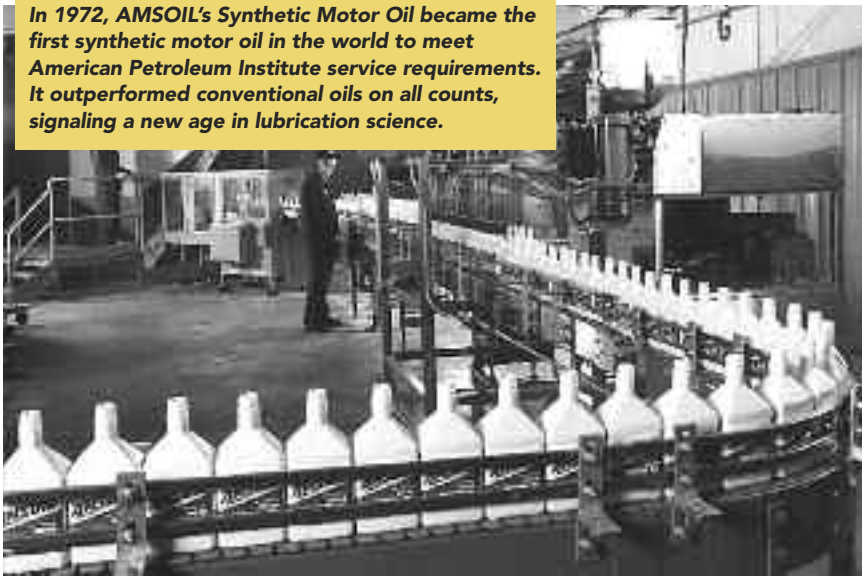
The Sunnen story started in a St. Louis garage in 1924, when a young mechanic named Joe Sunnen devised a new tool – the adjustable valve spring compressor – that made it easier to work on automobile motors. He followed this invention with a unique cylinder hone that was quickly recognized by mechanics to be the fastest and most accurate equipment available for sizing cylinder bores. These two products were so successful he soon had to move operations from the garage to a small factory. By 1929 the company outgrew that facility and moved to its present location in Maplewood, Missouri, a suburb of St. Louis. The factory has expanded many times over the years, but as we celebrate our 90th anniversary it is still the Sunnen World Headquarters, with subsidiaries in 12 countries and over 50 authorized international distributors around the globe.

Champion Brands, LLC

Champion Brands, LLC, originally Lowe Oil Co. founded by Ralph Lowe in 1956, is a globally recognized industry

CONTINUED ON PG 48

In 1972, AMSOIL's Synthetic Motor Oil became the first synthetic motor oil in the world to meet American Petroleum Institute service requirements. It outperformed conventional oils on all counts, signaling a new age in lubrication science.



contribution of introducing synthetic oil technology to the industry made today's sophisticated engines possible with tighter tolerances and potency," says **Ed Newman** of AMSOIL Inc.

Company Innovations

While technology in general was the primary answer to what innovations helped grow the industry over the past 50 years, when asked about innovations within their own

companies that have helped the industry, the answers were more specific to certain engine parts.

"Over the years a number of Sunnen innovations have been standards of the industry, and have stood the test of time," Davis says. "It all started with a unique hand held honing tool, variations of which are still used today. The Sunnen CK-10 Cylinder King cylinder hone – a game changer many decades ago – is

legendary around the world, and the new PLC-controlled SV-20 vertical hone with ball screw precision continues the heritage by setting the new standard."

Sunnen was also instrumental in advancing the use of diamond abrasives to reduce honing time and improve productivity. Another company that has contributed a lot to this industry is Elgin Industries.

"From our earliest innovation – high-quality, affordable piston pins – to our latest breakthroughs in the development of one-piece, thick-wall pushrods and super-cryogenic hardening capabilities for high-performance parts, Elgin has consistently partnered with OEMs and rebuilders to identify and address emerging challenges associated with smaller, lighter and more powerful engines," says Simko.

Outside of engine parts, AMSOIL is a company that has contributed a lot to how well all those parts function within an engine.

