MotoMan

Power News Magazine

Presents:

The Need For Speed !!

Hello Power News Fans !!

I'm excited to report that Power News is reaching the auto racing scene, with people from some the biggest NASCAR & Import racing teams signing up !!

By studying as many different engine types as possible, we can all become much better tuners.

Even if you only own or specialize in tuning one vehicle type or brand, most of these principles apply to all modern engines, so the key to becoming the best is to learn about a variety of different designs.

This issue features feedback and information from real people who have tested the info on this site, and applied these techniques to improve the power & driveability of cars, motocross bikes, ATVs, Harley-Davidsons and of course motorcycle roadracers & streetbikes !!

And now ... it's time to feed the need ... the need for speed !!

V i e w e r F e e d b a c k

Moto X and ATV Riders Are Flyin' With High Velocity Ports !

MotoMan:

Are You For Real ???

I am an engine builder primarily for ATVs, or racing quads and I am always looking for more ways to achieve the e on other builders. I stumbled onto your page somehow and I will tell you that I have come up with some interesti results. I still have my doubts, but I attribute them to my ignorance from lack of experience. I recently built an experimental Honda 400ex engine for myself to test. If you're not familiar, its a radial, 4 valve head engine. I hav flowed this head until I am blue in the face and found the better I make it flow, the more narrow the power curve Flat and simple! I get more power, just very narrow and subtle. I read your article and decided to take a chance, bought a case of JB weld and started to work. I didn't exactly copy what you said in your article, because I still ha not fully grasped how to figure air flow profiles. But I did decrease the size of the runners by 25%, and aimed the intake directly at the back of the valve.

The results blew me away, I mean blew me clear away.....

I sold this engine to a customer and you can see his results on www.rageatv.com under the STQRA points section is a virgin racer and has taken his quad to victory in virtually every race with this engine. My results are, the engir

now makes a longer more usable torque curve than the original head configuration. I have learned a lot from this experiment and this makes me look at motor design in a whole different way.

Thanks for pulling my head out of the sand ...

Avid Reader,
~ Dee
Rage ATV Racing
www.rageatv.com

Hi Dee !!

Right On !!

You've discovered something that will be the subject of a future issue of Power News... the importance of a broad power range over just increasing the peak power. The speed advantage is astonishing, but since the popular emphasis is usually on the peak HP number, not many tuners concentrate on this.

The high velocity porting articles are just the tip of the iceberg ! I'll be revealing many more engine secrets which will enhance this effect, as well as how to make even more power now that you have the high velocity porting as the starting point !

Taking a beginning racer straight to the winner's circle is quite an accomplishment, congratulations on your success and keep up the great work !!


Sincerely,
~MotoMan

MotoMan,

Velocity porting sucks and micro ports really suck! He he he, the {Yamaha} YZ250F that I sent pics of put out 38 some rear wheel horsepower. It gained power all the way up. More power everywhere. The only thing we did was the velocity porting. We wanted to see a direct and equ comparison.
The YZ rocks !!

Over and out Motoman.

~ Scott.

PS, Honda should have listened to Motoman. The new 600RR ports are gigantic! Much bigger tl the F4i. I will be Micro porting my TT600 in the near future. I expect big results !

Tried smaller ports on my son's {Honda} XR 200, INCREDIBLE DIFFERENCE particularly down l

~ Leigh
(Temuka, New Zealand)

Sharp Reader Catches MotoMan Sleeping !!

Hi MotoMan !

Great new issue of Power News. (The Factory Superbike) I've got another clue for you on the drilled shift drum. You don't see this so much on new bikes as they shift great - but I'm racing old '60s era 160 and 175 Hondas in 250 Vintage, and lightening the shift drums as much as possible really helps with missed shifts. The drums have so much inertia that a good solid boot on the shifter often sends them past the next gear into a false neutral between shift drum positions. Lightening the drums reduces the inertia - resulting in fewer missed shifts. I wouldn't be surprised if that was part of what they were going for with the lightened drum in your article.

