# **K-TECH NEWS**

**FALL 1997** 

THE KAWASAKI TECHNICAL MAGAZINE

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ROUTE LIST SERVICE PARTS SALES

# ZX-6R and ZX-9R—Less Weight, More Thrilling

by John Griffin Instructional Designer/Instructor

Kawasaki has new technology up its sleeve for 1998. A new ZX-6R and ZX-9R head the list of vastly improved motorcycles. The new ZX-9R is 77 pounds lighter than the '97 model and the ZX-6R drops 13 pounds from an already lightweight package. New chassis are smaller for quicker cornering. A completely new ZX-9R engine and revised ZX-6R power plant offer even more power. New technology includes a throttle position sensor tied to the ignition and a catalytic converter system for California models. The kinship between the ZX-6R and ZX-9R is clear, with similar layouts and many shared components.

### ZX-9R Engine

The ZX-9R engine weighs 20 pounds less and pumps out four more horsepower than last year's model. A larger bore and shorter stroke enabled 1mm larger intake and exhaust valves. Hollow camshafts now directly actuate the valves through bucket tappets for less reciprocating weight and a narrower in-

cluded valve angle. The alternator is now mounted on the crankshaft instead of behind the cylinders for less weight and friction. Special neodymium magnets reduce flywheel weight by over a pound for an engine that revs and responds instantly.

New ignition technology includes the Kawasaki Throttle Responsive Ignition Control (K-TRIC). This system connects a throttle position sensor to the ignition to vary timing with engine RPM and throttle settings for more power with less fuel consumption. New stick-type ignition coils are spark plug caps containing tiny coils to save nearly a pound and provide more consistent spark. To keep these

coils cool, they only fire on the compression stroke, thanks to an exhaust cam sensor detecting the piston location. Most ignitions fire the plugs with every upstroke of the piston.

The ZX-9R transmission is now as compact as the ZX-6R and features involute splines for improved shifting and two bearings on both shafts for support and smooth operation. The shift forks are now chrome plated for durability and use 7mm (from 6mm) pins for smoother shift action. The lightweight cable-operated clutch no longer uses a back-torque limiter and is the same size as the ZX-6R except for one extra drive and driven plate.

Lubrication improve-



ZX-9R Notes: Alternator on end of crank, exhaust cam sensor above #1 exhaust header, multiple magnesium covers, and no frame down tubes.

# **K-TECH News**

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ZX-9R stick type coils are spark plug caps and coils in one.

ments include a gear driven oil pump with a single rotor using the crankcase as part of the pump body for less weight. It has two intakes for better flow. New oil delivery passages in the cylinder block, generator cover, and new oil grooves in the #2 and #4 crank journals better lubricate the con-rod big ends.

Exotic metals like a titanium muffler shell (stainless steel on California model), and magnesium cylinder head cover, pulse cover, generator cover, clutch cover, and engine sprocket cover cut weight. The clutch and engine sprocket covers even wear a special recycling symbol.

#### ZX-6R Engine

The power and reliability of last year's best 600 power plant are improved for '98. New engine cases are stiffer in the crank area because two extra bolts secure this critical area. A stronger crankshaft no longer uses a woodruff key to locate the flywheel which now incorporates neodymium magnets for



New piggyback reservoir shock for both models. ZX-6R features adjustable ride height, removable subframe, and larger 5.5-inch rear rim.

quicker engine response. A curved aluminum radiator increases cooling and allows a more compact wheelbase. The cooling fan is even moved to the upper left corner for compactness. Magnesium generator and sprocket covers aid in reducing total engine weight by four pounds.

Engineers worked hard to make changes that benefit outright performance and improve its character on the street. New Mikuni BDSR36R carburetors with K-TRIC enhance throttle response and provide a seamless power delivery. The cam drive and primary gears are refined to reduce mechanical noise significantly. A liquid cooled oil cooler is more efficient and allowed the removal of last year's oil cooler. The oil filter and oil drain plug

can now be removed without moving any panels or parts.

