

Clearing The "Fog"

Could you please share your opinion/theory on winterizing and fuel selection?

The local dealership mechanic says it is not necessary to "fog" 4-cycle engines. He says that unless you are going to store the bike in excess of 6 months, an oil/filter change, fuel stabilizer and battery tending are all that is needed.

Another well-respected local mechanic says to fog through the carbs until the engine quits, then pull the plugs and fog the cylinders and continue as above.

I have several bikes and would like your info on this. In our area, the fuels are oxygenated from Oct. through Feb. The dealership mechanic says this makes no difference in performance and actually may help due to the addition of alcohol which helps with the condensation issue.

What say you? What about brand preference of fuel—how much difference does it make? Also, generic vs. brand name gas stations? Lastly, the octane issue. My local dealership mechanic says unless I have a high compression engine (180 PSI+ cranking pressure), mid- to low-octane fuels are adequate, and high-octane fuel is a waste of money.

I. Pfeifer
Ipfeifer@adelphia.net

We agree with the dealer that said it is not necessary to "fog" a 4-stroke engine before storage. It is, however, important to change the oil and filter before storage. Oil in an engine becomes contaminated from the byproducts of the combustion process. Many of these products are corrosive, and you don't want them sitting in the engine for any long period of time.

Fuel stabilizer is added to the gasoline in the tank and the float bowls to prevent the decomposition of the fuel into a thick, varnish-like substance that will clog the jets and other metering holes in the carbs.

The use of a battery tender is recommended, but if you live in an area where the battery will be exposed to very cold temperatures while it is in storage, we recommend disconnecting it from the bike and bringing it inside while it's on the tender to prevent case damage from heating and cooling cycles. Be sure that the battery, while on the tender, is not near any sources of ignition, since some hydrogen gas can be generated and that can explode the battery.

Alcohols in gas do not really help the condensation problem since condensation happens above the gas level. At best it helps carry the water through the engine rather than letting it accumulate at the low parts of the tank. Your best bet would be to simply store the bike with the tank completely filled with stabilized gas.

Octane is the resistance of a fuel to detonation; it has little to do with power. If your bike runs well (no detonation) with a mid-octane fuel, save the money. (See last month's "Octane for Dummies" article.)

Why So Much Maintenance?

I own a 2002 Honda Gold Wing GL1800A. I love the bike. The maintenance schedule seems a bit overdone, though. For example, why is it necessary to change the brake fluid and clutch fluid every 12,000 miles, or spark plugs every 16,000 miles?

What do you think?

R. Fischer
mbapool@pcfl.net
Palm Coast, FL

Both the brakes and the clutch use D.O.T. 4 brake fluid for their hydraulics. While D.O.T. 4 fluid has a higher boiling point than D.O.T. 3 fluid does, it shares the same characteristic as far as its property of being hygroscopic—this means that it will absorb moisture from the air. Over time, this moisture promotes corrosion in the operating mechanisms of the units. In addition, if the moisture collects in the slave cylinders (especially in the brakes), it can be turned into steam by the heat of the braking action. This rapid buildup of steam can, on occasion, cause the brake to suddenly lock with disastrous results. Thus, change your fluids at least once a year.

Spark plugs operate in a very hot, high-pressure environment. Also, each spark removes a small amount of metal from the electrode or the plug's tip. If we calculate that your engine is turning an average of 3000 rpm while it's running, that every other revolution is a power stroke (created by a spark), after 16,000 miles the plug has been sparked 24,000,000 times. (1500 sparks [every other revolution] x 16,000 miles). It is actually time to replace the plug.

Homemade Air Filter Effects

I am a 30+ year rider and do 90% of my own maintenance work. My question is on air filters. I know exhaust modifications can require carburetion changes, but what effects would air filter changes have on the same motor?

Due to the high cost of factory replacement filters (about \$45 from my dealer) for my '99 Kawasaki Voyager, I gutted the paper element from an old filter frame and constructed my own filter using UNI foam filter material. At idle, I can change from the paper to the foam filter, and there is a noticeable rpm change; the idle speed will increase a little when I would install the paper filter. From this, I'm assuming that the paper filter passes less air at a given rpm, probably causing a slightly richer condition.

Overall performance and fuel economy is excellent—typically running in the mid 40's at legal highway speeds. I know this motor is very lean as delivered from the factory. Am I at any risk of going too lean here?

Has MCN done any work on evaluation of aftermarket replacement filters (Uni, K&N, etc.) and the measured effects they might have on a particular motor? Thanks for your attention, and keep up the good work!

Don Perryman
dperryman@indy.rr.com

Your idea of the more restrictive filter causing a richer mixture makes sense to us. However, the fact that the home-made filter creates less rpm suggests that it may flow less air, rather than more. Since we cannot see your bike and tell if the filter change is causing an over-lean or over-rich condition, our best advice is to examine your spark plugs. If they are bone white, your engine is lean. If the plugs are off-white to tan, everything is just fine. Dark brown to black indicates the engine is rich. Uni Filters typically flow nearly the same as stock while K&Ns are freer-flowing.

Oil Consumption Increased By Top End Overhaul?

I have a 1980 Honda CX500D with 149,000 miles. During a recent upper-end freshen-up, I think I may have caused the engine to begin burning excessive amounts of oil. Until recently, it would burn perhaps a half-quart of oil every 1500 miles, which I thought was quite good considering the bike's mileage. Recently, I lapped the valves for the first time (thoroughly cleaning the residue), polished the ports and combustion chamber, and fitted new valve guide seals. The valve guide ID's were all nearing the outer limits of their specs, but I decided to reuse them as-is, with a mechanic's prayer. I also removed the ring of carbon at the top of each piston's travel in the cylinder bore. Immediately after the freshen-up, the engine consumed a quart of oil in only 500 miles. Consumption has dropped since, but it still burns a half-quart every 500-750 miles. I can now smell a faint but steady odor of burning oil while riding, but no smoke is visible from the tailpipe except under very hard acceleration.