"AMSOIL's history is a checklist of industry firsts, including first API-rated 100% synthetic motor oil, first "extended drain" 25,000 mile/one year motor oil, 100:1 Pre-mix 2-cycle

leader in specialty lubricants for over 58 years. Through the years, Champion has grown to produce and blend more than 350 different products including fuel, chemicals, motor oils, additives, and lubricants for the racing, automotive, heavy truck, agricultural, industrial, commercial, and specialty markets. Headquarters are located in Clinton, Missouri, just 75 miles southeast of Kansas City.

Elgin Industries

Elgin Industries is celebrating its 95th anniversary this year, and from our founding in 1919 through today we have been dedicated to manufacturing world-class products for the engine rebuilding industry. Our founder, Martin Skok, was an automotive technician at an Elgin, Illinois-based vehicle dealership when he became frustrated with a serious shortage of high-quality replacement piston pins. Early pins were capable of delivering only a few thousand miles of service and vehicle owners were often forced to wait six months or longer to have their engines repaired. Skok rented space in a nearby factory and quickly developed the processes required to produce high-quality, long-lasting replacement pins. He soon expanded into a variety of other products, including oil pumps, push rods, timing

components, king pin sets, steering gear sets, and pistons. He designed and developed a prototype for one of the industry's first electrical starter motors. As his company grew, Skok played key roles in supporting other early manufacturing pioneers. In fact, a few of the biggest brands in the engine rebuilding industry can trace their histories to early financial and other support from Martin Skok. He later helped raise the industry's profile on the world stage through the iconic Elgin Piston Pin Special, which competed with significant success in the Indianapolis 500 for many years. We were among the first manufacturer members of the Automotive Engine Rebuilders Association (AERA) and the Auto Care Association, and remain a member today. Ninety-five years later and now a global OE and aftermarket manufacturer, Elgin is still owned and operated by the Skok family, including Martin Skok's son, Martin Skok Jr., who is chairman; and grandchildren Bill Skok, Tom Skok and Cheryl Hogrewe.

RMC

Rogers Machine Company (RMC) was founded in 1957 by Al Rogers. Mr. Rogers was operating a successful group of machine shops in Michigan and saw the need for a source of quality and affordable engine rebuilding

oil, synthetic gear lube for automotive use, synthetic motor oil for diesel engines, as well as synthetic oil for racing, marine and turbocharged engines," says Newman.

AMSOIL's innovations have enabled higher-performance engines and equipment, reduced air pollution and fuel consumption, maximized convenience via extended drains and created less waste oil.

Just as AMSOIL has bettered lubrication, companies such as Engine & Performance Warehouse, Inc. (EPWI) and Engine Parts Warehouse have made one-stop shopping available to the industry.

"EPWI is an engine kit specialist," says **Dusty Dodge**, director of marketing for EPWI. "EPWI and other engine parts warehouse distributors have long seen the convenience of including all of the needed engine rebuild components in a single box. EPWI has built and supplied in excess of 1.3 million engine kits."

"Engine kit programs made pricing and engine rebuild much easier for the customer," says **Paula Flowers**, CEO of Engine Parts Warehouse. "We stocked everything necessary for the engine rebuild so the customer could

Champion, originally Lowe Oil Co., was founded by Ralph Lowe in 1956. For over 58 years the company has been a globally recognized industry leader in specialty lubricants. Through the years, Champion has produced and blended more than 350 different products.

order all his parts with one phone call and receive it the next day."

While not all companies sell as many parts as EPWI and Engine Parts Warehouse does, companies like Hastings and SCAT Enterprises specialize in specific engine parts.

"In 1956 we invented the Flex-Vent oil control ring, which quickly became the international standard for most engine applications," says Kollar. "In the 1980's the Flex-Vent oil control ring became the choice of OEM's worldwide and is still specified in today's engines."

"When Detroit had to make cars compatible with high performance modifications, SCAT responded by making crankshafts, connecting rods and rotating assemblies for all these applications," says Tom Lieb, SCAT's founder. "SCAT invested in technology and modern computer driven machining methods to supply the best possible crankshafts and connecting rods at competitive



pricing."

EGGE Machine is another company that has helped innovate a specific engine part – pistons.

