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**JASPER Hosts National School Bus
Technician/Inspector Skills Challenge**

The National Association of Pupil Transportation (NAPT) held its seventh annual America's Best School Bus Inspector and School Bus Technician competition at the Jasper Facility.



(left to right) NAPT President Bill Tousley, NAPT America's Best School Bus Inspector winner Shaun Dennis from Traverse City, Michigan and Zonar Vice-President Don Carnahan.

The four-day event was held September 28th through October 1st. Top school bus technicians and inspectors from across the country competed to become America's Best Technician and America's Best Inspector.

"School bus maintenance is critical to the education system across the country. School Bus Technicians and Inspectors all over America take great pride in the roles they play to insure the safety of school children. Each year we look forward to meeting some of the best school bus technicians and inspectors this country has to offer," says Marshall Casey, America's Best Coordinator.

America's Best hopefuls participated in two separate competitions: one for technical diagnostic skills and one for vehicle inspections skills. Each of these individual competitions included a written examination and multiple "hands-on" components.

The exam covered technical aspects of various school bus components, including electrical systems, brakes, engines, suspensions, drive trains and body systems. All topics were relative to actual school bus applications. The examinations were administered by The National Institute for Automotive Service Excellence (ASE).

During the second portion of the competition, technicians had to demonstrate their ability to diagnose, troubleshoot and repair various mechanical components found on school buses. Inspectors rotated through stations requiring them to examine all vehicle components and systems to identify defects.

"Jasper Engines & Transmissions is pleased to have been chosen to host the 2010 America's Best competition," says Fred Ernst, JASPER Diesel Marketing Manager. "This gave us the opportunity to show our support for the NAPT organization and for their primary mission, which is the safety of the students they transport. JASPER is honored to have been asked to be a part of that mission."

(winners listed on page 3)



Tim Knoll of Milan, Ohio (pictured right), was the winner of the NAPT America's Best School Bus Technician competition. He stands next to NAPT President Bill Tousley.

Gordon's Auto Services

We return to Pennsylvania for this issue's Customer Profile. Gordon's Auto Services in New Brighton is a full service repair and service shop for foreign and domestic vehicles. Gordon's shop personnel has a combined 75 years of automotive experience. This combined experience adds to their expertise, through a team approach with their technicians.

Dick Gordon, Sr. founded his business in 1969, after working many years in his father's shop and local dealerships. The shop was well known for specializing in transmission and engine repairs. After his father's passing in 1984, Dick Gordon Jr. has continued the family tradition.

Gordon's Auto Services has remained at 4301 Marion Hill Road in New Brighton since its founding 41 years ago. With an addition constructed in 2004, Gordon's boasts nine service bays in 7,500 square feet of space. No job seems too big or too small, as Gordon's can accommodate vehicles weighing up to 20,000 pounds. "If we can get it in the door, we fix it," says Dick Jr. "We have repaired a vast array of vehicles, from classic cars to backhoes."

All five of Gordon's Auto Services technicians have earned their ASE certification. Dick Jr. himself is an ASE Master Technician. Gordon's furthers their technicians education through support from online courses, part suppliers and attending JASPER Technical Clinics.

Since 1979, Gordon's Auto Services has been an installer of JASPER quality remanufactured products, including gas and diesel engines and transmissions. "Because of the support of the company, and the quality of the product, JASPER does updates to the inherent flaws in many original equipment designs," says Dick Jr. "Many of the JASPER transmissions have an improved shift quality over the original units. We also have piece of mind knowing our customers can rely on the support of JASPER, anywhere, nationwide."

When it comes to business philosophy, Gordon's Auto Services strives to be a step above the competition. "We like to provide exceptional service, and maintain customer loyalty," says Dick, Jr. "We enjoy providing a friendly atmosphere, which customers appreciate."

Speaking of the customer, Gordon's thinks of their customers as friends. "Many of our customers are third-generation customers that have been doing business with us for years," said Dick Jr. "We tailor our services to each customer's wants and needs."

In light of vehicles becoming more technical, the future of Gordon's Auto Services requires itself to constantly update their equipment and training to maintain the customer's confidence in their ability to repair their vehicle.



The personnel at Gordon's Auto Services in New Brighton, Pennsylvania, have a combined 75 years of automotive experience.

