



JASPER
ENGINES & TRANSMISSIONS



**DRIVE
LINE**

News and Updates From Jasper Engines & Transmissions

August 2006

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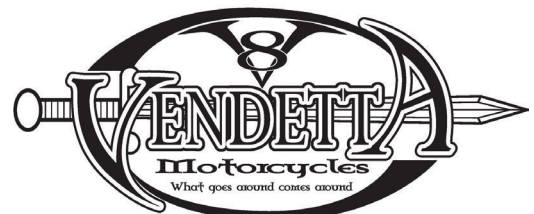
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JASPER & Vendetta Custom V-8 Theme Trike

There was anticipation in the air June 5, as Jasper Engines & Transmissions took delivery of a custom V-8 powered theme trike. This custom trike was a joint venture between JASPER and Vendetta V-8 Motor-cycles of Spencer, Indiana. JASPER is the exclusive supplier of automotive V-8 engines to Vendetta.

The production of the trike, production processes at JASPER and the unveiling of the bike to several hundred JASPER Associates, was videotaped for *American Biker*, a television show which airs on the satellite Men’s Channel. The JASPER theme trike show was scheduled to air in early August to approximately 27-million households.

In addition to the unique V-8 engine, the trike touts such features as a custom tri-color paint



job, custom cut wheels, CNC machined tooled logo valve covers by JASPER’s Indiana Tool & Die division, custom tooled seat, and JASPER “J” handlebars.

Other design aspects include an adjustable suspension system from Air Ride Technologies of Jasper. Through this system, the rider can adjust suspension levels of the trike to assure a smooth, even ride. Also incorporated is a specially designed charging system in which the alternator is driven by the drive shaft.

Tom Schrader, Vice President of Strategic Development for JASPER commented, “We are very pleased to be working with Vendetta V-8 Motorcycles. We are always looking for new markets for our line of quality remanufactured engines, and Vendetta has offered us a very unique one. Vendetta’s enthusiasm about building their creations with JASPER products lends to a great deal of credibility to remanufactured engines in general, and to JASPER remanufactured engines in particular.”

“I could not be more pleased to



Ready To Ride: JASPER President Doug Bawel prepares to ride the JASPER-powered Vendetta Custom V-8 Theme Trike.

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Be Car Care Aware™

Published by:
Jasper Engines & Transmissions
P.O. Box 650
Jasper, IN 47547-0650
Phone: 1-800-827-7455
Fax: 1-812-634-1820
www.jasperengines.com

Ewing Automotive

Snellville, Georgia, is the home to Ewing Automotive. With a primary focus on general maintenance, Ewing specializes in engines, transmissions and differentials. They also take on the additional duties of foreign and domestic high performance work and restoration of classic cars and trucks.

Ewing Automotive was founded in the back yard garage of co-owner, Billy Ewing, in 1976. Billy's interest in the auto industry started with his love of drag racing. He was a top driver in the NHRA and IHRA Pro Stock divisions for several years. When he was not repairing cars in his garage, Billy worked after hours, and on weekends, preparing his car for the race.

Ewing Automotive was a home-based business for 14 years before moving to its present location on Lenora Church Road in Snellville in 1990. The shop has ten service bays in 5,000 square feet of work space. The company has expanded by a small amount over the years, with their biggest focus on retaining the current customer base for repeat business.

There are four employees at Ewing Automotive, with two technicians that are ASE-Certified in several fields, including General Maintenance, Tune Ups and Engine Diagnostic and Repair, among others. Ewing offers pay incentives to encourage its technicians to further their automotive education. Billy Ewing says to be an auto mechanic, or technician, "You have to know more than

