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JASPER Discourages Diesel Pump PMD Relocation Practices

Jasper Engines & Transmissions is aware of several aftermarket relocation and heat exchanging devices being marketed with claims that they decrease the operating temperature of the Stanadyne DS Pump Mounted Driver (PMD), improving its reliability.

These devices often involve modifications to be made to the wiring harness between the engine and the injection pump. The PMD is located on the side of the injection pump in an effort to dissipate the tremendous amount of heat it creates during operation. The fuel passing through the injection pump helps to dissipate that heat efficiently and consistently during all engine conditions. Other methods of cooling cannot maintain this consistency throughout all conditions that may be encountered.

Another issue that arises from the relocation of the PMD concerns the wiring harness. By moving the PMD, the harness may be

extended, spliced into, or stretched to make the necessary connections. This causes numerous problems from added circuit resistance, poor connections, and voltage drops across splices. These can cause symptoms that lead technicians to replace the injection pump, or the PMD, unnecessarily. Symptoms like hot stall, no start, and fuel control solenoid DTC's are all commonly diagnosed as a failed PMD or Injection Pump, and in many cases are simply circuit-related issues.

Each diesel injection pump JASPER sells is coated with a sealing lacquer in the critical areas, including the PMD and the harness. JASPER has spent several years monitoring DS injection pumps that have been returned from the field after being diagnosed as defective. We have determined that relocation and aftermarket heat exchangers are not beneficial to the life of the PMD, or the reliability of the injection pump, as a whole.



(Above left) Relocating the PMD could cause circuit-related issues as the wiring harness is extended, spliced into or stretched. (Above right) Aftermarket heat exchangers are not beneficial to the life of the PMD or the reliability of the injection pump as a whole.

Customer Profile

Bourquin Automotive

Bourquin Automotive is located in Castroville, Texas, a short drive west of San Antonio. Bourquin is a family-owned, full-service auto repair facility and a NAPA auto parts store.

Brothers, Robert and Keith Schneider, took over the business in 1983 from their grandparents, Hugo and Adline Bourquin, after their grandfather became ill. The business was incorporated in August 1989, and became a NAPA AutoCare Center three years later.

There have been many changes made to the business since the Schneider brothers took over in 1983. The building was added to from all sides. Equipment and computers were upgraded to stay current with the newest vehicles. In the fall of 2004, Robert and Keith took their grandfather's dream and brought a NAPA Auto Parts Store to Castroville. This instigated additional building changes. A large area was added for inventory storage, counters were added, the air conditioning was brought up to date, and a waiting room for the service area and a showroom for parts was added.

Today, Bourquin Automotive is a 6,000 square foot facility located at 118 FM 471 North in Castroville. There are ten service bays, along with a 400-square foot customer service area, with over half a million of inventory in hard parts. Of the ten people employed at Bourquin Automotive, five are ASE-Certified in: Parts Specialist, Engine Repair, Automatic Transmission/ Transaxle, Manual Drivetrain and Axles, Suspension and

Steering, Brakes, Electrical/Electronic Systems, Heating and Air Conditioning and Engine Performance.

Bourquin Automotive provides services for agricultural needs, tires and exhaust and diesel engine replacement. They have been recognized as a AAA Repair Shop for the past five years. Each vehicle Bourquin repairs undergoes an intense quality check before it is delivered to the customer. A shuttle service is also provided.

Bourquin Automotive has installed JASPER remanufactured gas and diesel engines, transmissions and differentials since 2004. Their reasons are twofold: the quality put into the product and the nationwide warranty.

"Customers nowadays are looking for a warranty, due to the fact they're hanging onto their vehicles for a longer period of time," says Robert Schneider. "We have never been about the price. We are always looking for quality of the product."

With 90% of their business coming from repeat customers, the Schneiders feel their clientele relies on and totally trusts Bourquin Automotive to get their vehicles back on the road.

As to the future of their business, Bourquin Automotive intends to keep adapting to change as the automotive aftermarket evolves. The Schneiders embrace change and will make it easy for their customers to do business with them in the future.