(continued from front page)

Inspectors

1st - Shaun Dennis (Traverse City Area Schools, Traverse City, Michigan)

2nd - Steve Cox (Abbeville School Bus Shop, Abbeville, South Carolina)

3rd - Danny Reed (Beaufort County Schools, Washington, North Carolina)

Technicians

1st - Tim Knoll (Berlin-Milan Local Schools, Milan, Ohio)

2nd - Chuck Schneidt (Tippecanoe School Corp., Lafayette, Indiana)

3rd - Denver Foster (Fannin County Board of Education, Blue Ridge, Georgia)



(Top Image) Competitors in the 2010 "America's Best" National School Bus Skills Challenge pose for a group picture at the Jasper Facility. (Above Left) Inspectors were required to identify defects to school bus components and systems. (Above Right) Technicians had to demonstrate their ability to diagnose, troubleshoot and repair various mechanical components found on school buses.

JASPER Breaks Ground on Crawford Expansion

Jasper Engines and Transmissions broke ground September 8th on a 41,250 square foot expansion to its Crawford County Facility.

Upon its projected completion in March 2011, the Crawford facility will have increased in size to over 408,000 square feet, under roof.

The expansion will allow the space needed to merge Jasper Innovative Solutions with the company's Distribution operations for a more efficient flow of finished product, along with allowing both companies to grow.

"Over the past six months, we have added over 45 new jobs to our Crawford Operation," said Doug Bawel, JASPER President and CEO. "With this new expansion, we will add a minimum of ten additional jobs, along with room for needed growth."

The Crawford County facility is located approximately 40 miles east of Jasper. Originally constructed in 1998 for the purpose of core processing, the Crawford County facility has evolved into a complete remanufacturing opera-



JASPER's Crawford County facility undergoes a 41,250 square foot expansion to merge Jasper Innovative Solutions with the company's Distribution operations. The site undergoes preparation and the walls are getting ready for concrete.

tion in the disassembly, machining, assembly and testing of gas engines, transmissions, transfer cases and select manual transmissions.

JASPER's Product Distribution Center opened at Crawford County in 2000. Nearly 600 JASPER remanufactured products are shipped from the Distribution Center each day to a network of 40 branch locations throughout the United States. The Distribution

Center is also the primary location for the unloading, tagging and identification of cores and miscellaneous product from the branch locations.

Jasper Innovative Solutions, a sister company to JASPER, moved to the Crawford County facility in 2008. JIS is a supplier of vehicle parts to the United States Postal Service Vehicle Maintenance Facilities and other fleets throughout the United States.

MAF Sensor Cleaning or Replacement... Which Is Better?

by Jim Davenport, JASPER National Technician Instructor

Jim Davenport

has over 40 years experience in the automotive industry. During that time, Jim graduated from Vocational Technical College in Maryland



majoring in Automotive Technology. He has been an ASE-Certified Master Technician since 1973. Jim has been a Parts and Service Manager of many different vehicle makes. He has been an Independent Auto Repair Claims Inspector, and Better Business Bureau Field Inspector. Jim has been with JASPER as a National Technician Instructor for nine years and is a member of the North America Council of Automotive Teachers.

For many years technicians have always cleaned the mass air flow (MAF) sensors. This was mainly done for two reasons: 1) we wanted an instant fix for the vehicle, and 2) cleaning the sensor was a quick solution. Now Ford is indicating to technicians not to clean the MAF but to replace the sensor instead. We always figured the company just wanted to sell parts.

Now the MAF sensor has a bigger responsibility to the vehicle than we let on. For example, MAF sensors are used to monitor the air entering the engine. The data from the MAF is necessary for the engine control unit to balance, and deliver, the correct amount of fuel to the engine. Air changes its density as it expands and contracts with temperature and pressure. It's the MAF sensor's duty to send the signal to the ECU to lean out, or richen, the fuel mixture.

Now, when the MAF sensor



The Mass Air Flow, or MAF, sensor. This one comes from the intake of a GM Vortec V8.

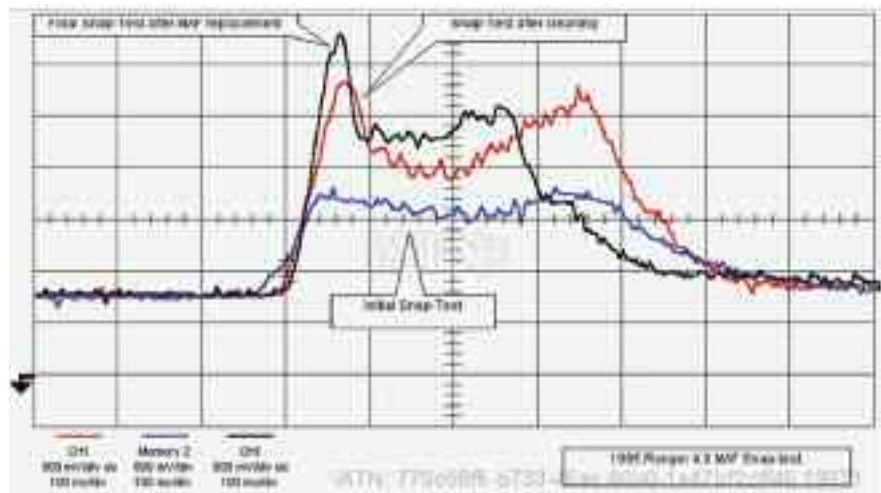
becomes contaminated with dirt, it will lean out the fuel mixture. In both cases, we are destroying the engine. One of things I talk about in being a good detective is, "why did the engine fail?" One cause is the MAF sensor.

