

Jet Fuel Boost?

I recently had a three-month job in Santa Fe, NM and started using the 101 octane "Race Gas" found at many Conoco stations there. My 2004 K1200RS started running like a jet and the difference was nothing short of transformational.

I want to re-create the ultra-smooth ride and acceleration I experienced with that better fuel, so my questions are 1) Why did my bike run so much better on the "Race Gas" when the Rider's Manual says 89 is okay? 2) How do I find 100 octane? Does that Octane Boost stuff really work? 3) Can I use 100LL (low lead) Avgas? How much will the low lead fuel really mess up the catalytic converter? Or do I have to invest in a whole new aftermarket exhaust system just to use 100LL? 4) Can I reset the timing to make my engine run smoother on the premium pump gas that I can buy anywhere? What gives?

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Because BMW uses extraordinarily high compression ratios on the new K-bikes, together with an active anti-knock technology to retard the timing if the engine senses that the fuel is not high enough octane, your bike was ready, willing and able to make use of the high octane 101 Conoco.

The factory actually specifies 98 RON octane unleaded premium. Unfortunately, I've never found any factory personnel who could tell me how German spec compares with US fuel (and I've asked a lot of important engineers at BMW), although I'm always assured that US premium works fine. US fuel is typically rated (R+M)/2, which means the two US octane rating types averaged: Research plus Motor method divided by two.

However, if you switch to low lead, the catalytic converter will be damaged and the O₂ sensor may also be coated with lead byproducts and cease to work effectively. How quickly this will happen, I'm not sure.

Octane boosters do apparently work, and years ago Road & Track did a test that showed the 104+ was the best at that time.

If you change out the exhaust and lose the O₂ sensor, the engine management will probably revert to a "default" mode that will not make the best use of premium fuel, but instead will be some "safety" setting that prevents damage from poor fuel (if it works at all).

Because the engine management uses the knock sensor, you are probably out of luck attempting to change the timing, as the computer decides what's best.

That said, anything is possible, and if you changed the exhaust, eliminated the O₂

sensor and switched to a race-type engine management system like a Motec, programmed it on a dyno for the 100LL avgas, you could make it all work. That might cost thousands in parts and tuning.

My advice would be to try an octane booster, and if it works to your satisfaction, try several to see which one works best. I'd stay away from leaded gas.

—Dave

Battery Tender Good for Sealed Batteries?

Based primarily on articles in MCN, I recently bought a 2006 FJR1300A. (No electric shifter, thanks.) Great ride — thanks for all the good advice — and no problems except that the current miles per gallon display doesn't work.

A question: The owner's manual says that because the FJR uses a sealed-type maintenance-free battery, a special "constant voltage" battery charger is required and that using a conventional charger will damage the battery. Does this mean I have to replace my trusty old Deltran Super-Smart Battery Tender? Or is this what they mean by a constant voltage charger?

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Maintenance-free batteries use a lead-calcium construction and produce slightly higher voltage (13.1 V) than the older, check-the-level lead-antimony type (12.6 V), so they need more voltage to charge correctly.

Constant voltage chargers are the simplest type and often the cheapest, while constant current chargers will charge twice as fast and may reach peaks of 20 V so they should not be attached to batteries still hooked up to the motorcycle's electrical system as they may damage solid state parts.

Combination chargers may use both types of operation, using the constant current to either initialize or recover deeply discharged batteries and constant voltage to maintain or "float" charge. Your Deltran Battery Tender is one such charger. This charger should work just fine for keeping your maintenance-free battery in good shape.

—Dave

Kawasaki Parts Incompatible With '82 Bonneville

I'm writing regarding the response to Jeff Stoddard's question about his 1982 Triumph Bonneville. While you were spot-on regarding the DOT-5 brake fluid, the rest of the answer left a bit to be desired. The old chestnut about Kawasaki being behind the early Hinckley triple engines has been debunked by people more knowledgeable than myself, so I'll leave that alone. As for

parts being shared between Kawis and Triumphs, it's quite true: Nissin supplies brakes and clutch components to both manufacturers, and levers that fit the ZX-11 also fit Triumph's T3 and T4 series bikes. That's really got nothing to do with Kawasaki, though. It's said that certain Suzuki Bandits use the same Keihin carbs as the Triumphs. The switchgears on the Buell Ulysses I test rode in June are identical to those on my '96 Trident, save for the missing choke lever on the injected Buell.

The thing is, Mr. Stoddard was asking about a 1982 Bonnie, which was one of the last machines to roll out of the Meriden plant before the old Triumph went under. His machine predates the Hinckley Bonnevilles by 19 years, and anyone who owns a set of Whitworth sockets will tell you that Kawasaki parts will not work on that bike.

Plain text can't show my smile as I write this, so please know that I write with the best of intentions.

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WD-40 Benefit Revisited

About every 1000 to 1500 miles I clean my chain with WD-40 and lube it up with Chain Lube.

In your July MCN, in the Downtime files under the heading WD-40 Really?, you state "because modern O-ring chain basically contains its needed lubrication inside the O-rings, WD-40 works to prevent rusting of the exposed chain, not as a lubricant."

Later in the same issue testing the new Kawasaki Ninja ZX-14, Walt said "At \$350 a pop for a new chain, I'd want to lube the chain every time I stopped for gas."