Bourquin Automotive in Castroville, Texas, is a full-service auto repair facility.

JASPER Offers GM 3.5L V6

Jasper Engines & Transmissions, the leader in remanufactured drivetrain products, has added the following late-model GM engine to its remanufactured gas engine line-up.

The GM 3.5L OHV V6 is available, on exchange, for the following 2006-2010 vehicles:

- Chevy Malibu
- Chevy Impala
- Chevy Monte Carlo
- Pontiac G6
- Saturn Aura
- Saturn Vue



Every JASPER remanufactured engine is subjected to strict, high-quality processes...

- Disassembly, meticulous inspection and cleaning of components.
- Moving parts machined, or replaced, for reliable performance.
- Head surfaces statistically monitored to assure proper sealing with the block.
- JASPER's research and product development ensures inherent problems in OEM design are corrected.
- Live-Run Testing provides peace of mind and assures reliability.
- An available Premium Service Plan that offers customers even greater value.

Each engine is covered by JASPER's 3-Year/100,000 mile nationwide transferable parts and labor warranty. Full warranty disclosure is available on our website, or upon request.

Call for JASPER 2012 Calendar Entries



The Jasper Engines & Transmissions 2011 calendar is out. We had some great entries sent to us, and a big "Thank You" goes out to everyone that submitted their images.

We're in the preliminary stages for our 2012 calendar. Do you or your customer have a vehicle that's calendar worthy? Why not send in your entry? The deadline is August 1st.

Entrants must submit a color photograph (35mm or larger) and information about their unique vehicle, or performance car or truck, along with the JASPER remanufactured product that has been

installed. Vehicles should be placed in a "show" type setting. 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 preferred.

All entries will be judged based on adherence to the category, equipment appearance and the quality of the photograph. Entries should be mailed to:

Jasper Engines & Transmissions
P.O. Box 650
Jasper, IN 47547-0650
Attn: Roxanne Sherman

JASPER Upgrades Boost Valve Spring Retaining Clip in Dodge Transmissions



(Above left) This little clip holds the boost valve spring in place on the valve body. (Above right) The clip is made of stamped steel and will break at one of the weak bend points.

Have there been times when a Dodge truck comes to your shop with no forward or reverse movement? If so, that problem could be caused by the boost valve spring retaining clip found in the valve body.

"This little clip is made from stamped steel and has a weak point in the bends," says Craig Leuck, JASPER Transmission Division Manager. "Over

time, the clip will break at one of the weak points. This allows the boost valve to move out of the valve body, losing all line pressure to the transmission."

JASPER installs a thicker boost valve spring retaining clip in all Dodge valve bodies to compensate for the weak points found in the original clip.

Tech Assistance

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.

If you have ever been to one of my technical classes, I always talk about being a good detective; finding why an automobile is not working correctly. But in many situations, it's easier said than done. That is why we need help with how to properly use equipment, obtaining the right information (that's the biggest one for me) and the know-how to do the job.

Not every technician knows all the ins and outs of every automobile or truck on the road, but shops and customers expect technicians to have all that knowledge and expertise in their head. Many shops will practically repair anything from a lawn mower to a tractor trailer.

Today, shops I know do a little research first before they attack a difficult job. They want to see how something works and then how to properly repair it. So where do you get this information? There are companies like Mitchell1, ALLDATA, IDENTIFIX and NAPA Autotech e-Learning, as well as many outside technical classes, which all provide valuable technical information.

Now having subscribed to all this technical information, and attending outside classes, do we add these costs to a repair order? In my opinion, I think we should, but our customers would not understand. Are there other means to get repair information, technical service information and wiring diagrams? The Internet is a great source... go figure. I remember when we only had these huge technical manuals to look through. Other technicians in our shop had access to them too. We were lucky to find the information, as long as none of the pages were missing, or grease marks made the page you needed hard to read.

I have been an instructor for JASPER for over nine years and that does not mean I know everything, because I don't. I still do a lot of research today, learning about new systems and how they operate before I can fix them. One resource I use is the JASPER Technical Assistance Hotline. The Associates there do a great job on helping out with technical questions dealing with drivetrain issues and also on JASPER warranty issues.

