



Replacing Tubed With Tubeless

I currently ride a 1978 Suzuki GS1000E that is equipped with mag wheels. If I remove the inner tubes and replace the valve stems in the rim with tubeless valves and use tubeless tires on the rim, is it okay to do that? I am not sure if tubeless tires were available at the time the bike was produced. The bike currently has Kenda brand tubeless tires on it using tubes.

Also, can radial tires also be used on this bike or is it better to stay with the bias-ply tires? What would be the pros and cons in doing this, if any?

Bill Hall
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Motorcycle rims for tubed and tubeless tires are very different because of the wheel surface area needed to secure the tire bead. This area is designed to perform two major functions: it needs to lock the tire to the wheel to prevent slippage during braking and acceleration, and it needs to have the proper surface area to seal the air in the tire. Tubeless tires were certainly around at the time that your bike was manufactured, but I can't find any references as to whether your wheels are compatible with them or not. Looking at the pictures of the bike from the original brochures, it looks like it may well be possible to fit tubeless tires on them but you should ask the manufacturer about the tires you're intending to use.

DOT 5 Revisited

In the September Downtime Files, you say that no manufacturer recommends DOT 5 fluid anymore. Why? I remember not too long ago, it was the latest and greatest.

Mike
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What's the "latest and greatest" changes as things actually get used and build up a history. Silicone-based DOT 5 had as its major advantage the elimination of a property called "hygroscopic absorption." Glycol-based DOT 3 and 4 accumulated water from the air. This property led to corrosion of brake components and, in extreme cases, could boil the water into steam, causing a brake lock up. DOT 5's downside is that it eats seals and expands when hot (which also can lock up brakes). The current "latest and greatest" is DOT 5.5 which eliminates those problems and is in fact compatible with DOT 3 and DOT 4 systems.

Road King Spitting

Since my dealer recently installed 203 cams and heated grips, my injected 2000 Road King Classic coughs or "spits" through the air cleaner and hesitates intermittently. They had the bike for over two

weeks yet claimed they could not reproduce the problem.

Leaks at the fuel line and intake manifold and bad fuel have been ruled out. The problem seems more prevalent at moderate speeds when getting under way or when the bike has been re-started after a partial cool-down. But it has also occasionally misbehaved when getting under way even at highway speeds. I always warm the bike at least somewhat before heading out. The problem disappears until the next use cycle.

I know these things have position sensors for throttle, cams, crankshaft, air intake temperature and separate warm/cold idle control settings.

PMS in New Jersey
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Since the last thing that was done to the bike was the cam swap, I think I would start there. Perhaps the cam timing is a bit off. It is possible that, even though the timing marks look right, the timing gear is not placed correctly in relation to the lobes. The best way to check it is with a degree wheel and a dial indicator to find the proper position for the cams.

Reformulated Fuels

As it is now fall here in Wisconsin, it is time to start thinking about storing my 2004 FZ1. I know you guys get lots of storage questions but I have a question regarding the reformulated fuels here in Milwaukee. I currently have about one gallon of reformulated fuel in the tank. My question: If I fill up the tank with regular fuel (non-reformulated) will I have problems with the motorcycle in the spring? In the past I have run into problems with my old motorcycle (a YZF600) when I stored it with reformulated fuel in the tank. I always used Stabil or the Yamaha brand fuel stabilizer.

Steven Koper
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Like most techs I know, I don't like "reformulated fuels." They tend to cause more gumming and other fuel system problems as well as not being friendly to many types of rubber fuel lines. That said, if you put stabilized conventional gasoline in the system before seasonal shut down, you will have no problems in the spring.

Triumph Trophy Headshake

I have a 2002 Triumph Trophy 1200 with 12,000 miles. I have a head shaking problem. Whenever I roll off the throttle as I come to a stop, before applying brakes, if I lighten my grip on the handlebars, the front end will start building an oscillation that tries to go into something like a tank

slapper. I have never let it grow to see how bad it could get. It doesn't happen below 45 mph, and if I introduce it above that speed, at around 40 mph it is diminishing. To control it, all I have to do is slightly increase my grip. During normal riding, I don't notice it. What should I look into to stop this: Steering neck tightness, triple clamp alignment or frame?