Speaking of the small Hondas - I'm planning on trying some of your high velocity porting ideas on some of our little vintage roadracers this season. I'm looking forward to seeing what happens.

Cheers !

Michael
www.groupwracing.com

The Shift Drum Solutior

Hi Michael !!

Yes .... I think you've nailed it ! I can honestly say that that idea never crossed my mind.

I'll be covering the inner workings of transmissions in a future article of Power News, but in the meantime, you've given us all something to think about !

Thanks for your contribution !

Sincerely,
~MotoMan

The First Power News Reader To Use High Velocity Porting On A Car

This e-mail was in Spanish, which I'm working on learning.
I just had to try out my translating abilities. Can anyone tell me if I got it right ???

MotoMan:

Te comento que me dedico a desarrollar tapas de cilindros para una categoría de autos muy importante en Argentina y también para superbike. Tenemos un Superflow 600 un Dino y un banco de freno hidráulico para los motores de autos.

Leí tus notas sobre lumbreras supersónicas y me interesaron mucho.

MotoMan:

I dedicate myself to cylinder head porting for very important category of cars and superbik in Argentina. We have a Superflow 600 flowbench, and a hydraulic brake type dyno f testing the horsepower of car motors.

I read your articles about supersonic ports, a I was very interested.

I tried smaller ports, but not as much (85%) {Note: Meaning a choke point height which is 85% of the valve diameter rather than 65%}

Yo probé lumbreras chicas pero no tanto (85%) con buenos resultados. Tenemos algunas dudas, que si no te molesta te preguntaremos mas detalladamente en un mail mejor armado. Muchísimas gracias, ~ Gabriel F. / Bs. As. (Argentina)	with good results. We have a couple of doubts, {questions ?} ar if you are not bothered by this, we could ask you in a more detailed letter, with more details. {The direct translation of "armado" is "ammunition", which I interpreted to mean details, proof etc...} Many thanks, ~ Gabriel F. / Bs. As. (Argentina)

Important Safety News: Tip Over Switch !!

Hey Motoman,

Excellent site it gets better and better all the time!

You certainly are rocking the established $$$$$$ tuning shops.

Still waiting on the GSXR600K but before it arrives how do I get round the troublesome tip over switch problem ? I can disarm the darn thing as you show in Power News but the ACU {Race Organization} require us to prove that a tip over switch is actually operating !

Any ideas ?

I thought of insulating most of the horseshoe ring except for a tiny area at the opposing extremities, or is this still an accident waiting to happen ?

Cheers for now,

~ Eddie
(Scotland)

Thanks for the info on this site. I just bought a brand new 2003 Suzuki GSX-R 600, and it shut on the first day. It had only 15 miles on it when it shut off (i bought at 0 miles). So this is exact what was wrong with it. The Tip Over Switch.

Do you really recommend putting silicon in it?

~ Abe

The Tip Over Switch

The tip over switch is still a big safety hazard which, as far as I know has gone un-addressed by the racing organizations. I know of many riders who have disabled their switches and have since crashed many times without the bike going up in flames....

... but with the switch disabled, a bike-melting fire is a possibility.

Most people would agree that it's far better to risk a ruined bike in order to avoid the persona danger of getting hit from behind, but disabling the switch it's still an incomplete solution.

Here's the best alternative solution I've come up with so far. It's a tether switch, which will shut off the bike only if the rider crashes:

http://www.mpsracing.com/products/MPS/hc01.htm

Smaller Ports on Harley Davidsons ??

Hey MotoMan:

I have indeed practiced your technique of port shrinking with J-B Weld on 2 of my personal bik and the engines have not shown any signs of indifference in the (HUGE) power gains associate with your porting techniques.

Both of these engines have only been ran just over 3000 miles and both were broken in very ha as is my standard practice for years just as your Break In article pertains to.