A Strive to Thrive Testimonial

The benefits of a customer waiting area outweighed the expense of creating it. For a minimal cost, we created a clean, comfortable waiting area for our customers. We no longer worry about the liability issues associated with allowing people and their children in our service bays. Not only is this more convenient, it allows our technicians to be more productive. Our customers have a place to sit, watch television, or read the paper while waiting for their vehicles.

In the short time since we've had the waiting area, our sales have increased approximately 10%. Our customer base has increased in the 18 to 25 age bracket, which we credit with the more professional look the waiting area has created. We consider this small expense an investment in our growth. In the near future, we hope to add wireless Internet capabilities for our customers, thus, making us a true "hot-spot" for vehicle services.

We kept the costs low by bartering with some of our customers who specialize in electrical work and other areas. For example, we obtained our carpet, chairs, and tables, from one of the local hotel chains. Our cost was replacing the brakes on the owner's personal vehicle. Our electrical work was traded for chassis work on the electrician's truck. The granite counters and cabinet work were traded for work on the rear end of another truck. The heat and air conditioning was donated, along with a new security door. The actual dollar amount for the project was approximately \$2,500.

The Strive to Thrive Presentation by Doug Bawel encouraged us to start looking at our business practices and being honest with ourselves about how our customers perceive our business, and continue striving to improve our business. Thanks, Doug.

John Smith & Blair Hoffman, Owners
Atlantic Automotive
Chesapeake, Virginia



The small expense in creating this waiting room at Atlantic Automotive was an investment in the shop's continual growth.

Trends That Look Great for Automotive Repair

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 was later named General Sales Manager in 1991 and was named Vice President of Sales in 2001.



able used cars out of the market for needed repairs. What it also did was help increase the value of used cars by more than 10% in 2010. With this increase in used car values, it is easier for consumers to justify investing in major repairs for their vehicles.

New vehicle sales were up in 2010, but they are still off over 30% from 5-10 years ago, when in the U.S. we were selling over 16 million vehicles a year. In 2010, 11.5 million vehicles were sold and almost 6 million were light duty trucks and SUV's. These are the vehicles that hold resale values much better than cars and, again, make it easier to justify investing in a vehicle. Remember, just a few years ago, consumers would run out and buy a new car instead of investing in their current vehicle. Many consumers are tired of the new car payment or cannot get financing, so they are willing to invest in their vehicle.

Many new vehicles, today, have very similar styling and this also benefits the repair industry. With a four to six year old vehicle looking very similar to the new models today, it is not motivating consumers to go get a new vehicle. No need to "Keep up with the Joneses" when the six-year old vehicle you are driving looks very similar to the new vehicle someone else may be driving. Over the last 18 months, we have seen the average age of the vehi-

cles we sell engines and transmissions for increasing, a sign consumers are investing in their older vehicles.

The repair business has changed and if you are not getting your share of the increased business, I challenge you to look for opportunities to change your business plan and grow your business in 2011.

About ten years ago, Bill Gates stated, "In the future, business will be done at the speed of thought." Once again, his prediction was correct. Many shops have reported that e-mailing or texting estimates to customers has increased the rate at which they receive work authorization. This has substantially improved their shop's productivity. If you haven't joined the age of instant communication, now may be the time. Ask your customer how they prefer to receive information about the status of their repair. Attach a document to an e-mail for a quote, and get a shop cell phone that will allow your service writers to text the younger generation with the estimate. You will be surprised at how fast the "OK, when will it be done" is texted back to you. Business at the speed of thought... make the most of it.

Make it a Great 2011.

How do you feel about the future of the automotive repair business? Many of us still have the memory of the poor economy in 2008-2009 burned in our minds. Well, that has changed.

Just this week, I spoke with a customer who said "I am pulling my hair out, I have so much work right now." I challenge you to look at some of the recent trends that paint a much different picture, moving forward.

