

News & Updates

JULY 2001

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JASPER Announces "New and Improved" Nationwide Warranty!

You've asked for it! And Jasper Engines & Transmissions has listened. The company known for quality remanufactured drivetrain components has improved its nationwide warranty on gasoline engines, transmissions and differentials.

"After some 18 months of implementation of The Perfect Product, and looking at the improvements we've made in the processes of remanufacturing and in the parts being procured, we are pleased to be able to offer this additional warranty to our customers," said Doug Bawel, President of Jasper Engines & Transmissions.

Transmissions for cars and trucks, Class I Performance Transmissions for cars and trucks

and On-Highway Differentials now carry a 36 month, 75 thousand mile parts and labor warranty. This is the same nationwide warranty as our Complete and Special Complete Gasoline Engines for cars and trucks.

Complete and Special Complete Engines, Transmissions and On-Highway Differentials for commercial applications up to and including one ton trucks also carry a 36 month, 75 thousand mile parts and labor warranty.

"Not only is this a sign of the improvements we've made in our products," says Bawel, "but also a commitment to providing exemplary customer service."

Transmissions for cars and trucks, Class I Performance Transmissions, for cars and trucks and On-Highway Differentials now carry a 36 month, 75 thousand mile parts and labor warranty. This is the same nationwide warranty as our Complete and Special Complete Gasoline Engines for cars and trucks.

Complete and Special Complete Engines, Transmissions and On-Highway Differentials for most commercial applications up to and including one ton trucks also carry a 36 month, 75 thousand mile parts and labor warranty.

Bridgewater Motorworks

Bridgewater Motorworks is located at 26 East Kearney Street in Bridgewater, New Jersey. This full-service engine and transmission installation center was founded in 1994. Motorworks owner, Greg Burchette, comes from a nonautomotive background. Burchette was originally a Hydrogeologist with a Masters Degree from Lehigh University, but bought into Bridgewater Motorworks in 1999. What he brought to the shop was a definite experience in common sense marketing, because Bridgewater Motorworks has grown 40 percent in the past year. Burchette attributes the growth to taking advantage of all the advertising tools at his disposal to continue the growth of his business. "I have a website and use e-mail. I also use television commercials, and other advertising outlets that newer businesses use," says Burchette. "Some of the other automotive guys have a hard nose about advertising. They think they can just get by with a yellow page ad."

Bridgewater Motorworks has eight service bays, and each bay has its own ASE Certified Technician. As a member of the Mechanics Education Association, the company encourages their employees to further their automotive education.

Free local towing is but one of the services Bridgewater Motorworks

"They (JASPER) make a good product. That's all there is to it."

- Greg Burchette

provides to their customers. Their technicians utilize state-of-the-art diagnostic equipment, and a short duration of turn around time helps get their customers back on the road fast.

JASPER's relationship with Bridgewater Motorworks has only been two years in length. But Burchette soon realized the success of the JASPER product. His company posted year 2000 sales in excess of \$225,000. The main reason why he uses JASPER is because of the quality of the product, and the high integrity of the company. "It's a good company," says Burchette. "They (JASPER) will stand behind you should a problem arise, and have stood behind me in the past. And it's because of the name. They make a good product, that's all there is to it."

As for the future, Burchette looks toward expansion of Bridgewater Motorworks, possibly a second location. After all, Burchette follows his company policy of "Make Money... and Have Fun."



The associates of Bridgewater Motorworks utilize JASPER remanufactured products because of the quality of the product, and the high integrity of the company.

JASPER Sponsors First Ever Import Truck in the ARCA/Lincoln Welders Truck Series

Tom Schrader, Vice President of Marketing and Strategic Development for Jasper Engines & Transmissions announced the company's historic sponsorship of the first ever import truck to run in the ARCA/Lincoln Welders Truck Series.

The #11 2001 Toyota Tacoma was developed and built by Future Motorsports, Inc. of Morgantown, West Virginia, and is being campaigned by the "fasttrucks.com" racing team, a division of Future Motorsports, Incorporated.