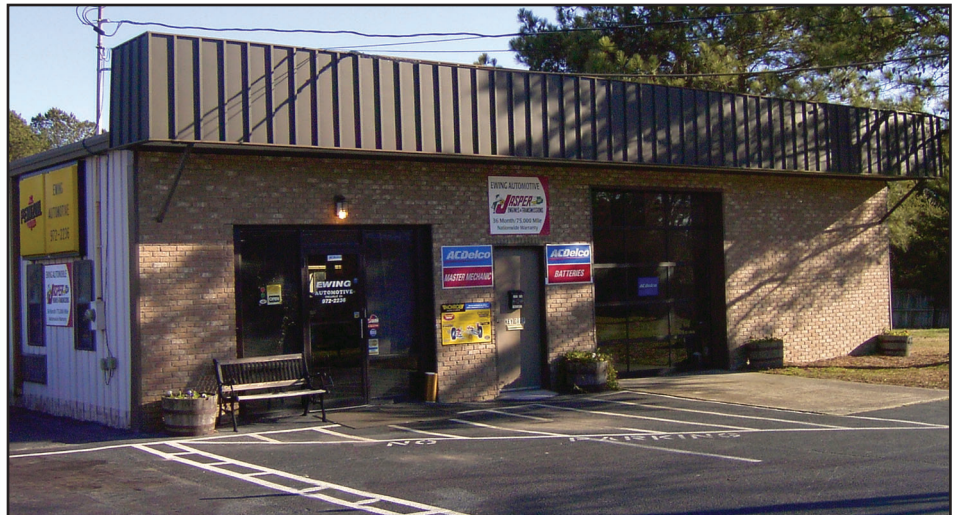
a doctor because the human body hasn't changed since the first one was created. We in the automotive field cannot stay the same. The automobile has, and will constantly change."

Ewing Automotive does a lot of in-house work instead of being just part changers. They do all of their own in-house certified cylinder head, surface lathe and mill port work. They also repair certain items on vehicles by repairing existing parts when possible.

"Ewing Automotive goes in-depth to repair vehicles that other shops couldn't because of the competitor's lack of knowledge," says Billy Ewing. "It takes years of experience to become a good mechanic, seeing and hearing different problems that you can't get in the classroom."

For the past three years, Ewing has been an installer of JASPER Remanufactured gas engines (with installation kits) transmissions and differentials. "JASPER's products are ready to install," says Billy. "They have an excellent, friendly staff of inside and outside personnel, and a warranty that you can depend on, especially when you need it."

The business philosophy at Ewing Automotive is a simple one: 'You're only as good as the work you do, and the products you sell.' "Customers are special because they picked Ewing Automotive," added Ewing. "They could have gone somewhere else but they chose to come to us."



Ewing Automotive in Snellville, Georgia, has been at this Lenora Church Road location since 1990, and is co-owned by former NHRA and IHRA Pro Stock driver Billy Ewing.

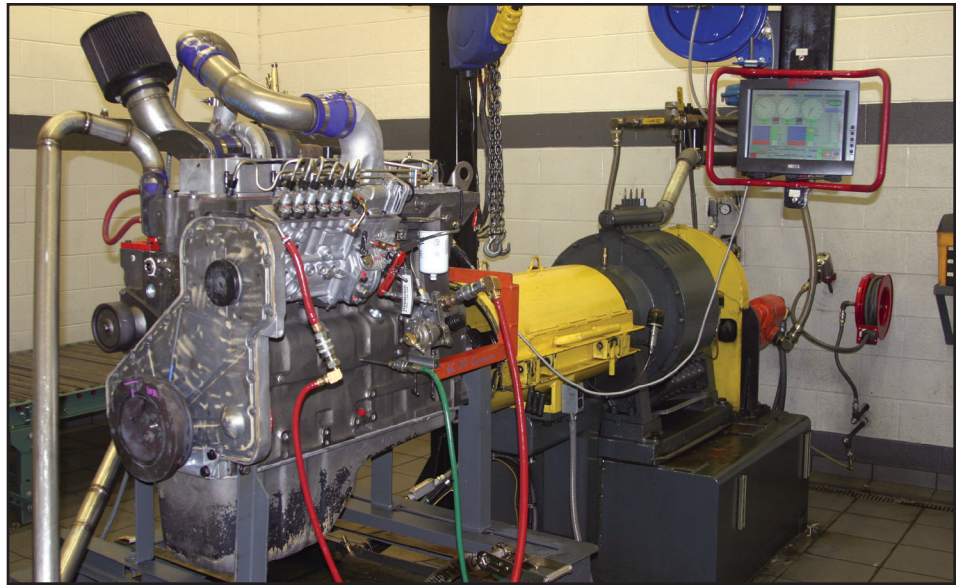
Diesel Dynamometer Testing

In 2005, JASPER started the installation of four new diesel engine dynamometers. Two of the rooms use water brake dynamometers, while the other two rooms have new eddy brake systems. Water brakes use water to create a resistance to the engine's movement, while eddy brakes use electricity. Eddy brakes have several advantages over water brakes, including less maintenance, quicker response, and smoother operation. Over the past year, JASPER has installed many sensors and program upgrades to all four dynamometer rooms to better determine how the engine and dynamometer are running. We also designed and installed a software program that automatically gathers and sorts all the information from each engine we test. Each engine's performance is compared to a standard for that engine type, and passes or fails the run test.