We all know the bad side of the "Cash for Clunkers", which took many afford-

JASPER Acquires Canam Marketing

The Jasper Engine & Transmission Exchange Employee Stock Ownership Program (ESOP) has acquired Canam Marketing Corporation. Canam Marketing will be operated by JASPER's sister company, Jasper Innovative Solutions, as the company strives to increase its presence in the United States Postal Service parts market.

Canam Marketing provides vehicle maintenance parts and supplies for LLV, FFV, Windstar, Uplander and other USPS delivery vehicles. Canam Marketing provides product distribution from its Milwaukee, Wisconsin, office, with sales offices in Milwaukee and Las Vegas, Nevada.

"The acquisition of Canam Marketing will be a great addition to JIS," says Luke Bawel, JASPER Innovative Solutions General Manager. "Canam's strength in new product development and dedicated



workforce, coupled with JIS's customer service, ordering system, inventory levels, and Transit company will be a winning combination."

"We see great quality and value in Canam products," added Bawel. "With this acquisition we will be able to allow customers the convenience of ordering through one system, the availability of ramped up inventory, and on time delivery! We are very excited with this new growth!"

Canam Marketing will continue to operate as a separate company initially and, over time, will be merged into JIS.

The Canam name will remain for branding purposes and name recognition in the marketplace.

Jasper Innovative Solutions is a supplier of vehicle parts to USPS Vehicle Maintenance Facilities and other fleets throughout the United States. JIS sales offices are located in Bristol, Pennsylvania with distribution facilities in Leavenworth, Indiana.

For more information on the quality products of Jasper Innovative Solutions, call 800-752-1700 or www.jasperis.com.

Jeep Grand Cherokee IFS Differential... We Take The Work Out Of Remanufacturing

The Differential Division of Jasper Engines & Transmissions tackles the job of remanufacturing the Jeep Grand Cherokee independent front suspension differential, from model years 2005 and up.

Prior to 2005, Dana Corporation was the main source of drivetrain components in many Jeep products. In 2005, Jeep made a design change from a solid front axle to an independent front suspension.

“Jeep uses two hefty snap rings to adjust carrier bearing pre-load and backlash”, says Wayne Mehringer, JASPER Differential Division Manager. The snap ring in Figure 1 measured .174 thick! It requires a modified pair of retaining ring pliers to keep the ring compressed for installation. “A pinion depth shim located under the pinion bearing cup is also much thicker than the ones used in previous applications, said Mehringer.” The shim in Figure 2 measured .213 thick.

In order to properly adjust this version of the Jeep Grand Cherokee front differential, JASPER stocks 98 different-sized snap rings and 75 different-sized pinion depth shims. Each component varies in thickness in .001 increments. “JASPER must keep these components in stock to properly set these units to original equipment specifications,” added Mehringer.

So, when a Grand Cherokee comes to your shop needing an independent front suspension differential, give JASPER a call. Each differential is covered by JASPER’s 3-Year/100,000 mile nationwide transferable parts and labor warranty. Full warranty disclosure is available on our website or upon request.



Figure 1: It takes a modified pair of retaining clip pliers to compress the .174 thick ring for installation into the Jeep Grand Cherokee front differential. JASPER stocks 98 different-sized snap rings of varying thicknesses in .001 increments.



Figure 2: This pinion depth shim measures .213 thick. JASPER keeps 75 different-sized pinion depth shims of varying thicknesses in .001 increments.

JASPER Used at Local Track

Five years ago, I sold a JASPER engine to a friend of mine for his race car he runs on a local dirt track. I'm not sure of the exact date, but it was a 350 chevy engine. It was one of the first engines I ever bought from JASPER.

My friend runs in a Pure Stock class. Several local mechanics told him that the JASPER engine would be completely worn out at the end of each season, and may not even stay together at all. Well, they were wrong!

That engine is still running strong and has never had a wrench put on it. Every time I have seen the car run, it looks strong and pulls hard down the straightaways.

By the way, the JASPER engine is in its third car body... The other two bodies were worn out, beat up and unusable. Don't you just love a good success story. It kind a brings a tear to your eye.