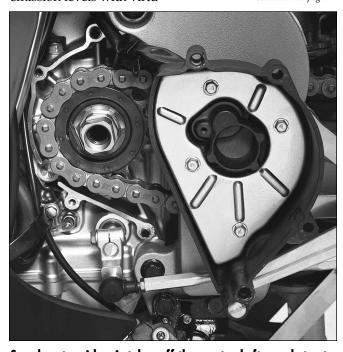
## Catalytic Converters

California ZX-9R and ZX-6R models come with a catalytic converter system to meet the stringent emission levels with virtu-

ally no loss of power. A catalyst in the muffler and a pre-catalyst just upstream in the pipes use metal honeycomb coated with platinum and rhodium to convert carbon monoxide and hydrocarbons into harmless carbon dioxide and water.

Microcomputer-controlled solenoid valves in the carburetors shut off fuel to the motor during over-rev situations or if the ignition is shut off while the motor is still turning over. This prevents raw fuel from getting into the exhaust and burning out the catalysts. Using the converter enabled Kawasaki to use the same ignition and cams on 49 state and California models. The California model ZX-9R is only down one horsepower or less than 1 percent.

Continued on page 12



Speedometer pickup is taken off the countershaft sprocket nut.

#### PISCATAWAY/GRAND RAPIDS



**New Telephone Number for Regional Class Enrollment** 

To register for classes held at our Grand Rapids, Mich., or Piscataway, N.J., training centers, please call (732) 469-1221 and speak with Ms. Karla Phillips. Karla will be handling all student enrollments for these two locations.

For the following Road School locations, registration should be made through Ms. Karla Phillips, at the same telephone number listed above: Albany, N.Y., West Lebanon, N.H., Syracuse, N.Y., Buffalo, N.Y., Pittsburgh, Pa., Columbus, Ohio, Indianapolis, Ind.

The Fall 1997 and Spring 1998 Technical Training schedules have been mailed to your dealership and were also given out at the October Kawasaki dealer meeting in Orlando, Fla. Road School locations are also listed on this schedule.

Make sure your Service Department reads this training schedule.

Sign up early to take advantage of the training opportunities available to your dealership person-

We look forward to meeting with you at one of our classes in the near future.

> Fred DeHart 201 Circle Drive N. #107 Piscataway, NJ 08854 (908) 469-1221

### ATLANTA/DALLAS



This past summer, I had the opportunity to help a dealer with an ongoing customer problem. It was an example of a customer losing confidence in the dealer's service department. I learned from this experience that a dealer can prevent most customer problems by seeing that repairs are done correctly the first time. The first time this bike visited the service department, it was a service problem. The second time, it became a customer problem.

As soon as the dealer met this customer, a red

flag should have gone up. We would have to classify this customer as "extremely picky." His bike has always been dependable and safe to ride, but on a long trip it began to exhibit a driveability problem. The customer took his bike to two dealers, one of which was not a Kawasaki dealer. The bike now had more problems than before. Unhappy with his experiences so far, the "picky" customer finally took his bike back to his local Kawasaki dealer. Unfortunately, the local dealer just added to the problem by not seeing to it that the repairs were carried out properly. Each time the customer picked up the bike he would inspect it carefully. During several visits in the next couple of months, the dealer caused a number of additional problems. The irony is that after all the parts and service problems were finally corrected and the bike was running properly, the customer refused to believe his bike was fixed. The customer had lost confidence in the dealer.

I had the opportunity to ride the bike and was able to verify that it was running properly. Only then was the customer satisfied, and finally appeared to be pleased with his bike. Most of these problems could have

been prevented if the local dealer had been more thorough in his parts ordering and careful with his service work.

I hope you can use this example as a guide to preventing this type of customer problem in your service department.◆

Walter Rainwater 6110 Boat Rock Blvd. S.W. Atlanta, GA 30378 (404) 349-2000

#### IRVINE/SEATTLE



There's a lot of good news in the upcoming '97-98 training season. First, we have a new satellite training center in Tacoma, Wash. Bates Technical College is located in the southern part of Tacoma and offers a variety of technical classes. We will be using their facility for our K-Tech training classes in February and March these will include Jet Ski® watercraft, Jet Ski watercraft Fuel and **Electrical Systems** Troubleshooting, Mule™ utility vehicles, Motorcycle Electrical



Regional News-con'td

System Troubleshooting, Motorcycle Maintenance-1/ATV, Police Motorcycle Maintenance, Service Update '98 and the new K-Share/Kawasaki Information Center (KIC) Seminar.