"Up until the 1950s most production vehicles came with cast iron or steel pistons," says Silver. "EGGE Machine was among the first companies to offer cast aluminum replacement pistons in the U.S. EGGE Machine designs its pistons to allow

machinery. He started in Denmark with AMC crankshaft grinding, align boring and resurfacing machines and then moved on to Italy with Berco, Zanrosso and Ruaro/Scledum, finally settling on Robbi, Picconitti and Comec. RMC is still the U.S. distributor for Robbi to this day. In 1973 Ray Meyer (current owner) had a partnered performance auto parts and machine shop business, this is where he met Mr. Rogers and purchased most of his shop machinery. Ray broke away from that business in 1986 and joined up with Mr. Rogers as his sales man in his equipment business. Mr. Rogers had an accident in 1986 and became paralyzed leaving Ray and Mr. Rogers' family members to keep the business going. Shortly after Mr. Rogers felt it was in the family's best interest to sell the company. In 1987, General Parts Inc. (CarQuest) acquired Rogers Machine Co. and renamed it RMC Engine Rebuilding Equipment and Ray was rehired as the President. CarQuest saw a great fit to have their own equipment company to supply their auto parts machine shops with equipment. In 1992 CarQuest felt the need to get out of the equipment business, at which time Ray Meyer purchased RMC and has been the sole owner since. So we continue on as the new RMC, providing the latest technology in the industry and staying true to our

philosophy "Dedicated to serving all your engine rebuilding equipment needs." Currently, we still import equipment from Robbi (Italy), use U.S. suppliers for CNC machines and tooling and manufacture specialized fabricated machines, fixtures, and tooling generally made to order at our 15,000 square foot manufacturing facility in Saginaw, MI.

EGGE Machine Co.

EGGE began its life as an automotive repair shop in Plainview, TX in 1915. The original name was "E.N. EGGE Auto," named after its founder E.N. EGGE. E.N. repaired anything and everything that came into his shop. As the business progressed, he developed the ability to sand cast aluminum pistons, primarily because replacement pistons were simply not available. In the early 1920s E.N. moved the company to downtown Los Angeles where it remained for many years. Eventually his two sons, Nels and Sy, joined the company and they began to experiment with permanent steel molds to make pistons. Shortly after E.N. died, Sy began EGGE Marine and specialized in marine applications. Nels EGGE took over the operations of the original company and relocated the business to Gardena, CA in 1958. Nels improved his



Founded in 1957 by Al Rogers, RMC was originally known as Rogers Machine Co. Over the years, the company has changed hands, but today it still offers customers CNC, fabrication and tooling machines.

for the differing expansion rate of aluminum. In addition, since ring sets for some early applications are no longer available, Egge has redesigned those pistons to accommodate modern ring sets."

Adding to the list of engine parts,

Caitlin Green, vp of marketing for Pro-Fliter Performance Products says cylinder heads, intake manifold designs and casting technology have been key innovations as well. "As far as I know we were the first with a Pro-Stock style "As Cast" 12-degree BBC

Spread Port Head," she says.

Melling Engine Parts is another company that has helped develop the landscape of the industry with its innovations in oil pumps and its acquisition of Dura-Bond Bearing Company, a leader in camshaft bearings.

"In 1952 we introduced the first high-volume oil pump, which revolutionized the automotive aftermarket for oil pumps," says Charles Barnett, vp of sales and marketing for Melling. "Bewteen Melling and Dura-Bond we offer an extensive portfolio of replacement and performance parts."

Just as the engine parts themselves continued to improve over the years, the machines for making them also improved.

"In 1999, RMC was the first to present a CNC machine as a complete turnkey engine block machining package," says Meyer. "From that point on we have continued to be a leader in developing new advancements using CNC technology. We have come to the realization that a single purpose machine still may have its place in the industry (example: dedicated resurfacers, align boring, rod boring equipment), but most customers need to get the most value for their dollar."

While some companies are progressing forward with new product innovations, others such as Packard Industries, are rebuilding the past with today's modern technology.

"We specialize in the obsolete," says James From, marketing manager for Packard. "We have taken various pistons, bearings, timing chains and gears, reversed engineered them, corrected many of the flaws that had caused their downfalls and remade them using today's technology and materials."

Industry Changes

It's obvious that today's engines are made up of a lot of moving parts, and those parts have changed along with the numerous changes in the industry over the years. What our advertisers have seen change the most over the years has been related to engine size, increased foreign competition, issues with getting younger people involved in the industry, and engines lasting much longer.