How do you test this component? Well, one way is to scan data with either grams per second or voltage. My personal preference is grams per second. First, I gather the scan data of a good vehicle and compare that data with the vehicle in question. This data is taken under load and also, under idle conditions. Better yet, the MAF sensor can be checked with a lab scope.

The graph below shows a lab scope

image from a 1995 Ford Ranger 4.0 liter six-cylinder engine. Each of the three lab scope readings were taken under load. The blue line shows the findings of a contaminated MAF sensor. The red line is the results of a MAF sensor that was cleaned and reused. Finally, the black line is the reading from a MAF sensor that was replaced. We found that the replacement MAF sensor was the better solution and provided more power to the engine.

If you have any thoughts on these and other subjects, please email me at: jdavenport@jasperengines.com.



The black line on this graph is the reading of a replacement mass air flow sensor. It's the best solution to providing more power to the engine, compared to cleaning and reusing the MAF sensor (red line). Graph courtesy of iATN.

Crawford Facility Receives VPP Merit Certification

The Indiana Department of Labor has announced the Merit Certification of Jasper Engines and Transmissions' Crawford County facility in Indiana's Voluntary Protection Program (VPP).

VPP, Indiana's Voluntary Protection Program, was established to recognize and promote safety and health management programs throughout the state. All companies, regardless of size or business, can participate in VPP - where management and employees work together to create and maintain a healthy working environment.

The Crawford County facility is the second of JASPER's remanufacturing facilities to achieve VPP status, and is one of only 56 Indiana companies to reach this level. The Jasper, Indiana, remanufacturing facility earned its Merit Certification in 2008.

"It is always gratifying to witness companies that proactively address and manage workplace safety and health," commented Commissioner of Labor Lori Torres. "The Department of Labor is pleased to partner with and congratulate Jasper Engines and Transmissions for achieving VPP Merit status."

"The JASPER Safety Committee and Associates have been working on this program, and its benchmarks, for four years," says Jason Pieper, JASPER Safety Director. "We understand we still have a lot of work to do, but we have now created more awareness, more Associate involvement and made sure JASPER has Safety Systems in place."

The VPP Merit Certification ceremony was held September 24th at the Crawford County facility. The ceremony provided an opportunity for JASPER Associates, staff and management to showcase their exemplary status to state officials and local elected officials.

JASPER has been successful in reducing the number of OSHA recordable injuries and illnesses by 30% in a three-year span. "VPP sites are demonstrated leaders in the occupational safety and health arena," added Torres. "The reduction of recordable injuries and illnesses at JASPER is proof positive in how successful implementation of a



Associates of JASPER's Safety and Executive Committees proudly display their Indiana Merit Certification with Indiana Department of Labor Commissioner, Lori Torres.

safety and health management system has an impact on not only injury and illness rates, but also on employee satisfaction and morale."

"Management commitment and Associate involvement are the two main

components of the VPP program," added Pieper. "JASPER has both these elements, which has improved our safety program. JASPER's goal is to have all of our remanufacturing sites in the VPP program".

Getting It Right!

Can you tell the difference between a 6.0L International and a 6.6L Duramax? Apparently, the Editor of this Newsletter can't.

An article appeared in the October 2010 Newsletter, touting JASPER's availability of the 6.6L Duramax Running Complete diesel engine. Unfortunately, the image accompanying that article was a 6.0L International (*above right*). OOPS! The correct image of a 6.6L Duramax (*below right*) should have been used. The wrong image was simply picked out of the computer file without careful examination.

JASPER apologizes for the mistake. We'll make sure the Editor takes a closer look next time.



Our Editor can't tell the difference between a 6.0L International (*above*) and a 6.6L Duramax (*below*).



JASPER & AAM... Working Together to Provide Market-Competitive, Quality Parts

Jasper Engines & Transmissions prides itself on using quality parts and components. For the remanufacture of axles, American Axle & Manufacturing (AAM) is a key supplier for authentic original equipment parts that include a variety of gears and axle components.