We are also expanding our support to the technical training schools across the nation. New models and support materials have been donated to the schools in an effort to increase the student's knowledge and abilities on Kawasaki.

Robert Taylor 9950 Jeronimo Road Irvine, CA 92618 (714) 770-0400

# **Improving Distributor Communications:**

# **Welcome Latin America Service Support Coordinator**

by Don Church Manager, Service Training and Communications

In order to improve our support for Kawasaki Distributors in Latin America, we are pleased to introduce to you Carlos Johnston, Service Support Coordinator for Latin America. Carlos has extensive knowledge of Kawasaki products with 12 years experience as a technician at one of Kawasaki's best and long-time dealerships in Southern California. Carlos speaks and writes Spanish fluently; he was educated and lived most



of his life in Spain.

Carlos has begun an extensive training program to get prepared for his new responsibilities. He will be available to serve you beginning January 1, 1998, with all service-related matters including:

• Technical Support Hot Line. Accepting phone calls, facsimile messages, letters, or Email correspondence regarding technical and warranty issues.

- Consumer Services.

  Advising Distributors

  how we can work together to handle customer complaints.
- Newsletter. Carlos will be producing a Spanish newsletter to all Distributors to address service issues from tech tips to special tools.
- Service Bulletins.

  Translating service bulletins and other important service documents, and distributing them to all Distributors.
- Technical Training.
   We will be offering a
   two-week training program in Orlando, Fla.,
   for two weeks in June. It
   will be taught in
   Svanish.
- Visits to Distributors.

  Carlos will periodically be visiting each country to advise and consult the needs of efficient service and parts departments. He will also be able to troubleshoot difficult product problems using this as a training opportunity.

# **New Hot Line Technician**

We would like to introduce our new Hotline technician, Dave Langford. Dave was hired in July to replace Shannon Beason who had taken a position in the KMC R&D department to work on new product development.

Dave has already been on the phones through the busiest time of the year, and he also went to the dealer show in Orlando. So many of you have already met him in person or on the phones.

For Dave it started at

age 12 when his father bought him a Yamaha 100cc Trailmaster. Since then he has had a long history of enthusiastic involvement with our industry including several years of road racing both production and GP bikes.

He landed his first job in a dealership in 1975 when he went to work in a Kawasaki shop assembling new bikes and helping around the service department. Since then he has worked at several Southern California



dealerships as technician and service manager. Dave also has extensive experience handling collision, theft and extended warranty claims as an independent insurance adjuster.

We are confident Dave's enthusiasm and experience will make him a valuable addition to our Hotline group.

**—**Еd.

# K-Tech Training On the Road:

# **Getting Ready for the Kawasaki Information Center**

by Don Church Manager, Service Training and Communications

You saw KIC for the first time at the Kawasaki Dealer Meeting in Orlando, Fla. Whether you attended one of the KIC overview presentations or used KIC yourself on the new K-Share Micron PCs in the display area, you saw first hand this exciting new K-Share application.

The Kawasaki
Information Center is a
full-featured electronic
parts catalog system with
easy access to service publications, flat rate
codes/times, and sales literature. With all these features plus its integration
with K-Share's parts ordering and warranty
claims processing functions, KIC is a valuable
tool for practically everyone in your store.

This is why K-Tech is taking KIC and K-Share training on the road: to train everyone in your store on how to use all the functions of KIC and K- Share.

Students will learn what information lies under the various inquiry "buttons" in KIC, and how to use the "fuzzy" search capabilities of KIC to access this information quickly.

Students will learn how to boost their productivity and reduce the potential for errors when using KIC and K-Share together to order parts and file warranty claims.