Each room has a computer that gathers information while the engine is running. It also controls the engine throttle and dynamometer load, and creates a display for the operator to monitor all operations of the dyno. Readings taken from the engine include cooling water temperature, oil temperature, engine RPM,



JASPER Associate Heath Eckerle pours over the numbers while the diesel engine undergoes dynamometer testing.



A Cummins diesel engine is checked out on one of JASPER's four dynamometer stands. This dynamometer uses a water brake to create the resistance.

torque, horsepower, smoke emissions, fuel pressure, oil pressure, turbo boost pressure, cooling water flow rate, dynamometer bearing temperatures, and engine and dynamometer vibration levels. Air temperature, air pressure and humidity are also monitored to constantly calculate SAE corrected horsepower readings.

Each engine tested on the dynamometers has a run profile. This profile tells the computer what RPM and horsepower the engine should be run at, and sets safety limits. The operator simply enters a 6-digit identification number, starts the engine, and begins the test. The computer takes over from there, automatically increasing RPM and horsepower levels. Most engines are run at 50 horsepower for 10 minutes, then at 100 horsepower for 10 minutes. The run finishes up with a full power pull, finding the maximum torque and horsepower output of the engine. If any safety limits are crossed, the operator receives a warning on the computer screen. If the problem is not corrected, the computer automatically shuts the engine down according to what the problem is. For example, if the cooling water is too hot, the engine is shut off, but an external pump continues to circulate the water to cool the engine. If an engine exceeds its RPM limit, the ignition power is shut off and

the dynamometer is fully loaded to stop the engine. The engine will also be shut down if there is insufficient water flow, or if it has unusually high vibration levels. There are over 200 different profiles with different run levels and safety limits.

When an engine is tested, the dynamometer program takes readings from each sensor every tenth of a second, then creates a spreadsheet containing all the information from the run. Each engine is run for about a half-hour, so each run file contains over 15,000 lines of data, 15 columns wide. That's more than 225,000 numbers. As you can imagine, it is difficult to look through this information and see how the engine performed, so a program designed by JASPER's computer department reads the spreadsheet and picks out the vital information. The program looks for maximum horsepower, engine speed at max horsepower, smoke emissions at max horsepower, oil pressure at max horsepower, oil pressure at idle, and fuel and turbo boost pressures. These numbers are automatically compared in the program to a standard for that engine type, and the engine is passed or failed. If the engine passes, it is sent to be painted and shipped. If the engine fails, the operator must determine what the problem is, correct it, and re-test the engine.

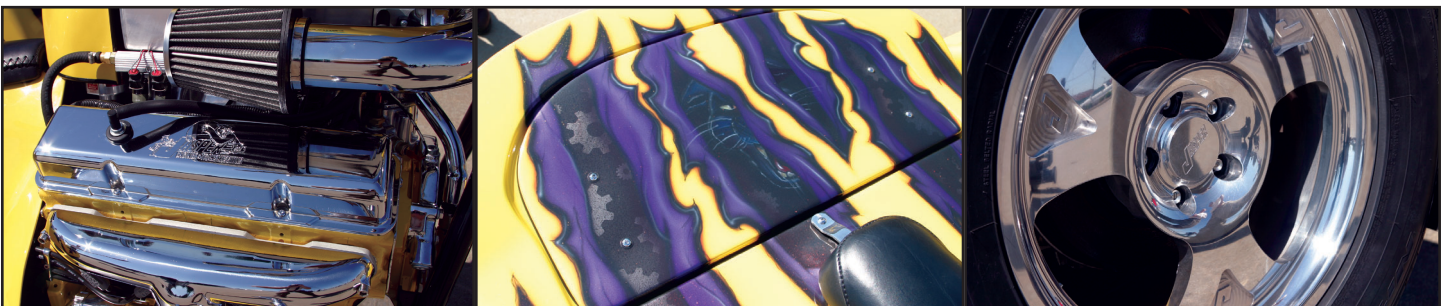
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team up with Jasper Engines & Transmissions,” said Warren Evans, a partner in Vendetta V-8 Motorcycles. “With their powerplant in our Vendetta V-8 we will set a new standard by which all other automotive-powered motorcycles will be judged. JASPER offers a 36-month, 75,000 mile warranty and with 7,700 service locations, we are providing customer service with a Vengeance.”