Jasper Engines and Transmissions is no stranger to the world of racing. In addition to sponsoring Robert Pressley in the #77 NASCAR Winston Cup Series car, the company also sponsors drivers in NHRA sanctioned events and the NASCAR Gatorade All Pro Series. "We've looked at racing as an excellent means of building brand awareness," said Schrader. "Racing sponsorships have done a great job in building the awareness of our domestic remanufactured engines and transmissions for cars and light to heavy-duty trucks. We view this sponsorship as an oppor-

tunity to let more people know about our line of remanufactured import engines as an economical means of extending the life of their present vehicle," he added.

Future Motorsports President, Jody Stirewalt, has a similar goal in mind. "We plan to offer existing Toyota Motor Company retailers a unique opportunity to present the Toyota product line to the buying public through the use of a national Motorsports competition. Now having association with Jasper Engines and Transmissions, we will be introducing import car and truck owners to new possibilities for keeping their existing vehicles on the road."

Racing audiences, up until now, have typically had the opportunity to view only domestically produced motorsports vehicles. "We plan to change that," said Stirewalt. Future Motorsports, Inc. has worked with ARCA (Automobile Racing Club of America) to remove existing barriers and reach a new audience of racing fans.

The 2.6 liter powered Tacoma will be driven by Norm Weaver, a veteran dirt track and asphalt racer.

Weaver's relationship with Stirewalt began in 1988 when the pair teamed up to run Modified Four Cylinders. During the next four years, the Weaver/Stirewalt team swept the tri-state area (West Virginia, Ohio & Maryland) winning almost everywhere they raced, at one point compiling 19 wins in 21 starts. A 1995 career change took Weaver to North Carolina where he continued to hone his racing skills. In 1998 the Weaver/ Stirewalt relationship was again sparked beginning this chase for a crown in the ARCA/Lincoln Welders Truck Series.

The 2001 Toyota Tacoma will be raced in thirteen point series events in 12 locations throughout the spring and summer.

For additional information about JASPER remanufactured products and the company's racing involvement, please visit their web site at www.jasperengines.com. For more information about Future Motorsports, Inc., fasttrucks.com and the #11 Toyota Tacoma, please visit www.fasttrucks.com.

2001 ARCA Lincoln Welders Truck Series Schedule

June 9	LaSalle, IL
June 22	Toledo, OH
June 30/July 1	Mt. Vernon, KY
July 7	Crystal, MI
July 13	Birch Run, MI
July 21	Flat Rock, MI
July 28	S. Amherst, OH
August 4	New Paris, IN
August 10	Sparta, KY
September 1	Schererville, IN#
September 8	Salem, IN
September 15	Toledo, OH
tba	Morris, IL
October 6	Las Vegas, NV*

= Tentative race
* = Non points race



The Jasper Engines & Transmissions sponsored #11 Toyota Tacoma driven by Norm Weaver. It's the first ever import truck in the ARCA/Lincoln Welders Truck Series.

On the Technical Side:
Gaskets and Gasket Materials:
How Engine Sealing Components Have Evolved!

By Chuck Lynch - JASPER
Research & Development

Chuck Lynch

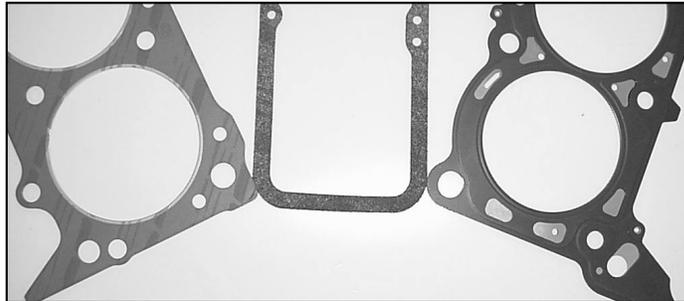
has been associated with JASPER since 1994. Lynch has been a member of the



Research & Development department for the past four years, and has been involved in associate training in the Gas and Diesel departments. He has earned ASE Certification as an Auto and Truck Technician and a Master Machinist in Gas and Diesel Engines.