Students will learn how they can use K-Share applications such as the Vehicle Service Inquiry and Vehicle Information Processing to boost customer service and loyalty.

Take advantage of this training opportunity even if you saw KIC in Orlando. You will be surprised what you will learn in one day and how your new skills will immediately improve your work. Plus all students will receive a "tool kit" of handy reference materials to help them continue to get the most out of K-Share and KIC.

The Kawasaki Information Center is a full-featured electronic parts catalog system with easy access to service publications, flat rate codes/times, and sales literature.

To enroll in the K-Share/KIC seminars, call the numbers listed.

Please note there is a charge of \$25 per student

billed directly to your parts account for all locations except Kawasaki Training Centers.◆

Students will learn how to boost their productivity and reduce the potential for errors when using KIC and K-Share together to order parts and file warranty claims.

| December                  |   |  |  |  |  |
|---------------------------|---|--|--|--|--|
| 10th                      | Grand Rapids, MI*(732) 469-1221             |  |  |  |  |
| 12th                      | Orlando, FL(404) 349-2000 ext. 4227         |  |  |  |  |
| 16th                      | Fort Lauderdale, FL(404) 349-2000 ext. 4227 |  |  |  |  |
|                           |   |  |  |  |  |
| January                   |   |  |  |  |  |
| 6th                       | Piscataway, NJ*(732) 469-1221               |  |  |  |  |
| 13th                      | Little Rock, AR(404) 349-2000 ext. 4227     |  |  |  |  |
|                           | Minneapolis, MN(714) 770-0400 ext. 2452     |  |  |  |  |
| 16th                      | Des Moines, IA(714) 770-0400 ext. 2452      |  |  |  |  |
|                           | Hammond, LA(404) 349-2000 ext. 4227         |  |  |  |  |
| 20th                      | St. Louis, MO(714) 770-0400 ext. 2452       |  |  |  |  |
|                           | Syracuse, NY(732) 469-1221                  |  |  |  |  |
| 23rd                      | Atlanta, GA(404) 349-2000 ext. 4227         |  |  |  |  |
|                           | Buffalo, NY(732) 469-1221                   |  |  |  |  |
|                           | Kansas City, KS(714) 770-0400 ext. 2452     |  |  |  |  |
|                           |   |  |  |  |  |
| February                  |   |  |  |  |  |
| 24th                      | Pittsburgh, PA(732) 469-1221                |  |  |  |  |
| 27th                      | Columbus, OH(732) 469-1221                  |  |  |  |  |
|                           |   |  |  |  |  |
| March                     |   |  |  |  |  |
| 10th                      | Tacoma, WA*(714) 770-0400 ext. 2452         |  |  |  |  |
| 17th                      | Indianapolis, IN(732) 469-1221              |  |  |  |  |
|                           |   |  |  |  |  |
| May                       | Ad . CA* //04\ 040 0000 · 4007              |  |  |  |  |
| lst                       | Atlanta, GA*(404) 349-2000 ext. 4227        |  |  |  |  |
| *Kawasaki Training Center |   |  |  |  |  |
|                           |   |  |  |  |  |

# Micro-K Getting the Most From Your Library

by Jeff Hoeppner Parts Data Coordinator

The microfiche deck can be your best friend or your worst enemy. If properly maintained, it will be a well organized library of accurate information; left neglected, it transforms into a confusing wad of misfiled, duplicated, expired, or misplaced fiche.

The following is a list of helpful hints and little known facts that will help you get the most from your Micro-K library.

• Check out parts bulletin Gen 97-01. It contains information on fiche readers, bulbs, spare parts and fiche storage devices. Also look in the "Kawasaki Technical Services Department Catalogs of Resource Materials." It contains a wealth of information for supplies and related items for your parts and service departments.