The 2 Harley engines are running to good to tear them down just for a "look and see" and thou you may have some input for me as to what I can expect out of the J-B Welds lifespan ??

Thanks,

Mike

Hi Mike !

It's so cool to hear from you ! As far as I know, you're the first Power News reader to use epoxy in a Harley ... righ on !!!

In over 10 years I've never had a problem with JB Weld coming loose or deteriorating. It's just very important to c the surface so it's 100% oil free before putting the epoxy in. I don't know if it lasts forever, but at least a very long time.

What I'm wondering is, more specifically, how did your bikes run ... more mid-range, top-end or both ?? Also, did do more things to the engines, or just the porting... (like cams etc...) I'd like to feature your results !!

Sincerely,
~MotoMan

Hi MotoMan,

The 2 Harleys I used the J-B Weld shrink porting on were as follows. One stock 2000 FLSTF Fatboy with the 1450 Twin Cam motor and a 2002 XL Sportster 883 c.c. that I did a 1200 c.c. conversion on. To start with both bikes ha the minor upgrades like a K&N air filter, carburetor jet/needle kits, and better flowing slip -on style exhaust cans.

I chose to use Wiseco 10:5:1 forged dome top pistons on the Sportster, along with 536 lift Screamin Eagle Cams, fully programmable Hyperfire ignition system and single fire Crane Coils. I'm a porter by trade and have experimer with J-B Weld shrink porting on "much less expensive" and smaller c.c. engines with "great results" and finally ran across your well written article to confirm it.

Your "Outside the Box" thinking is what it's all about and I'm extremely grateful to see it in print on the mototuneu website. I can't tell you how many times I've tried to convince my customers the advantages of shrink porting to n avail, all of the typical hype about massive flow numbers, huge titanium valves, and "mirror polished" port chambe "eye candy" have ran deep into the closed minded pockets of many a Harley Davidson owner. Again, I'm glad to s in PRINT !!!

With a moderately mild clean up of the casting lines and dimples, blending in the valve seats into the port chambe and shrink porting ... the 88 cubic inch 1450 c.c. Fatboy will eagerly spank a well built 95 cubic inch 1550 c.c. SuperGlide Sport.

The Sportster ... once a mild mannered 883 Hugger will now spank a 115 H.P. VROD in good fashion leaving a BL look on the VROD owners face. Both of these bikes crank easier, warm up faster, idle smoother, accelerate like we tuned Ninja's and the torque curves are absolutely straight with no dips from idle through wide open throttle. Thes bikes run exceptionally clean too.

In my experience, there is NOT a cylinder head that cannot be improved on ... whether it's stock equipment or aftermarket ! At one time or another I've had them all in my shop to be freshened up and have seen some strang things to supposedly suggest high performance porting. Trying to explain this shrink porting theory to a customer has only read about massive flow numbers from one of these websites is almost impossible, especially when they already have shucked out $1500 for the eye candy.

Anyway ... Thank You for your great articles and please keep them coming as they are appreciated.

Respectfully,
~ Mike

Very Impressive Job, Mike !!!

Sincerely,
~MotoMan

Brilliant !!

Long time Power News reader Phil Seton is really making an impact in the UK !!

He was one of the first readers to test the high velocity porting, and it's paid off in both his tuni business, and on the racetrack. Phil handily won the British Motorcycle Club's 600 Supersport Championship by a solid 81 points over his nearest rival !

Congratulations Phil !!!

(Look at all those trophies !!)

BMC 2002 600 Supersport Championship Points:

1 Phil Seton 331
2 Paul Seward 250
3 Darren Clarke 208
4 Kenny Burns 165
5 Martin Buckles 141
6 Chris Gregg 139
7 John Barnett 119
8 Sam Green 115
9 Jamie Holmes 113
10 John Woodhams 102

Phil Seton - Racer/Tuner

These superb racing photos are courtesy of Martin Heath Xtremephoto !!