As engines have evolved, so has the need to develop new sealing components. Customer expectations demand that the life of today's engines far exceed that of yesterday. The engines that are currently produced can commonly see 100,000 miles or more in a short time. Many areas on an engine must be sealed to ensure its longevity. Sealing components must be able to seal water, oil and combustion pressures. To accomplish this task, we must incorporate many different sealing techniques and materials.

Hard Gaskets are manufactured from materials such as steel, stainless steel, copper or a combination of these materials. These gasket materials can be used with or without facing materials such as clay and fiber paper that aid in compressive strength. A very common gasket used by engine builders has an expanded steel core and is coated on each side with a high-density



Left to Right: Fiber paper steel head gasket; cork valve cover gasket; multi-layer steel gasket.

graphite facing material. Hard gaskets are used on intake mating surfaces, exhaust mating surfaces and head to block surfaces. These gaskets are often coated with a material that enhances sealing properties and resists the scrubbing of the gasket surface due to thermal expansion of engine castings. The addition of an elastomeric bead may enhance the sealing ability of a gasket where oil or water passages are hard to seal.

Soft Gaskets consist of very flexible materials such as cork, rubber, rubberized cork, silicone or rubber coated steel, and oil resistant treated paper. The use of cork gaskets has steadily declined due to the success of rubber coated steel gaskets that do not relax as drastically as cork gaskets. Cork gaskets are also known to become brittle after numerous thermal cycles and oil absorption, leading to shorter replacement intervals. Soft gaskets can also be made from materials such as RTV silicone or flange sealant. These materials show excellent reliability when properly applied and are inexpensive alternatives to most gasket materials.

MLS (Multi-Layer Steel) Gaskets are a new approach at handling shearing forces that are

created by expansion and contraction of engine castings. Gasket shear is a common problem with the bi-metal engines that are being built today. MLS gaskets typically have three to seven layers of steel. The outer layers are usually stainless spring steel and embossed. The inner layers add support and gasket thickness. A fluoroelastomer commonly called Viton is added in cold sealing ability. MLS gaskets have excellent durability and are well suited for engines that may see 150,000 miles or more.

Another trend is to eliminate gaskets from engines altogether. This can be achieved with a perimeter groove in the casting to accept an o-ring to seal ports or passages. O-rings come in a wide variety of materials and sizes. It is very important that the proper o-ring is selected to ensure proper sealing. A similar approach to o-rings is the application of an anaerobic "form-in-place" gasket that cures in an environment that is absent of oxygen. The material is applied in a groove similar to an o-ring groove. Oxygen will be displaced as the sealer is injected into the groove. Once the Material has completely filled the groove, it will cure almost immediately.

Piston Ring Performance - Part 2

Built with the quality products of Sealed Power and Fel-Pro.
By Scott Gabrielson - Federal-Mogul Corporation



Scott Gabrielson

has over 21 years of engine parts experience and has operated in multiple job responsi-



bilities within Sealed Power and Federal-Mogul Corporation. He is currently the product planner/engineer for Piston Rings at Federal-Mogul Corporation. This is the final installment in his series on piston ring performance.

Gaps are Back

The most dramatic change in OE piston ring technology can't be found in the rings themselves, but in their end gaps. In simple terms, gaps are getting narrower in the top rings and wider in the second rings as OEMs continue to seek new ways to enhance power output while emissions are reduced.

Top ring gaps traditionally have been dictated by combustion concerns; as temperatures rise, the chances of the ring ends butting against one another increase. This, of course, can cause severe scuffing of the cylinder walls and/or flaking of moly from the ring face.

This challenge has been overcome primarily through OEMs' use of advanced engine electronics, which more precisely monitor and control timing, air-fuel ratios and other critical variables that affect operating temperatures.

Gaps are moving in the opposite direction on the second rings.

While logic might suggest what wider end gaps would increase the incidence of blow-by (some ring manufacturers offer gimmicky "gapless" second rings to address this misconception), the opposite actually is true. And that's the primary reason why second-ring gaps of .016-.022" are becoming more common versus .008 to .010-inch gaps for the top ring.