- Monthly Micro-K mailings include an updated Index that shows the part number and revision date of every fiche that we print.
   Information on how to order individual and complete decks of fiche is also contained on this index.
- With the exception of new models, every new fiche that you receive is a revision of a previous fiche. We reprint a revised fiche when new information is added or there is inaccurate information contained on the fiche. Always replace the old fiche with the new one and throw away the old fiche—it may contain bad information.
- The July 1997 monthly distribution contained an entire set of ATV fiche in a new category color, orange. This will give the ATV product line its own identity in a separate part of your fiche library, just like watercraft or generators.
- Almost every microfiche has a part number index at the bottom right side of the card. It lists every part number that is on the fiche, and its location on the fiche. This can be a handy little tool when you have a part number that you know is on a fiche, but you

don't know where.

• Monthly Micro-K mailings include a pink Micro-K report card. At the time of the next printing of these cards, I will be revising the text to include reference to the KIC electronic parts catalog. In the meantime, please use these cards for comments on Micro-K and KIC. Your comments are very important.

# Retraction On Emissions Article

By John Griffin

In the last issue, I incorrectly stated the '98 KDX200 and KDX220R would not be sold in California. These models <u>are</u> sold in California as "closed course competition" units.◆



# **Jet Ski Cover Claims**

The new "VACU-HOLD ULTRA" Jet Ski covers being sold by Kawasaki Accessories this year have a two-year warranty from the manufacturer, Commercial Sewing. Each cover comes with a warranty statement from Commercial Sewing explaining the warranty provisions and the procedures to be followed in case of a warranty failure.

The manufacturer wants the dealership (you) to deal directly with them for any warranty assistance. If a customer comes into your dealership with a defective cover, contact Commercial Sewing at (860) 482-5509 and follow their instructions.

Depending on the failure, they may have you send the cover to them for repairs.◆

# 1998 KX80-W1, **KX100-C1 KIPS** Governer **Assembly**

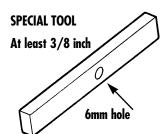
by Craig Martin and Gregg Thompson

If you ever have to replace a KIPS Valve Governer on a '98 KX80 or 100, you might be surprised to find out it's not available as an assembly. That's not so bad except that the parts have to be assembled by pressing

them together; and it is very easy to do this wrong. The good news is with a simple handmade special tool and a little information, you can easily assemble one of these correctly with a bench vise.

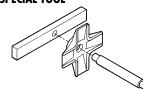
The KIPS Governer shaft has a small shoulder about 6mm from each end. The governer ramp and the gear each have to be pressed onto the shaft (one at each end) to be exactly flush with that shoulder. Anything different results in the wrong preload on the governer spring which in turn causes the governer to operate at the wrong RPM.

The special tool you need is a smooth piece of steel or aluminum bar stock with a hole drilled



through it. Not too tough, huh? The bar needs to be at least 3/8-inch thick. The hole you drill in it should be at least 6mm but no larger than 1/4 inch (two drill sizes you probably have).

### SPECIAL TOOL



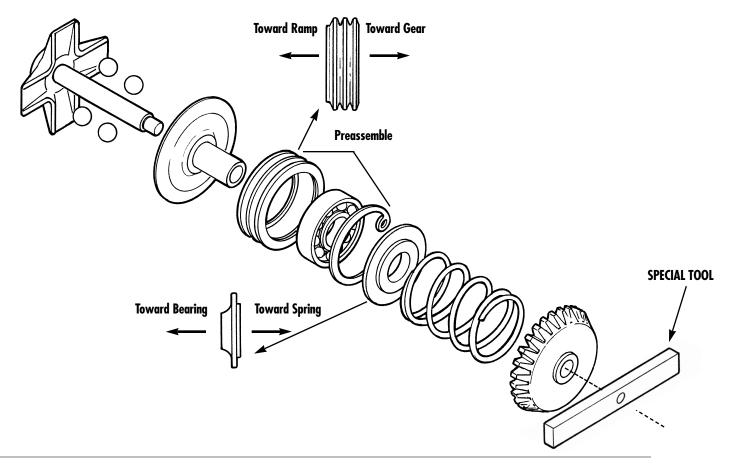
### Press together in vise

Start by assembling the governer shaft, ball ramp and your special tool in the vice as shown. Be sure

to use aluminum jaws on your vice to avoid damaging the KIPS governer

As you press the shaft through the ball ramp, the small diameter portion of the shaft will go into the hole in your special tool. The shoulder will not go through the hole, so the shaft will stop exactly flush with the outside surface of the ball ramp. Perfect.