Give the folks on the floor a high five for us!!! Thank you for making me look good in front of my customers.

Chuck Coats
Chuck Coats Automotive
Gulfport, Mississippi

Winter Weather Was Hard on Vehicles. Repower, Not Replace!

from the Engine Repower Council

Some of the worst winter weather seen in years had a destructive impact on a vehicle's engine. Hard starts, sub-zero temperatures and improper fluid levels, or usage, can shorten the life of a vehicle by damaging its engine. Many motorists may think their only option is to purchase a new vehicle. Not so, says the Engine Repower Council.

"Many people love the way their car looks and handles, but as a result of the severe winter weather seen by most of the country, many vehicle owners may experience engine trouble," said Ken Carter, chairman of the Engine Repower Council. "However, a damaged engine doesn't have to be the end of the car you love. Repowering your current engine is a sensible option, extending vehicle life and saving the cost of a new vehicle.

"Engine repowering makes economic sense. For the cost of an average down payment on a new car or truck, you can repower your current vehicle, gaining years of reliable service - all without monthly car payments and higher insurance rates."

With repowering, a vehicle's engine, or an identical one from another like-vehicle, is completely disassembled, cleaned, machined and remanufactured/rebuilt. Unlike used or junkyard engines with an unknown performance and maintenance history, repowered engines are dependable, reliable and backed by excellent warranty programs. In addition to its financial benefits, remanufactured/rebuilt engines also save the tremendous amount of energy used in processing discarded engines and vehicles. Repowering your engine also saves an incredible amount of raw materials that would have been used in building a new engine.

"A damaged engine doesn't have to be the end of the road for your beloved vehicle," continued Carter. "Repowering your engine is both an economically and environmentally sound decision."

Ford 4R70W Valve Body Update

Jasper Engines & Transmissions has made an update to the valve body of the Ford 4R70W transmission produced after 2001.

This update centers around the installation of a reinforcement plate where the forward clutch and direct clutch circuits meet. This allows extra clamping force between the separator plate and the gasket.

Initial problems would include the 4R70W slipping in third and fourth gear, which lead to the burnout and failure of the direct clutch. "What we found was that a reinforcement plate was eliminated on valve bodies produced after 2001," says Mark Balsmeyer, JASPER's Crawford County Transmission Manager. "This caused a lack of clamping capability between the separator plate and gasket. The gasket would blow out, allow fluid to leak into another chamber and apply the direct clutch when it wasn't supposed to."

At JASPER, we drill and tap the valve body to accommodate the reinforcement plate, securing the separator plate to the gasket and eliminating the possibility of gasket failure in the affected area.

The remanufactured 4R70W transmission is covered by JASPER's three-year, 100,000 mile nationwide transferable warranty. For more information on this and other remanufactured products of Jasper Engines & Transmissions, please call 800-827-7455, or log onto www.jasperengines.com.



This is the location JASPER will drill and tap to accommodate the reinforcement plate, reducing the possibility of gasket failure.

JASPER's Reverse Servo Cover Update

Jasper Engines & Transmissions has made an update to the reverse servo of Ford 4R55E/ 5R55E transmissions produced between 1995 and 2008.

This update centers around the installation of a support plate over the reverse servo cover of 4R55E/5R55E transmissions found in the Ford Ranger Pickup, Explorer SUV and the Aerostar Minivan. Drivers noticed the loss of reverse in these vehicles. The problem centered around the reverse servo gasket of the transmissions.

The gasket lays underneath the reverse servo cover. "These OE gaskets handle in excess of 250 psi when in use," says Craig Leuck, JASPER Transmission Division Manager. "We have found that aftermarket gaskets can hold about 425 psi. But, we also know these transmissions will see pressures in excess of that."

"JASPER's Reverse Servo support plate allows the servo to handle in excess of 600 psi, well above what the servo will see, to make sure these transmissions can maintain reverse," added Leuck.



This support plate, mounted over the reverse servo cover of the Ford 4R55E/5R55E, allows the transmission to maintain reverse in 1995-2008 Ranger, Explorer and Aerostar.



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