Fuelish Economy

Now that gas prices are high and will probably climb higher, makers of new fuel injected motorcycles all seem to recommend premium gasoline. Pretty soon, a fill-up for my Harley will cost what a fill-up for my SUV cost only a couple of years ago. Why must we use premium fuel for fuel injected motorcycles? What harm will come if we use regular (87 octane)?

Gerald Bertinot
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The problem with using a lower octane gasoline than specified in most of these bikes is not directly related to the presence of fuel injection, but rather to the compression ratios/cam timing/combustion chamber designs that these bikes use, which is directly related to their hp-output. The problem is that if you use regular gas against the advice of the manufacturer, you have a much greater chance of detonation occurring, which is very harmful to the pistons, rings, connecting rod bearings, etc.

Also, you should know that ambient temperatures will have a great influence on an air-cooled engine. If you were to ride in colder weather and avoid working the engine very hard, you might be able to get it to tolerate regular, but is that how you'd want to ride?

Marvel Mystery Oil Mystery

In your April 2004 issue you talked about adding "Marvel Mystery Oil" into the intake manifolds with the engine running, a few teaspoons at a time. Now, this may be a stupid question, but how and where do you add the oil? I have a BMW R1150R and experience the same problem.

Steve Berto
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The oil is introduced into the engine by putting a capful of oil under a plastic tube, with the other end of the tube attached to the fitting that is usually used to synch the carbs. The manifold vacuum will draw the oil into the air stream.

Your response to "Suggested Carbon Cure" was to introduce "Marvel Mystery Oil" into the intake manifolds, with the engine running, a few teaspoons at a time to clean the valves and to remove huge chunks of carbon. This is fine for bikes using dry clutches. However, a note of caution should also be included. If Marvel Mystery Oil is fed to the intake manifolds on a bike having a wet multiplate clutch, enough Mystery Oil could leak past the rings and into the engine oil, which in turn could make the clutch plates too slippery. Once this happens, they can't be cleaned or repaired and must be replaced.

Love your mag. It's number-one on my list of mags and I recommend it highly to all I speak to. Keep up the great work.

Al Robitaille
w1yut@amsat.org

Since the oil is being added into the air/fuel mix, it is burned before it can get into the lower end, unless the rings are so bad that raw mixture is getting past them... and if that's the case, you have bigger problems than just a bit of carbon on the valves. And by the way, the recommended amount of oil being introduced is less than a teaspoon (I use a capful) and is fed in over quite a bit of time, since it is being drawn in by manifold vacuum.

Re: Strange Vibration

My early 1991 FXRS with 15K miles has developed a strange vibration, like a grinding/shuddering. In each gear, it begins at about 2200 rpm (15 mph in first, 22 mph in second, 30 mph in third, etc.). It is gone by 2700 rpm. It is obvious at 25 mph in second, but not there at 25 mph in third gear.

I have checked all of the obvious engine mounts and stabilizer links. The frame, wheels, and tires appear in good condition. Everything seems normal, and if I keep the rpm above 3000, there is no noticeable problem. Your assistance would be greatly appreciated.

Terry D. Lundgren
tdlundgren@eiu.edu

Since the vibration goes away at above 3000 rpm and is not felt at lower speeds, we suspect that your problem may well be located in the transmission main shaft bearing (or the shaft itself). This is especially true if the bike has ever been dropped.

H-D Front Brake Bug

Last summer my 2001 Road King Classic with 14K miles on it began having a front brake problem. The lever felt spongy, and if I pulled hard, I could pull it all the way to the grip. Yet, the pads were not worn down and there was no brake fluid leakage indicated.

Under my extended warranty, my dealer first tried a rebuild kit for the master cylinder, and on a second attempt, he replaced the front brake hose assembly as well. But I still had the problem, which was then presumed to be air in the system that would not bleed out.

My dealer called the factory rep, who suggested that he pull off both calipers, remove the pads and compress the pistons back into their bores and then re-assemble and bleed again. This cured the problem.

My dealer then said that other owners of FL models, mostly Road Kings 2001 and newer, had also complained of similar symptoms, and now they knew how to fix the problem.

That fix was done one week prior to the Milwaukee celebration, which I attended. I put on more than 3000 miles on that trip and about 1500 since then with no brake problems until last week (April, 2004).

After a 100-mile ride last week, the spongy front brake problem returned. The pads were still good and it had no leaks.

I pulled the calipers and followed the procedure, and all is okay once again. I can only assume that somehow air got into the system again, but I don't know how it could. I alerted the dealer's mechanic that was familiar with the problem and fix and he had no idea either how it could reoccur. Any ideas out there?

Moscooter@aol.com

It does indeed sound like you have an air leak into the brake system. There are a few places that this may be happening, although in most of them, the leak would be slow, since it is happening when you release the brake lever.

One place we would check is at the threads of the bleeder valve: If it was overtightened at some point in the past, there may now be enough clearance to suck some air at that point. We would also check all the other fitting points in the system for the same type of problem. Some small pieces of teflon tape on the threads would fix it, if that were the problem.

Reader's Advice On Squealing 1200

Sir, I just read your item in *Motorcycle Consumer News* about your squealing GL1200. I have an '86 Interstate with a similar condition. My "problem" is intermittent and only seems to happen on the first chilly ride of the spring, or the last chilly ride of the fall. The bike starts normally, then about the time the motor warms up, I will get this horrible high-pitched squealing. It lasts usually for a couple of minutes, then subsides. The pitch is proportional to engine speed. It comes from somewhere in the front of the bike. I've decided that my noise is associated with the water pump, in conjunction with a half-open condition in the thermostat. There is some combination of events that occurs when the engine is cold (below 40° F), as the thermostat starts to open. I'm thinking that the partially-open thermostat is somehow creating a cavitation in the antifreeze and changing the load on the water pump—setting the water pump vibrating. With the thermostat closed—no problem. With it open—no problem. But in-between—lots of alarming noise!