Now assemble the other parts on the shaft as shown and use the same procedure (and special tool) to press the gear onto the other end of the shaft. Like the ramp, the gear will come to a stop flush with the shoulder on the shaft just like it's supposed to.◆



FALL 1997

# KVF400 Prairie Crankcase Vent

by Gregg Thompson Product Support Supervisor

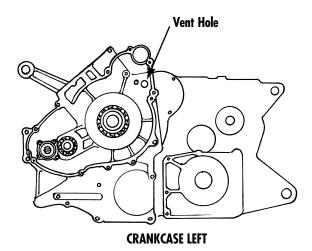
We have heard of a few KVF400 Prairies that have had problems with lots of engine oil getting into the air box during normal riding conditions. The crankcase breather system is located in the castings of the crankcases on this model and there are several holes in the cases that are involved. If any of these holes are obstructed (by casting flash, for instance), the breather will

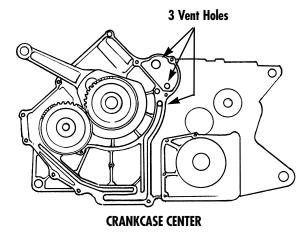
not work properly and oil will end up in the air box.

Of course any time you have a unit that is pumping oil into the air box, first make sure the crankcase oil is not overfull. Also perform a leakdown test to make sure the piston rings are in good shape (not allowing too much blow-by).

Once you are sure the engine is OK, you need to investigate the crankcase vent system. On the KVF400 Prairie, this means removing the left-hand crankcase half. That sounds pretty drastic but actually this can be done without removing the engine from the frame.

Locate the vent holes as shown in these drawings and make sure they are free of any obstructions.





# GTPP Certificates

by Jill A. Dunning Consumer Analyst

Have you ever had one of those days where you know you were supposed to do something, but forgot? Well, here is your reminder.....

When you sell
Kawasaki's GOOD
TIMES PROTECTION
PLAN extended warranty, please do not forget to fill out the GTPP
certificate and pass it on
to your customer. The
certificate contains valu-

able information such as:

- What is covered under the GTPP
- *How to transfer the GTPP*
- How to cancel the GTPP
- What is excluded from coverage by the GTPP

If you need to order GTPP certificates, the part number is 99995-593-03.◆



# CORRECTION: Mule Engine and Gear Case Assemblies

In the last issue of K-Tech News we published a table listing the engine assemblies and gear case assemblies available as spare parts for the various Mule utility vehicles. Unfortunately, there were errors in that table. Please go to your shop copy of that issue (Summer 1997, pg. 8 ) and make a note referring to this issue for the correct information. We are sorry for any trouble this may have caused you.—Ed.

|                                  | KAF300-B/C    | KAF620-A (4x4) | KAF620-B/C    |
|----------------------------------|---------------|----------------|---------------|
| ENGINE ASSY.                     | 70290-2176-LF | 70620-2007-EG  | 70620-2007-EG |
| TRANSAXLE ASSY<br>(Transmission) | N/A           | 13101-1194     | 13101-1196    |
| FR. GEAR CASE                    | N/A           | 13101-1220     | N/A           |
|                                  |               |                |               |

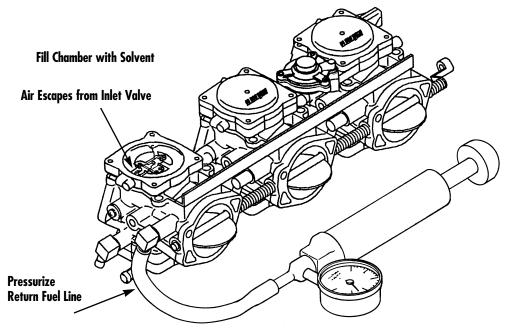
# Setting 1100 STX Pop-Off **Pressure**

by Gregg Thompson Product Support Supervisor

We have had a number of reports from the field regarding 1100 STX Jet Skis with hard starting and bad throttle hesitations that couldn't be corrected by adjusting the carburetor mixture screws. What we found on nearly all of these was that the fuel inlet valve pop-off pressure was well above the factory specification.