JASPER V-8 Theme Trike Specifications

- **Engine:** 300 hp 350 c.i. Small Block Chevy by Jasper Engines & Transmissions - the Exclusive Automotive V-8 Supplier to Vendetta
- **Frame:** Vendetta V-8 TIG-Welded Chrome Moly
- **Radiator:** Two-Core Rear Placement
- **Headers:** Vendetta V8 Insulated with Heat Shield
- **Exhaust:** Dual Glass Packs with Chrome Tips
- **Fuel Injection:** Holley Ram Stealth Multi-Port
- **Distributor:** Mallory Billet Distributor
- **Heads:** Cast Iron
- **Fan:** Electric
- **Water Pump:** Electric
- **Transmission:** Two-Speed with Reverse-Shorty Glide
- **Torque Converter:** 2,400 Stall
- **Brakes (Front):** Dual Disc
- **Brakes (Rear):** Disc-Automotive
- **Front Wheel:** 3.5-21"
- **Front Tire:** Avon 120/70-21
- **Rear Wheels:** 10.5-18"
- **Rear Tires:** Nitto 305/55R18
- **Suspension:** Air Ride Technologies Independent System with Dual Controls
- **Wheelbase:** 88"
- **Weight:** 1,500 lbs.
- **Seat:** Stock Aftermarket Softail - 25" Seat Height (approx.)
- **Fuel Capacity:** 11 US Gallons (est.)
- **Mileage:** 20 MPG
- **Red Line:** 5,800 rpm
- **Maximum Speed:** 136 mph



“Ryan Newman Night” Held at Hometown Track



On The Gas: Ryan Newman takes his first laps in the JASPER-sponsored #39 Mopar Bullet at South Bend Motor Speedway.

NASCAR NEXTEL Cup Series standout Ryan Newman, driver of the #12 Penske-JASPER powered Dodge, returned to his open-wheel racing roots for “Ryan Newman Night” at South Bend Motor Speedway in Indiana.

A crowd estimated at over 5,000 packed the stands of the tight, quarter-mile paved oval on June 14th, to watch their hometown hero participate in a United States Auto Club (USAC) Regional Midget Car Series event.

Newman was entered as the driver of the #39 Mopar-powered Bullet chassis, maintained by Keith Kunz Motorsports, with sponsorship from Jasper Engines & Transmissions and Mopar.

Newman started fifth in the 23-car, 30-lap feature, but could not advance in the opening laps, instead falling back to eighth. After several cautions early on, Newman was able to return to sixth, but

could not advance any additional positions, and slid back to eighth before the checkered flags flew.

Newman’s appearance at South Bend overshadowed a dramatic victory by Lafayette, Indiana’s, Brandon Wagner who won the feature race beating 16-year old Bryan Clausen to the stripe by less than a foot as the two cars raced side-by-side down the front straightaway on the final lap.

Newman did make his preliminary heat race exciting, however. After qualifying fourth out of 31 entries, he started sixth in the fourth heat and quickly picked off a pair of cars to take fourth. Then on Lap 4, with just enough room to fit two cars in the turn, Newman found enough room on the track to make it three-wide and squeeze past two others, almost taking the lead from Steve Thinnies at the exit of Turn 4. He settled for second behind Thinnies, one of four heat winners during the event.

It had been six years since Newman last turned laps in a midget in USAC competition. Prior to his stock car debut in 2000, Newman was a top driver in the three major USAC national divisions (Midget, Sprint and Silver Crown). His list of open-wheel achievements include the 1995 USAC Midget Series Rookie of the Year, and the 1996 Silver

Crown Series Rookie title. In 1999, Newman won the Silver Crown National Championship (known as the Silver Bullet Series at that time) and was the first driver to win at least one



Picture Time: Ryan Newman takes time for a picture, while the #39 receives service in the pit area of South Bend Motor Speedway.

race in all three major USAC divisions in the same season.

Newman plans to run additional USAC Regional Midget events in 2006.

Over Two Centuries of JASPER Experience in This Picture!