Paul Maxwell
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Head shake on deceleration is usually either tire related or as you suggested, related to the steering head bearings. At 12,000 miles, it is time to take them down, clean and inspect them, and then lubricate and reinstall, observing proper torques.

Indian Starting Problem

I've built a custom bike using the Indian PP-100 engine. I bought the engine from Performance Assembly Solutions of Livonia, MI. They were under contract with IMC to assemble the PP-100 and were "stuck" with around 84 assembled engines and parts enough for many more.

Here's the problem. The bike is set up to be "kick only." It starts on the first or second kick after "priming" before the ignition is turned on. Once started, it runs smoothly.

When I shut the engine off, I cannot start it again until it cools down, way down!

I have replaced the ignition system entirely. Gone from a dual fire to a single fire coil, used the Thunderheart PP-100 Performance Package, incorporating the Smart Link software to set the module. Same thing happens (well it runs even more smoothly in single fire, or so it seems), starts right up cold, runs great, won't start hot.

The only things I haven't done (or changed) is to replace the "control center" for the ignition/electrical system or run a dyno diagnostic. At this stage I suspect that there is something not right about the intake, but what I can't fathom.

Tom Meisenheimer
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From what you said, since it starts fine when cold, but won't start when hot, the first thing I would look at is not electronic, but rather fuel. It sounds like you are running rich in your pilot circuit. I would check the mixture settings, but first, I would remove the air cleaner and see if the extra air helps any. Another thing I would check is to see if the enricher is being held on or is leaking.

Gastank Rust

I recently bought a 1983 Honda Shadow VT 750. The gastank has some rust in it. Is

there a product and recommended method to remove the rust?

Bruce Hendon
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I use about a 6" small steel chain shaken inside the tank to remove all the loose stuff, then get the chain out with a magnet, use the magnet again to get out all the big rust flakes, thoroughly wash out the tank with dish soap and hot water, rinse with hot water, dry with pressurized shop air, and then use a fuel tank sealer kit called Kreem. Make sure you carefully follow the directions and don't rush the acid wash or any of the other steps. It should turn out just fine.

Savage Running Rich

Jack (October issue) reported that his 1995 Suzuki DR350SE was running rich. I recently had a similar problem with my 2001 Suzuki Savage.

While troubleshooting the problem, I disconnected the vacuum line that runs from the fuel petcock. I noticed a slight smell of gasoline in the line. So, I left it disconnected from the petcock, capped off the open petcock nipple, and capped off the vacuum line.

End of problem. I suspect the vacuum diaphragm in the petcock was leaking and allowing fuel to flow through the vacuum line into the intake manifold. Now I just run the bike with the petcock lever in the "prime" position. Someday, I'll get around to replacing the vacuum diaphragm in the petcock housing (maybe).

I hope this helps.

Duane Carey
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It's an answer but not a great answer. The reason there is a vacuum line and control to the petcocks is that the inlet needle and seat which controls the flow of fuel into the carburetor's float bowl is not a perfect seal (ask anyone who's had a manual petcock and left it on for a day or three). The gasoline slowly seeps into the bowl when you are not riding, and when the level of the fuel gets high enough, it flows through the jets, down the intake tract, past the valves and into the cylinder. At this point a few "interesting things" can happen. Best case scenario, the fuel goes past the rings, washing the oil off the cylinder and contaminating the oil in the sump. This can actually lead to an explosion when the bike is run (not often though), but it always leads to the oil not lubricating things right. The other interesting thing is that if the gas stays in the cylinder, and the piston comes up, the gasoline does not compress, so, it can bend your connecting rods, break your piston

or other part that is weakest. My advice: fix the petcock.

Fall-related Front End Shake?