"Pop-off pressure" is the pressure needed to push the fuel inlet valve off its seat and allow fuel to flow into the fuel chamber. We have found that pop-off pressure in these carburetors should be around 24 to 25psi. What dealers are finding is that most of these carburetors are at about 30-35 psi. When the vehicle is running, the pressure on the needle is actually overcome (opening the valve) mostly by the diaphragm, not by fuel pressure. The fuel chamber diaphragm is operated by vacuum from the carburetor venturi which it senses through the main jet.

When the pop-off pressure is too high, the carbu-



retor will starve for fuel momentarily under certain conditions (usually at idle) causing a hesitation when the throttle is opened abruptly. Hard starting can also result from this condition.

To check the pop-off pressure, you need a pump and gauge that will go up to 30psi or more. The two outside carburetors on the 1100 STX have fuel pumps mounted on them which make it easy to check pop-off pressure. All you have to do is connect your pump to the fuel return hose and pressurize it. The fuel pump prevents pressure from escaping through the fuel inlet fitting. The center carburetor does not have a fuel pump, so on this one you have to block off the (dual spigot) inlet fitting before pressurizing the return fitting.

When you pressurize the carburetor with a

hand pump, the valve will hold pressure to a certain point (lets say 25psi) and suddenly blow off, dropping a few psi abruptly and then continue to leak down slowly a few more psi before stopping at a lower pressure (let's say 19psi) which it should hold indefinitely. The higher pressure (25psi in this example) is the "popoff." If the valve leaks air at a much lower pressure, there may be some wear or damage to the needle or seat. Minor damage to the valve seat can sometimes be repaired with a Q-tip and some fine lapping compound.

Note: Pop-off pressure should be checked with a "wet" needle and seat. The best procedure is to lay the carburetor (or carb set) flat on your bench with the fuel valve chamber facing up and the diaphragm and cover removed. Fill the area

around the inlet valve with solvent or WD-40 to keep the valve wet. This also allows you to see bubbles escaping from the valve when it leaks.

To reduce the pop-off pressure, just cut some length off the lever arm spring. Usually removing just the first turn of the spring will reduce the pop-off pressure by about 5 psi, so be careful not to overdo it. It's hard to put material back on the spring once you've cut it

By the way, you can also pressurize any of these carburetors through the fuel inlet pipe but that requires blocking off the return pipe first. So on carburetors with integral fuel pumps, it's easier to pressurize them through the return fitting. If air leaks out through the fuel pump while pressurizing the return hose, the fuel pump is bad.◆

# **Waterproofing Prairie Rear Brakes**

by Keith Pestotnik and Gregg Thompson

Most dealers who sell a fair number of Kawasaki ATVs are familiar with the FDM for the rear brake on the KVF400-A1 Prairie. This repair campaign was to address premature rear brake (mostly drum and shoe) wear that resulted from water and mud leaking into the brake during use in extremely wet conditions.

Unfortunately, some dealers are still having trouble with this problem after performing the FDM.

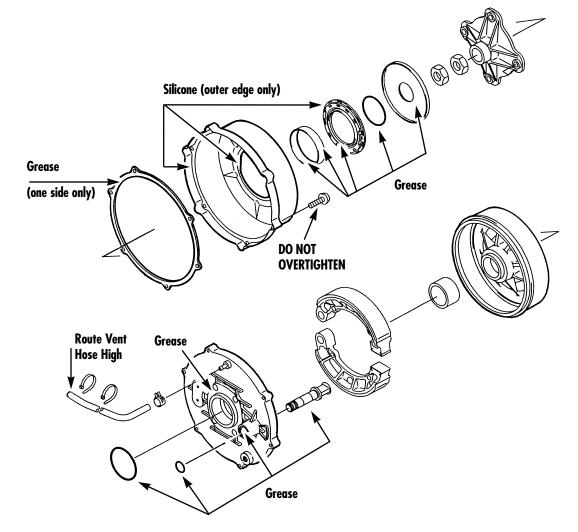
We have done some investigating here at KMC and have found that with careful assembly these improved parts do a very good job of keeping water out of the Prairie rear brake. However, the brake drum cover must not be damaged in any way. Many of the units that continue to leak after the

FDM has been done turn out to have a dent somewhere in the cover from striking a rock or stump. Just about any dent in this cover is likely to distort one of the sealing surfaces, allowing it to leak.