The reasoning behind wider second-ring gaps is best described by the "Pressure Balance Theory." With a small (or no) second-ring gap, combustion gases become trapped between the second and top rings. As the piston moves through its power stroke, these gases can lift the top ring off its land, causing extreme blow-by and the resultant power loss.

This phenomenon has been demonstrated in countless dynamic engine tests, both at the OE and aftermarket levels. As a result, virtually every major OE engine remanufacturer now specifies a larger end gap in the second ring.



One final point on ring end gaps: Some engine builders are reluctant to use standard end gaps with hypereutectic pistons due to limited problems associated with ring land breakage. This problem is a function not of the piston ring or piston material but the manufacturer's piston production process. In manufacturing hypereutectic pistons, it's

critical to precisely control the alloy's cooling process; failure to ensure consistent cooling can cause "clumps" of silicon to form within the material, creating weak spots.

How can you protect yourself from this problem? By relying on JASPER engines, which feature pistons and rings engineered for use as an integrated assembly. As a result, there's no question about materials or design compatibility.

The Next Step: 'Loaded Pistons'

If you're relying on JASPER remanufactured engines, you already are seeing the benefits of one of the latest engineering and manufacturing achievements in the piston ring category: complete, "loaded" piston assemblies.

JASPER and Sealed Power engine parts manufacturer Federal-Mogul Corporation have partnered in the development of pistons and ring packs that are delivered to JASPER as ready-to-install assemblies.

The benefits to customers? Increased confidence in engine reliability by eliminating a critical variable in engine assembly. The "loaded" piston production process eliminates chances of improper parts selection or installation. The bottom line is, every piston features a perfectly-mated ring pack selected and installed for the specific application.



2002 Calendar Contest Deadline August 31st

JASPER is seeking quality color photographs of vehicles and equipment in which a JASPER gas or diesel engine, transmission, differential or stern drive has been installed, for its 2002 Calendar Contest. Photo categories are vehicles and performance-oriented cars and trucks.

Entrants must submit a color photograph, (35mm or larger) and a description of the vehicle or application along with the JASPER product that has been installed. Vehicles should be placed in a "show" type setting when photographed. Polaroid pictures and digital pictures transferred to photo paper *will not* be accepted.

Every qualified entrant will receive an autographed JASPER race hat. All entries will be judged based on adherence to category, equipment appearance and the quality of the photograph.

Winners will be required to sign a release consent form for photograph and name publication.

All entrants whose work appears in the calendar will receive a JASPER denim jacket and a \$100 credit toward their next purchase of an engine, transmission, differential or stern drive. Honorable mentions will receive a JASPER sweatshirt and a \$50 credit toward their next purchase of one of the aforementioned products.

tioned products.

Entry deadline is August 31st, 2001. The contest is open to all JASPER customers, distributors and associates. Entries should be mailed to:

**Jasper Engines & Transmissions
P.O. Box 650
Jasper, Indiana 47547-0650
Attn: Abby Brelage**



Pictured here are two of last year's contest winners. These are examples of the type of setting and background that we look for in choosing a winning entry.

Selling in a Soft Market

By Zach Bawel - JASPER Vice President of Sales

Zach Bawel

is a graduate of Indiana University with a Bachelor of Science degree in finance. He



joined Jasper Engines & Transmissions in 1987 as a sales representative. Bawel later became Branch Manager of the company's Baltimore location, was named General Sales Manager in 1991 and was named Vice President of Sales in 2001. This is the first in a series of articles on tips our installers can use to increase their business and their sales.

As we talk to many independent garage owners across the country, the message is the same. "I feel like I'm on a roller coaster. I have one good week, and then one slow week. Two good weeks, then one slow week, etc. What do I need to do to change or stop this cycle?"

We don't have all the answers, but if you keep doing what you're currently doing, you will keep getting the same results.

Try something new, take a proactive approach to generating more business from your current accounts, and the positive word-of-mouth advertising may bring in new customers as well.