In today's business environment, selecting suppliers depends on a number of critical criteria. AAM provides solutions to many remanufacturers' performance concerns, including: Cost, Durability, Quietness and Reliability.

AAM utilizes advanced manufacturing techniques to exceed the normal performance parameters expected by OEMs. One such process is a two-cut versus five-cut manufacturing process used for ring and pinion gear sets. Ring and pinion sets are often the cause for vibration, noise and durability problems in axles. A new technology developed by AAM can produce ring and pinion sets that are stronger, more durable and more quiet at a market-competitive cost.

A two-cut process uses no machining oil, compared to conventional gear cutting, making it more environmentally friendly. The two-cut process produces a better performing gear that reduces noise and vibration and increases durability.



It improves the tightness of tolerances, therefore allowing for tighter backlash specifications.

AAM cuts ring gears and pinions in one operation, thereby reducing costs. In the manufacturing process, the two components are lapped together after hardening, producing a quiet gear set. Tooth height is measured from root of the gear to the crown. The two-cut tooth is the same height at the toe of the gear, as it is at the heel. This creates a natural "bias" condition, where the pattern shows up slanted when the pattern is rolled with a gear marking compound. This pattern will show more gear mating and less backlash than a conventional five-cut gear.

AAM gear sets are subject to precision shot peening to extend their life. In this process, spherical shot is bombarded to the root of the gear teeth, resulting in comprehensive stresses to combat fatigue loading. Shot peening increases the durability and reliability of the parts.

JASPER chooses to use AAM components for its axle remanufacturing, because AAM provides the same part quality found in the original vehicle products. JASPER and AAM are working hard to provide you, the installing technician, with high-quality products at market-competitive pricing.

We Have Our Calendar Winners for 2011



1951 Chevy 3100 Truck owned by Craig & Tammy Mortenson of North Branch, Minnesota.



1964 Ford Galaxie owned by Anthony DeGregorio of Bridgeton, New Jersey.

You have come through again! We had lots of great entries submitted, and the winning photographs have been selected to grace the pages of the 2011 Jasper Engines & Transmissions calendar.

All of the entries received this year were judged on adherence to the category, equipment appearance and the quality of the photograph or image.

Every qualified entrant received a Jasper Engines & Transmissions hat. All entrants whose work appears in the calendar receives 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.

Congratulations to all our winners!

Craig & Tammy Mortenson North Branch, Minnesota 1951 Chevy 3100 Truck	Zack Hollenbeck Muscatine, Iowa 1967 Ford Mustang Fastback
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Anthony DeGregorio Bridgeton, New Jersey 1964 Ford Galaxie	Bruce Howard Florence, Alabama 1962 Chevy Truck
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Cecil & Julia McKay DeWitt, Michigan 1960 Ford Thunderbird	Mark Cameron San Lorenzo, California 1949 Ford Custom
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Rick & Amy Nelson Elkhorn, Wisconsin 1978 Pontiac Trans Am	David Jackson Winchester, Tennessee 1968 Dodge Charger
--	--

Randy Tschida St. Augusta, Minnesota 1973 Chevy Corvette	Don & Karen Greenlee The Villages, Florida 1929 Ford Model A Coupe
--	--

Jesse Green, Jr. Troy, Missouri 1971 Chevy Chevelle SS	Doug Winnie Los Angeles, California 1963 Chevy Corvette Split Window
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Gerry & Lars Lindeqvist
Baldwinsville, New York
1968 Chevy Malibu



1973 Chevy Corvette owned by Randy Tschida of St. Augusta, Minnesota.



1968 Chevy Malibu owned by Gerry & Lars Lindeqvist of Baldwinsville, New York.



1967 Ford Mustang Fastback owned by Zack Hollenbeck of Muscatine, Iowa.

REMINDER!!! The deadline for 2012 Calendar entries is August 1st. Questions and/or vehicle images can sent to Roxanne Sherman at rsherman@jasperengines.com.

Crossfire Protective Sunglasses from JASPER



JET8001

MP7 Polarized Blue/Green Lens,
with Crystal Black Frame



JET8002

RPG Polarized Blue Mirror Lens
with Matte Black Frame



JET8003

ES5 Polarized Brown Lens
with Crystal Brown Frame

Crossfire Safety Eyewear is an industry leader in designing and manufacturing ANSI Z87.1 - 2003 Certified Safety Eyewear. Their approach to design affords the end user a seamless link between the latest in style and cutting edge technology. Crossfire provides safety eyewear and styles that are directly aligned with the needs of our military, police, industrial workforce, and extreme sporting conditions. All styles are identified with JASPER and include a micro-fiber bag and padded case.

All styles \$53.00



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