When you have one of these apart for any reason, whether doing the FDM or just routine maintenance, it should be reassembled very carefully according to the following procedures.

- ➤ Assemble the unit using high quality waterproof grease (Bel Ray is excellent) and RTV silicone where indicated in this illustration. Carefully Sealing these parts as indicated with grease and silicone is the key to success in this repair.
- ➤ Put silicone on the brake drum seal O.D. before installing it in the cover. This makes it easier to install.
- ➤ When installing the brake drum cover, be careful not to overtorque the bolts. Overtightening them will warp the sheet metal cover and possibly cause a leak.
- ➤ Assemble the brake and cover with all the silicone still wet and then let it set overnight. With the silicone still wet, the brake drum seal will center itself on the drum and then hold in that position when the silicone cures.
- ➤ Route the vent hose as high as possible to prevent water from entering there.

Note: Early units had a drain groove in the bottom of the cast aluminum backing plate. If the one you are working on has a drain groove, fill the groove with silicone.◆



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## **ZX-9R & ZX-6R**

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### ZX-9R And ZX-6R Chassis

The chassis for both machines are new for '98. The ZX-9R frame is much lighter due to the elimination of the down tubes and thinner wall aluminum in most locations. The wheelbase is 25mm shorter for quicker steering and less weight. The ZX-6R frame is more sporty with a 13mm shorter wheelbase, 0.5° steeper rake (23.5°), and 1mm less trail. The steering head tube is also 15mm longer to space the triple clamps farther apart for superior rigidity. A removable rear subframe and adjustable rear ride height are features right off the race bikes.

Suspension changes include stout 46mm conventional cartridge forks on both bikes for great rigidity, less weight, and better

action under braking. They offer adjustable preload, 10-way compression, and 12-way rebound damping. New extruded aluminum swingarms are strong and light and secure new piggyback reservoir rear shocks. These shocks feature adjustable spring preload, 20-way compression, and 20-way rebound damping. Last year's remote reservoir units offered only 4 rebound adjustments.

New wheels and brakes complete the performance picture. Six-piston caliper brakes are used on the front of both models for incredible stopping power. The ZX-6R is the first 600 class bike offering this feature. The ZX-6R front brake rotors are 300mm in diameter and now 0.5mm thicker at 5mm. The ZX-9R uses ultra light 296mm x 4.5mm thick front brake rotors. The rear brake rotor on both models is



Electronic speedometer is lightweight, digital displays show the odometer, tripmeter, clock, and a slick bar-type water temperature gauge.



A 600 class first—6 piston calipers on ZX-6R.

down-sized from 230mm to 220mm. Thinner wall aluminum rims are shared by both bikes for less unsprung weight and gyroscopic effect. The ZX-6R rear rim jumps from 5 to 5.5 inches wide to handle a new 170/60-ZR17 tire.

The street-legal equipment was scrutinized for weight loss wherever possible. The single multi-reflector headlight uses a plastic lens and body. The electronic speedometer uses a magnetic sensor on the countershaft sprocket nut for an accurate readout. The odometer, trip meter, and clock are

shown digitally on the LCD display. The LCD water temp gauge has a bar type display. New rear grab bars are made of reinforced plastic. The sidestand uses a hollow tube with a welded-on foot instead of the heavy forged steel units used in '97.

The ZX-9R and ZX-6R use the best method for increased performance less weight and more power. New technology enables these two machines to handle better, stop quicker, and accelerate like bats out of Hades. Ride one as soon as you can.◆