So, do I WD-40 clean and lube, or just WD-40 clean every 1000 miles or so, as my KLR650 O-ring chain is already lubed?

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Thanks for the question and I apologize if my comment caused you any confusion. What I am going to share with you is my philosophy and experience, not necessarily that of MCN or the Downtime Files.

WD-40 is great for displacing water, in fact, I understand the name WD-40 refers to water displacement/40th day. True or not, WD-40 does displace water and it can also "clean" your bike's chain, but it offers little in the way of a high pressure lubrication that I believe is needed between the sprocket and chain. It's true that O-ring and X-ring chains seal the lubrication behind the rings, and that lubing the outside of the chain won't get any lube inside the chain links, but what of the interface between chain and sprockets? Chain and sprockets are heavily loaded

on acceleration and can run at high temperatures. Lubrication is a sure fire method to help reduce wear caused by loading and heat.

On the highway, there is always an issue with grit, grime, and if you're not a fair weather rider, water. You may have another issue with your KLR if you spend any time off road in dusty or wet and muddy conditions.

It becomes all the more important for you to keep your drive system clean and dry. A brush and WD-40 works well for this task.

Until someone can prove to me that additional lubrication between chain and sprockets is of no value, I'll continue to keep mine lubed. By the way, I now have 17,000 miles on the original chain and sprockets on my Kawasaki ZZR1200, I believe in part because of the quality of the chain and part because I regularly clean and lube the chain.

Hope this clears up any misunderstanding that my comment may have caused you.
—Walt Fulton

Rebuilding GL Front End

My son has a 1986 GL1200 SEI model which was recently hit by an 18 wheeler that was improperly backing while negotiating a failed turn. The bike was totaled due to the front end being smashed. Since it's a low mileage bike in near perfect shape, he does not want to sell the bike.

My question is can we secure front end parts (no longer OEM available due to age) consisting of front forks, wheel, tire, brakes etc., and install same without too much knowledge other than mechanical skill above the norm? If so, could you direct us in the maintenance of this task, in the areas where we may have problems? Any help or advice would be greatly appreciated.

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The problem with restoring the front end of a motorcycle that has been heavily damaged in an accident is that the alignment of the steering head and frame front cannot be accurately set with "normal" hand tools. There are alignment companies like Computrack that can bring the components back into alignment. Before you try to get the frame aligned, you will need to have the frame professionally inspected to check all welds and stress points for cracking or other damage. That said, your best bet for finding parts is via web searches, motorcycle salvage yard searches and places like eBay. The service manual is still available and this should give you all the information you need to properly remove the old components and install the new ones. —Stripe

Triumph Backfiring

I have a Triumph 2001 Legend TT. I bought the shop manual, but it doesn't answer one question: why does it backfire? Is this standard for all TTs when downshifting?

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It depends...A backfire by definition is when combustion gases come out the intake tract, and that's certainly not normal at all. It indicates a problem with the intake valve sealing, timing or an ignition problem. Afterfire, on the other hand (which many people mistakenly call backfire), is a noise that comes from the exhaust pipe. It can be caused by many things including a lean fuel mixture, an air leak in the exhaust manifold, ignition timing and a few other things. No properly running motorcycle should have consistent backfire. —Stripe

Wet Electrics

A few weeks ago, due to the heavy rains that flooded the parking lot in the apartment complex where I live, I had carpenter ants climbing on my SV650 everywhere. I tried hosing them off with water but that didn't help. I tried spraying them off with ant killer and then washing the bike. It worked. Now my problem is that the blinkers will work intermittently and my taillight will go off at the same time. Also, the bike injection system doesn't work and I get the FI light on the dash. If I cycle the key back and forth two or three times the bike starts normally.

The blinkers and taillight will work or not. Any ideas on where to start looking? Also, what do I have to do to get a manual for a 2003 SV650? I ordered one through a Suzuki dealer in March and it has been on back order ever since. Thank you.

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Getting water into the electrics of any motorcycle is always bad news. It sounds like you have gotten the water into the under tank main harness connector that feeds the front end. The first thing I would do is undress the bike, and separate each connector. Inspect the male and female side of each mating pin looking for corrosion, then spray with a water displacing oil (WD-40). Fully reseal the connectors and test each function before redressing the bike.

The best bet for getting your service manual is of course your dealer, but if that does not work, the next step would be to call Suzuki customer service, or do a web search in the user groups.

—Stripe

Switching To LEDs

I have two bikes, a 1990 DR650 and a 2004 DL650 V-Strom. I would like to change some of the light bulbs over to LEDs on both bikes and I am wondering, can I just do the swap? Or does this involve things like load equalizers or changes to relays or anything else? The lights I am thinking of changing are the turnsignals and brake lights. I want to do this in part to conserve some power to be able to hook up things like heated grips and maybe clothing, and also because of the LED's ability to withstand more vibration. Thanks.

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You are right to be cautious when it comes to swapping electrical accessories in modern bikes because of the trend to use the system computers to monitor loads. In fact, one brand has eliminated all fuses and uses the computers to control all circuits directly.

In the case of your machines however, depending on the aftermarket lighting system you select, no additional changes other than the LED assembly swap out should be required. —Stripe



Wyotech Downtime Files

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Please keep in mind that since the Wyotech 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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