In a May 2006 Newsletter article, 60-year JASPER Associate Gervase Schwenk posed with brothers Dave and Fred Ernst. Between the three Associates, there was a combined 148 years of service to JASPER.

In this picture, Gervase poses with the five Wessel brothers, who have a combined 192 years of service to JASPER amongst them!

Standing left to right is: John Wessel (*Gas Engine - 48 years*), Bill Wessel (*R & D - 41 years*), Gervase Schwenk, Herb Wessel (*Diesel Assembly - 30 years*), Paul Wessel (*Service Dept. - 38 years*) and Charlie Wessel (*Diesel Parts - 35 years*). Add Gervase’s tenure to the Wessel brothers, and you have 252 YEARS of work experience! Associate longevity is the norm, and not the exception, here at Jasper Engines & Transmissions.

Deadline Draws Near for 2007 JASPER Calendar Contest

Is your vehicle calendar worthy? It's a question we pose to our readers each year. Well it's time once again for Jasper Engines & Transmissions to seek 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 2007 Calendar Contest. Photo categories are unique vehicles and performance oriented cars and trucks.

Entrants must submit a color photograph (35mm or larger) and information about the vehicle along with the JASPER product that has been installed. Vehicles should be placed in a "show" type setting when photographed. Polaroid pictures and low-resolution digital images transferred onto photo paper *cannot* be accepted. High-resolution digital images, 8 x 10 at 350 dpi are acceptable.

Every qualified entrant will receive a 1/24th scale diecast #12 car autographed by Ryan Newman. All entries will be judged based on adherence to the 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 \$100 gift certificate which can be used to purchase JASPER remanufactured products or wearable items, 24 complimentary calendars and a special JASPER Gift Package.

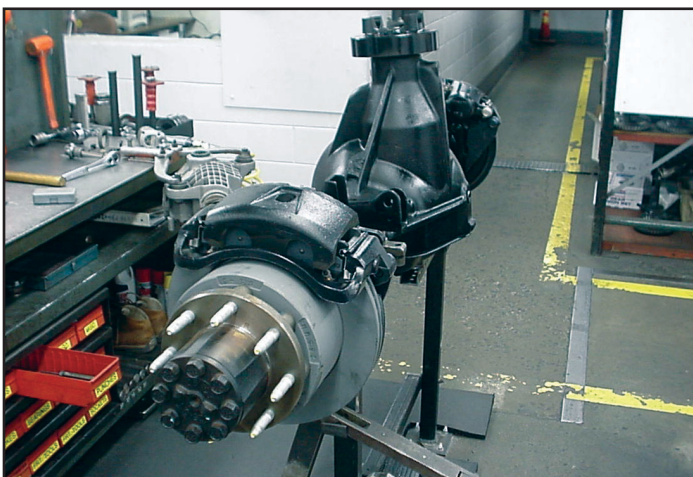
The entry deadline is September 30th, and is open to all JASPER customers, distributors and Associates. Entries should be mailed to:

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



Here is a sample of the vehicles featured in the 2006 Jasper Engines & Transmissions calendar. Send a picture of your JASPER vehicle (in a "show" type setting) to us no later than September 30th.

Complete Rear Axle Assemblies Available, While They Last!



For a limited time, Jasper Engines & Transmissions has available complete rear end differentials from American Axle Manufacturing.

These AAM differentials (*pictured at left*) have an 11.5" ring gear, and will fit 2001-2004 GM one-ton 2wd and 4wd trucks. The differentials are new with axle shafts and hubs, disc brakes, rotors, calipers and new brake pads.

There are several different housings available, so have your vehicle's VIN number ready when inquiring.

Standard differentials are priced at \$2,157.00. Limited slip differentials are priced at \$2,529.00.

Contact your JASPER Factory Representative for more information.

PowerMAX Spark Plug Wires and SAE Class F (SAE J2031)

Look at any PowerMAX Spark Plug Wire Set found in a JASPER installation kit, and you'll find "SAE Class F" printed on each wire. But what does it mean and why is it important?

The SAE Class F rating indicates that the cables used in PowerMAX wires have passed the full range of tests specified by the Society of Automotive Engineers (SAE) under Standard J2031, the standard for ignition cables. The letter classification denotes the severity of the test conditions. Class F comprises the most severe conditions and is the SAE's highest classification. The Class F rating means the wire has been subjected to, and passed, numerous tests, including the accelerated life test, which measures the cable's ability to withstand exposure to salt water, oil and fuel, as well as high and low temperatures. This testing is designed to make sure the wires can handle the cold of winter, the heat of summer and the chemicals found in confined engine compartments.