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"Over the past few decades, we've seen engine downsizing, onboard diagnostics and brain boxes, turbo boosting, advanced combustion, and advanced valve timing," Newman says. One of the biggest changes in the industry is the fact that engines last upwards of 250,000 miles today versus perhaps 50,000 miles within recent memory, resulting in fewer engines in need of rebuilding.

"This shrinking market has rewarded those shops who are able to provide fast turnaround, precision work and reduce human error, all which can be aided with modern equipment," Davis says. "The biggest expense is still labor, and a shrinking pool of skilled machinists makes it even more important that equipment be easy to set up and operate on a consistent basis so today's tight tolerances can be met."

Prompted by the onset of pony and muscle cars, SCAT began in 1966 with founder, Tom Lieb making crankshafts, connecting rods and rotating assemblies. Over the years SCAT invested in technology and modern computer-driven machining methods to further improve upon its products.

EPWI agrees that today's engines have forced the industry to change. "There are generally fewer rebuild opportunities and fewer components in an engine to replace that's offset somewhat by a continually growing vehicle population," Dodge says. "The industry has seen rapidly changing

engine technology and more advanced and sophisticated systems, shorter engine production runs and greater engine variety, and fewer production engine rebuilders and machine shop/engine builders. The survivors are well run, creative and technically competent machine shops/engine builders who have adapted to a changing marketplace and technologies."

Both Engine Quest and Elgin echo the fact that people are the ones that keep the industry moving forward.

"The challenge for all business today is people," Stolberg says. "Ours is not the kind of industry people grow up aspiring to be in. But if you work in it, you can find it very rewarding."

"To us, this remains a people business and we work very hard to exceed the expectations of all our customers, from custom engine rebuilders to much larger global companies," Simko says. "Some manufacturers – having been acquired and consolidated with other organizations – have lost sight of the people side of this business, but we never have."

Aside from technology and people, the economy has also played a major role in how this industry has changed.

"Many of the industry's key players have returned to their basic root products to reduce overhead and eliminate slow moving inventory due to the slow economy," Meyer says. "Smaller shops with one to three employees without a niche market, or those that can't afford to invest in advanced technology, struggle to remain profitable. Prices on shop labor, machinery, tooling, and supplies will continue to rise because of reduced sales volume and inventories causing special order situations for once normal stocked items."

Speaking of once normally stocked items, Packard Industries has seen an increased number of discontinued products that rebuilders today are looking for.

"We are constantly looking at whether to reproduce certain parts," From says. "There is not an everlasting

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Sunnen is celebrating 90 years in 2014. This is a look at the company's old trade show booth, which often included demonstrations of the portable cylinder grinder (cylinder hone) with grit removal suction system. This allowed engine cylinders to be honed with the engine still in the chassis. The suction system removed the grit before it could fall down onto engine components.



supply. We have to stay on our toes and keep our ear to the ground to the ever-changing trends in the industry. One minute early V8 (331 and 365) Cadillacs are hot, then the next minute it is early HEMIs."

Edge Machine has also seen how trends can change among rebuilders.

"For years engine

swaps in older vehicles have not been uncommon," Silver says. "An early favorite replacement engine was the Chevy 327, then hobbyists began adopting the Chevy 350, and now it's the General Motors LS engine. The affordability and availability of the LS engine has brought major changes to how our market looks at repowering older vehicles. LS swaps have become very popular and have eroded a large piece of the domestic restoration market."

The Future of Engine Rebuilding

Changing topics from obsolete engines and parts to how these companies see the future of the industry, the conversation surrounded technology, sustainability, the environment and specialization.

"Sustainability is the critical driver behind current trends in the passenger car industry," Newman says.

"Environmental concerns are thus the primary impetus behind the study of sustainable development and science.

"The current aim of new technologies is to enable better performance with better fuel economy and reduced emissions. As engine designs change, lubricants must be developed that are up to the task. Engine designs and lubrication technologies must work together. Change will continue because of these forces pushing us toward a sustainable future. How engines produce power will continue to evolve. This means motor oils will also continue to change as well.

"The materials engines are made of will also continue to change as designers strive to incorporate low-friction components, advanced coatings and lighter weight materials. And in the realm of motor oil, the future will become ever thinner."