My bike has 66,000 miles on it and has behaved this way now for the 30,000 miles I've ridden it. I think this is my original water pump. I figure if the noise ever fails to go away, I'll replace the water pump and thermostat. Being intermittent and predictable, however, I'm just ignoring it for now. I suspect that the bearings in the water-pump are worn and some coincidental condition just starts the shaft vibrating.

Shawn Bucy
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Vibration Ad-Venture

As a result of, or possibly in spite of, your February test of the Yamaha Venture, I purchased a Midnight Edition and found your observations spot on, with one exception; having owned two V-4's (Hondas) in the past, I am disappointed with the lack of smoothness in the Yamaha. Did Yamaha mess with the timing in an attempt to emulate the throb of a V-twin? And, is there a fix for this, short of transferring an engine from a V-Max? Yamaha, if had I wanted a V-twin, there are better choices!

ThomPin4@aol.com

To the best of our knowledge there is no way to modify the timing of this bike's engine to make it smoother—sorry..

VTR Backfires

I have a '98 Honda VTR1000 that, toward the end of the riding season, began to backfire mildly on deceleration. The bike has 30,000 miles and lives in Minnesota, so it is stored winters. The storage procedure has always included Sta-Bil in the full gas tank and drained carburetor float bowls. When draining the bowls this year, gas continued to flow after discharging more than a bowl full of gas from the front carburetor. It seems that something is not seating properly, allowing the continued flow from the tank. Am I on the right track, and is the condition probably also the cause of the backfiring? Even with my Haynes manual I am not sure I want to be the one tearing down my carbs. Is there another possible cause for this problem or an alternative solution?

Dave Cornstuble
davekc8@aol.com

The continuing flow of fuel from the carb is a symptom of a stuck fuel inlet valve, either the seat or the needle probably have some debris on them and they are not being shut by the float properly. Another possibility is a stuck pivot or other problem with the float assembly. These are all easy things to check.

The mild backfire, however, is a symptom of a lean condition (opposite of what an open fuel inlet would cause) so it's a secondary problem. First tackle the fuel problem and properly set the fuel level height, then find out what is causing the backfire. It could be a manifold leak or similar.

Balancing Tire Balancing Techniques

I own a Honda VTX1300 Retro and need new tires. I inquired at my local Honda shop and they said they use a bubble balance method of balancing the tires. I asked at the next closer Honda dealer and was told that they use the spin balance method.

Can you describe the differences and plus or minuses of each method? Which method is more accurate at balancing the tires?

Jay Snow
JSnowMagic@aol.com

Here at the school, we teach and use both types of balancing methods, and both of them work great. The bubble balance method may be inherently slightly less accurate, but is certainly adequate. Unless you are dealing with very high speed riding (over 100 mph), any difference in balance would not be noticed, assuming that a skilled technician did the work.

The computer spin-balance method actually works to magnify the effect of imbalances by spinning the tire, and it should therefore be able to achieve greater accuracy. However, you should know that the spin-machine's computer also contains a standard "masking" feature that eliminates the effect of tiny imbalances—considered too small to matter—so that its ultimate accuracy may not be as great as it appears. The spin-balancer also requires less skill on the part of the tech, other than knowing how to set up the machine and interpret the results.

Just for reference, big tire companies typically rely on simple static balancers, with the axle resting on pairs of knife-edge bearings, to balance tires for race track speeds.

Internet-Purchased Tire Woes

For a number of years, I have purchased my sportbike tires on the internet and then taken them to a dealership for installation and balancing. Despite increased installation fees (as a result of not purchasing tires from the dealership itself), I still averaged about $130 in total savings from doing things that way, and the dealerships never seemed to object to the work.

This spring however, I was surprised to find the dealerships incredibly reluctant to do the service, with some flatly refusing. They unanimously stated that their liability insurance would no longer cover them in the event of a tire failure (for tires purchased outside of the dealership itself). A very helpful service manager explained that they would perform the service if I could provide some form of documentation that the tires were not "blems" (which I assume to be factory seconds of some sort).

Is this something new, or have I just been behind in the times? I was wondering if you or any of the readers out there have had similar experiences.

Also, is there any way that one could tell if they are getting defective tires? It seems to me that if an insurance company (or possibly multiple insurance companies, in this case) would take steps to restrict this service function, more than a few instances of tire failure must have taken place.

Joe Kozerski
spoonman442@highstream.net

First of all, true 'blems' are not defective from a functional point of view. They are appearance problems only (hence the term, "blemished"), so safety is not really a factor. The reluctance on the part of the dealers is a result of our litigious society (blame the lawyers, and their clients). Since the insurance companies are the first ones to usually pay, they are the organization pressuring the dealers. There is no code or marks on the tires (as far as we know) that would indicate that a unit is, in fact, a blem.

Downtime Files

is a joint service of *Motorcycle Consumer News* and the American Motorcycle Institute of Daytona Beach, Florida.

Please keep in mind that since the AMI staff has not seen your motorcycle, the answers given are best-guess assumptions based on prior experience and education, and may not necessarily be correct. When in doubt, take your motorcycle to a qualified shop.

Send your typewritten questions and photos if possible to:

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P.O. Box 6050
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