Several weeks ago I dropped my 2004 Kawasaki Meanstreak in a large gravel lot. As I raised my left foot to bring up the kickstand, my right foot suddenly slid out in the loose gravel. I fell hard, and so did the bike (right side).

Since that fall, when I brake really hard, the front end shakes. Normally it's smooth as always. Checked the rotors, set the fork tubes on jackstands so it's good and solid, less than .005" runout on both sides. With the front wheel off the ground, I can detect no looseness or coarseness in the steering head. Tires are fairly new Metzeler ME880s, properly inflated, and balance is good at all speeds. I've wiped the rotors with a rag sprayed with brake cleaner. Still got the shakes (hard braking only).

Any ideas on what might be causing this?

Ken Johnson
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It sounds like you may have tweaked the mounts for your brake caliper so that it's not square to your rotors. If the problem was fork related, you would feel it mostly on turns. If it was the steering stem, you would feel it all the time.

CB350 Four Missing

I own a 1973 Honda CB350 Four. The 350F has an engine miss that I cannot solve. It's an excellent original bike with 6200 miles on the clock. I first performed the following: thorough carb cleaning and rebuild with K&L carb kits, new air filter, points, condensers, plugs, ignition timing, tank cleaning, fresh gas and an inline fuel filter downstream of the petcock filter. I then checked valve lash (right on) and cam chain adjustment (fine). Cam and internals looked like new, with no visible wear. The carbs were carefully sync'd and everything double-checked. A warm compression test yielded 120-125 psi on all four cylinders.

The miss was visible with an inductive timing light, intermittently on both 1-4 and 2-3 coils. I then installed an NOS Honda coil/wire set that I had on the shelf—no difference. My voltmeter showed 13-14 V at the battery, and 12-13 V at the coils, depending on the engine speed. I even installed an ignition relay to feed battery voltage directly to the coils, along with additional ground wires for the engine and coils. Two different sets of NGK plugs were tried. I ordered and installed a new Dyna S electronic ignition, new 3 Ohm Dyna coils, wires, and plug ends. Beautiful hot blue spark on all cylinders, but the miss still prevails, with only some improvement to show

for all of my time and money. The centrifugal ignition advance works properly, and no other electrical problems can be found.

Important clues: the bike starts instantly and runs almost normally when cold, with only a slight miss. Then, as the engine warms up, the miss gets worse. Light and moderate-throttle cruising is the smoothest. The bike accelerates nicely under heavy throttle, but the miss gets worse. At low rpm (under 2000) the engine will often stumble and miss badly when attempting to accelerate. I cannot find any fuel-starvation problem, or intake/vacuum leak problems. Pulled plugs look medium-dark brown. I even tried a spare set of carbs and observed no difference in running behavior.

The best comparison I can make to describe the miss is this: Remember the way the old two-stroke bikes often ran at light throttle? Sort of a random but steady misfire feeling and sound? Even though the miss (or something?) is still visible on the inductive timing light, I now doubt it is (or maybe ever was) an ignition problem any longer. *Everything* in the ignition system is new.

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Since the timing light shows the stutter when the miss is occurring, it certainly sounds like you have an electrical intermittent. If you had not already changed them I would be looking real hard at the ignition coils because you say as the bike warms up it gets worse. I wonder if the problem is a simple bad connection in a plug-in bullet connector. It makes good connection when cold but as the bike heats up, the sleeve expands and the vibration of the engine is causing an intermittent breaking of the circuit. Intermittents are the bane of a technician's life because you never really know when it's fixed and you can't troubleshoot it when it's working. Your best bet is to monitor the bike as you have been and start flexing wires and connectors to try to make it fail.

Brake Upgrade For FLHRI

I want to upgrade my front brakes on a Harley FLHRI and am thinking about the six-piston Nissins. I want to know if they have anything that will fit. Do you have any clue how to contact them?

Mike Basse
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It looks like it will be custom fabrication time for you, and as always I need to add the usual disclaimer about safety and the fact that you are betting your life that it is going to work right and withstand the stresses that your bike will impart on the mounts, reaction mounts and other components.