An important part of this test is the Thermal Overload Test. This test involves exposing PowerMAX wires to



SAE Class F is printed on each PowerMAX Spark Plug Wire. But why?

high temperatures, simulating as closely as possible an engine compartment on a hot summer day. To pass the SAE J2031 Thermal Overload Test and earn the Class F designation, the wire is exposed for an extended period to 250° C (482° F) heat and is then rotated on a mandrel to stress the wire and to check for defects. The wire must not show any signs of cracks, fractures or other failures. The resistance of the wire must also stay within a specified range to make sure it is still capable of delivering power.

Based on the results of the test, the wire is assigned a Class from A to F. Even though Class F is the highest SAE classification, PowerMAX engineers were not content with merely meeting this rigid standard. To further demon-

strate the superiority of PowerMAX over the competition, a "heat ramp" test was developed and validated by an independent third party. This test was designed to stress the cable by successively ramping up the temperature for an extended period, then wrapping the wire around a mandrel to check for signs of damage. Each time the wire passes, the temperature is increased, until the wire reaches it's maximum limit. In this testing, PowerMAX cable far exceeded the Class F temperature rating and achieved a "Best in Class" protection index rating vs. the competition.



Wallace Wins Rain-Soaked ARCA Kentucky Event



Steve Wallace has Penske-Jasper power under the hood of his #61 ARCA RE/MAX Series Dodge at Kentucky Speedway.

Not even Mother Nature could stop Steve Wallace from winning the ARCA RE/MAX Series event at Kentucky Speedway May 13th.

Wallace, in the Nu South Lemonade-Hantz Group, Penske-JASPER powered Dodge, withstood numerous rain delays, several periods of caution, and a hard-charging fellow rookie to win the Harley-Davidson of Cincinnati 150 by .229 seconds over Brewco Motorsports'

Brad Coleman.

Wallace, the 18 year old son of former NASCAR NEXTEL Cup Series champion Rusty Wallace, earned the pole position with a new track record for ARCA Series cars with a lap of 177.509 mph (30.421 seconds), scorching the previous record by 2.244 mph, or .390 of a second. Wallace went on to dominate the race, leading 63 of 103 laps on the rainy Kentucky day.

In fact, just about the only thing hotter than Wallace that weekend was his victory lane burnout, which left an actual trail of flames in the infield grass after some rubber he put down caught fire.

The race was lengthened by two laps to accommodate a green flag finish after a spin on the frontstretch on lap 96.

When the race resumed on lap 101, Coleman got within a half-length of Wallace's rear bumper, but could not find a way around the eventual winner.



He's in there somewhere: Steve Wallace's victory burnout caught fire after the ARCA RE/MAX event at Kentucky Speedway.

"We sat on the pole today," said Wallace. "We broke the track record and we won the race. A pretty good day."

Steve Wallace's Remaining 2006 ARCA RE/MAX Series Schedule

8/10 Michigan Speedway
10/6 Talladega Superspeedway
10/15 Iowa Speedway

Braid or Monofilament?

by Chad Morgenthaler, JASPER Fishing Team



Look for more fishing tips with Chad Morgenthaler and the JASPER Fishing Team in future Newsletter issues, and on the JASPER website: www.jasperengines.com.

A lot of anglers ask: “When do I use braided line over monofilament line?” The answer is: “Whenever the need arises.”

To better answer the question, I use Maxima’s Ultragreen monofilament (mono) line the majority of the time. Mono is very strong and abrasive-resistant and this is the main reason I like to use it. I think mono is best used when fishing around wood because it’s slick and tends not to get hung-up.

However, braid has its place, too. I use braided line in situations such as flipping into heavy vegetation matts with large weights. Braid doesn’t stretch and is unmatched in sensitivity and strength. Bottom line, braid will cut through vegetation where mono will not. I also prefer to use braid when making long casts with heavy blades and frogs.

Braid is a line that must be matched with the correct rod. If not, you will more than likely lose fish. Be patient because it will take practice to find the line/rod combination that works best for you.



www.jasperengines.com

e-mail: sales@jasperengines.com

815 Wernsing Road · P.O. Box 650 · Jasper, IN 47547-0650

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