Some garages follow up with every customer one week to ten days after work is performed to make sure it was performed to their satisfaction, and to ask if there are any other vehicles in need of repair or servicing. This is not a high-

pressure sales pitch, but a sincere question of, "Do any of your other vehicles need repairs or servicing that we can schedule for you at this time?" You would be amazed at how much business is gained through these simple phone calls.

Concentrate on the basics. Your company's single most important job is to get and keep customers. The only way of doing this is to help your customers solve their car repair needs. Listen to the customer, and be sure you understand what problems their vehicle is experiencing. This may mean taking more time to be helpful, understanding and supportive to your customer.

Someone once said the definition of insanity is doing the same thing over and over, but expecting different results. So try something new to build and develop a stronger customer base.

Gift From JASPER Gives College Students Access to New Technology

Automotive technology students at Central Missouri State University now have access to the latest equipment on the market for diagnosing transmission driveability problems following a gift from Jasper Engines & Transmissions.

Jim Miles, Kansas City branch manager, delivered recently a TranX2000 Transmission Analyzer and six adapter cables to the Department of Power and Transportation. A compact unit, the TranX2000 is a diagnostic tool that allows technicians to simulate the computer controls which operate late-model cars with automatic transmissions. By doing so, a technician can determine if transmission related problems are due to the electronics operating the system or if the problem exists in the transmission itself. The market value of the equipment is estimated at \$3,000.

In presenting the gift, Miles told the faculty in the department, "We



Jim Miles, left, presents the new TranX2000 Transmission Analyzer to Art Rosser, center, dean of the College of Applied Sciences and Technology at CMSU, and Scott Wilson, associate professor of Power and Transportation.

at Jasper Engines & Transmissions appreciate the excellent job you do in your Automotive Power Technology program to educate and graduate well-qualified individuals for the careers that await them. It is my hope that this donation will make your job even that much more effective."

Scott Wilson, associate professor

of power and transportation, accepted the gift along with Art Rosser, dean of the College of Applied Sciences and Technology. Wilson said students enrolled in courses such as Transmission Drivelines and Computer Diagnostics will use it. Most of these students are preparing for management careers in the automotive industry.

Jasper Engines & Transmissions Names New Officers and Vice Presidents

Doug Bawel, President of Jasper Engines & Transmissions, has announced the appointment of two new vice presidents and corporate officers as part of the company's ongoing strategic planning process.

Ralph Schwenk has been named Vice President of Corporate Finance and Information Services and Zach Bawel has been named Vice President of Sales. Tom Schrader, who had held the position of VP of Sales, has taken over the duties as Vice President of Marketing and Strategic Planning along with overseeing inside sales and customer service operations.

Ralph Schwenk joined JASPER in 1983 after graduating from Indiana State University with a

Bachelor of Science degree in finance. He has held numerous financial positions with the company including Assistant Comptroller and Manager of Financial Auditing.

Zach Bawel joined Jasper Engines & Transmissions in 1987 as a sales representative after graduating from Indiana University with a Bachelor of Science degree in finance. He later became Branch Manager of the company's Baltimore location and established JASPER's East Coast Regional Manager positions. Bawel moved to the company's corporate offices as Assistant Sales Manager in 1991 before taking over the duties as General Sales Manager.

Both Schwenk and Bawel have

served on the company's Executive Committee since 1995.

In making the announcement, Doug Bawel said, "These appointments fit well with our plans for continued growth. In 1996, we embarked on a program to double the size of our company in five years. We have achieved that goal with our 1,600 associates. Now we are ready for the next step. By signing a five-year agreement to become the Officially Licensed Remanufactured Engines and Transmissions of NASCAR, we have strengthened our commitment of becoming nationwide. Couple this with our Perfect Product Program and we are right on track."



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JASPER Branch & Distributor Locations



* Denotes Distributor

Florida:

ORLANDO*: 1-800-727-4734

Georgia:

ATLANTA*: 1-800-727-4734

Illinois:

CHICAGO: 1-800-827-7455

Indiana:

JASPER: 1-800-827-7455

CRAWFORD: 1-800-827-7455

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CINCINNATI: 1-800-827-7455

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COLUMBUS: 1-800-827-7455

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Washington:

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