Dusty Dodge of EPWI agrees that environmental issues and sustainability will be growing concerns, but says he sees continued opportunities in the industry as well.

"There will be continued opportunities created by new engine designs – the LS series, Ford modular and Coyote designs are examples," he says. "There will also be continued challenges due to changing vehicle and engine technologies – hybrid and electric vehicles are examples."

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Pro-Filer Performance Products manufactures cylinder heads and intake manifolds. It was one of the first companies to make a Pro-Stock style "As Cast" 12-degree BBC Spread Port Head.

Bob Davis of Sunnen agrees that more changes will come with the increase in hybrid and electric vehicles, but he also sees future use of more exotic materials such as compacted graphite, nikasil and spray coatings, which are all more difficult to machine, so tooling and abrasive technology must keep up.

RMC also expressed that it sees different ways parts might be manufactured moving forward.

"I would imagine with the advancements in 3D printing we are

going to see some crazy changes in manufacturing parts," Meyer says. "I also believe we will see much more being done to reduce energy consumption with alternative fuels in heavy-duty and performance markets."

Caitlin Green of Pro-Filer says she sees future changes in drag racing having an impact on the industry.

"I anticipate the power adder classes continuing to grow on the drag

racing side," she says. "We are adding new cylinder heads for this market to take advantage of the power adders, instead of the market trying to force the power into antiquated parts."

Paula Flowers of Engine Parts Warehouse also sees growth potential on the performance side of the industry.

"Engine builders' knowledge and expertise in machining and building race engines is a necessity in this industry," she says. "Performance engine builders are the backbone of

the racing arena and will continue to prosper."

Some companies however, believe the original replacement engine parts market will shrink.

"There will always be the purists who insist on restoring vehicles to period correct condition," Silver says. "They seem to be a growing minority. The financial barrier is also a challenge for younger hobbyists considering an older vehicle. We see younger hobbyists preferring older import vehicles for their restoration projects. If the trend continues we will see a larger demand for replacement parts to fit imported production vehicles."

Others see a rise in demand for rebuilt engines as vehicles continue to become more expensive and other vehicle systems last longer.

"This will make repowering an increasingly viable and appealing option for many consumers," Simko says. "The key is to keep the industry strong by investing in products and programs that support the business needs of engine rebuilders, and making the industry more attractive to younger professionals." ■

ability to cast permanent mold pistons when he purchased a quantity of molds from a major OE manufacturer who deemed the molds 'obsolete'. Nels moved the company to its current location in Santa Fe Springs in the early '70s and eventually turned the company over to his son, Robert.

Packard Industries

Packard Industries was built in 1978 on the idea of covering the day-to-day costs of business with wholesale division. Our main objective was to supply the various specialist retailers in the industry. At first we did not actually provide engine parts. We started out with a small suspension line, water pumps and fuel pumps. As we grew we added the engine parts. In the early years there was little to no competition as many of our competitors only dealt in a certain engine make. We would offer parts for something as common as an engine overhaul kit for a 216 Chevrolet to something as unique as a set of pistons for REO.

Pro-Filer Performance Products, Inc.

Pro-Filer Performance Products, Inc. got started in the engine building industry after realizing the need for a high quality, aerospace grade, cylinder head and intake

manifold in the high performance aftermarket industry. We began in a niche "big motor" drag racing market since those were the engines we were involved with at the time. After seeing the improvements and horsepower gains over OEM parts of the same size, we saw the opportunity to expand the line to meet needs in various motor markets. Needless to say it has been an exciting 12 years.

Engine Parts Warehouse

Paula Flowers' parents owned and operated a machine shop and parts store in Louisville, Ky. Growing up she spent a lot of time at the shop and eventually worked there. It wasn't long before Flowers realized a need for a warehouse distributor with a focus on internal engine parts. From that idea, Engine Parts Warehouse was born with the help of three partners, Paula Flowers, Mark Flowers and Zorado Shelton. It was difficult at first as the company's potential customers were also its competitors. However, the company's persistence was rewarded by the confidence in other engine builders in the area that needed inventory. Engine Parts Warehouse later expanded into performance parts with PBM Performance Products and Erson Cams. ■