Considering the bike's mileage, perhaps I should not lose sleep over this, but what bothers me is this level of oil consumption only occurred after my work. I am specifically wondering if I caused this increased consumption by removing the carbon/oil residue from the top of the cylinders. After the fact, I vaguely recall reading something to the effect that these deposits should not be removed from the cylinders of a high

mileage engine because they act as a sort of additional oil control barrier into the combustion chamber, and that removing them can cause oil consumption to increase.

Did I do the wrong thing by removing these carbon deposits on the cylinder walls of my old engine?

Ron Graf
TRBODV8@aol.com

Let's start off with the premise that a 20+ year old bike with that much mileage on it will use some oil. The removal of the carbon buildup probably did not cause the increase of consumption since the buildup was above the rings. We would not really be too worried about an engine of this age that burns a quart in 750 miles (although it is a bit high; normally a quart per 1000 miles is considered normal).

The loss of oil is probably through one of two pathways. It is going through either the valve guide seals, or past the rings. We would start with a simple compression test. If the compression is okay, then the problem is probably the valve guides.

One way you may be able to easily tell is that if it smokes more on deceleration, it's the guides, but if it smokes more on acceleration, it's the rings.

Dyna Charging System Output

I have a couple of questions. I ride a 2002 Dyna SuperGlide and was wondering if you could tell me what the total watt output of my 32 amp electric system is, and what is the total draw in watts.

I run electric clothing and am considering running a second set but would like to compare the two numbers. I called my dealer and even the Harley factory and the best I get is "there should be plenty." While this may be reassuring to some, it doesn't do much for me. Many times in life it's the math that matters.

My other question is in regards to the vent hoses that come from the top of my cylinders and are routed into the aftermarket breather. When I run the bike hard I sometimes get oil in the breather and I'd like to vent them to a catch tube or somewhere else that isn't so messy.

Any help you can offer on these two matters would help me greatly.

Allan Howard
nomadmax@hotmail.com
Dayton, OH

The specified charging system output, according to the service manual, is in the range of 33–38 Amps @ 3600 rpm. This means that at running speeds, the wattage able to be supplied is between 422.4 and 486.4 watts (assuming a fully-charged battery at 12.8 Volts). Your bike uses approx-

imately 125 watts of energy to run with all standard lights on (including brake light and high beams; worst case scenario). Of course, this cannot include any aftermarket accessories that you have added and we are not aware of. You did not mention the make and model of the electric clothing you are using/planning to use, so we cannot determine what its current or wattage consumption will be. You should, however, have about 300 watts of energy available, but be sure that you leave a safety margin to allow battery charging and for slow speed, stop-and-go riding. We suggest that you use no more than 200 watts for accessories.

Dark Oil Is Typical?

I have a 1997 H-D Fatboy. I bought it four months ago with 7000 miles and it seems to be running very well. The shop's head mechanic has test driven it and says it runs/rides great. The vibration I feel is supposed to be normal, I'm told, and timing/compression tests all appear to be right on.

I questioned the mechanic about the very dark looking oil when I first changed it and the filter—he seems to think that the dark color is common with an air-cooled motor, but I have other bikes and the oil does not get as dark!

I am now changing the oil/filter every 1500 miles and it still looks dirty to me. Should I be looking for some other explanation? Am I overly concerned? Thanks for your help, I enjoy your magazine.

Don Faucett
dfaucett@msn.com

The dark color of the oil is probably due to carbon and other products of combustion that have gotten past the rings and is normal. If the bike runs great and has good compression (as you say it does), we would just recommend that you enjoy it and ride the wheels off it. Remember, there is no such thing as changing the oil too often.

More On Smokey Bandits

I have a 2002 Suzuki Bandit 1200S which I bought new in June. It now has just over 1700 miles on it. It has used ¾ of a quart of oil since the 500-mile service. I looked on the Internet and found several web sites for Bandits. After some research, I found that this seems to be an inherent problem with 2nd-generation Bandits. Some are much worse than others.

However, there have been considerably different responses from dealers and Suzuki reps on this topic. Some guys have received replies from Suzuki reps giving serial numbers for faulty pistons and had them replaced under warranty, while others have been flat-out denied any coverage at all.

I called my dealer and he told me he never heard of this problem, but was willing to look into it and perform tests for oil consumption. I live in PA and since it is February, my dealer told me they would like to see my bike in March or April when they can do test rides again.

Have you heard of this problem? I have subscribed to your magazine for five years now and cannot recall this topic being discussed. Not to say you haven't, I just can't remember. I would really appreciate any information you could provide on this topic. I would like to be as well prepared as possible for my return visit to my dealer. Thank you very much for your time.

Mike Lehr
K12rs@aol.com

This issue was first mentioned in the Jan. 2002 Downtime Files and again in the Feb. 2002 Letters section. However, in general, the industry standard for oil consumption is one quart of oil for every thousand miles of travel. You indicate that your bike is using ¾ quart in 1200 miles. This is not excessive. As far as the defective piston replacements, as far as we know, this was not an oil control issue. At 1700 miles, the piston rings should be fully seated and if the engine was broken in properly, the consumption should remain stable from this point on.



Downtime Files

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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:

MCN Downtime Files
P.O. Box 6050
Mission Viejo, CA 92690

Send e-mail questions (with any attached images in jpeg format) to:

editor@mcnews.com
Subject Line: Downtime Files