If you're in the UK and looking for someone to do high velocity porting & championship winning engine set-up,

I highly recommend contacting Phil Seton personally.

Here's his website:
http://www.seton-racing.co.uk

Here's a direct link to contact Phil:

http://www.seton-racing.co.uk/contact.asp

Subject: College Options?

Hey MotoMan,

I am a senior in high school trying to decide where I want to go to college. I am very interested sportbikes and pretty much anything with an engine. I am a computer geek and I have been planning to go to school for computer science. Lately I have been straying away from that path don't know if I would like to get into engineering or just become a wrench monkey.

My grades aren't entirely great, but I have a good ACT score. Like you, I spaced off in school w the other kids learned how to memorize patterns to get an answer without understanding what they just did (math). I only came out of my daydream to turn the page ... something I don't pla to do in college.

Any suggestions would be greatly appreciated!

Thanks for Power News. I love it!

~ Scott

Hi Scott !!

I'm very glad you asked !

Here's my take on the situation: most engineering students will do the same thing.... pick the m prestigious school they can afford, and learn the same math-science-logic related things that everyone else attending engineering school is.

There's nothing wrong with this, but in a competitive field like engineering, you need an advant to get past the "cutting edge" !! Daydreaming is really not all that bad, because you're actually exercising your creative left brain abilities !!

(Educators don't generally recognize this ... and such students are usually labeled " problem ".)

In the *Factory Superbike Spy* article I spent a good deal of time talking about the concept of th right and left sides of the brain. I hope you were paying attention for this part, because it's goi to give you a
Huge advantage that few people are aware of ...

Spock & Dali are analogies I used to illustrate these 2 distinctly different ways of "Knowing" ...	Left Side of The Brain  **Mr. Spock** (Scientific - Logic)	Right Side of The Bra  **Salvador Dali** (Artistic - Creative)

Here's my advice ...

Memorize this fact: The easiest thing to do is to memorize facts.

Now, take some time to think about this one: The hardest thing to do is to develop the ability see things from a right brain perspective.

Developing new concepts and improving on old ones requires knowledge of " Engineering ", but doing really great things in engineering requires innovation and creativity !!
Top mechanics have excellent spatial-relationship skills, which is mostly a function of the right side of the brair

Find the best engineering school you can afford ...

.. since you're unlikely to find an engineering school which equally develops both left and right brain concepts, you've got to take things into your own hands:

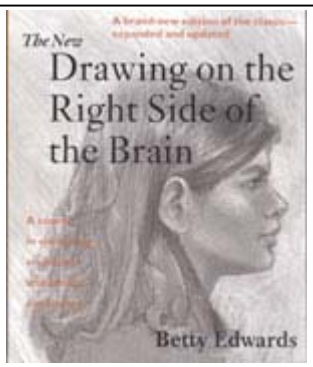
Here's an amazing book, which I highly recommend to everyone reading Power News:

This book teaches techniques for learning to tune into to the often less developed right side of the brain, in order to learn to see visual images as they actually are.

The reason that most people stop progressing in their ability to draw, is that our left brains usually take over at an early age.

Here's the website for the book which explains it all:

http://www.drawright.com



This Book Rocks !!

My last advice for continuing education is

Keep reading Power News, as we continue to venture:

Beyond The Cutting Edge

The Subtle HP Trick

Yes, it was very hard to "see" the power trick mentioned in the *Factory Superbike Spy* article !! It's subtle, but definitely not unimportant.

The clue was the crankcase breather vent on the right.

It's natural to tear an engine apart looking for the obvious stuff like porting and pistons etc. This power trick is harder to notice, because you must use your "right brain" to get it !!

The trick itself is evident in 2 sections. Notice the 2 semi-circle openings between 1-2 and 3-4 cylinders, and the same in the matching crankcase area.

When they fit together, form a "window" between the cylinders.

What's The Purpose ??

Drum roll please ....

V i e w e r F e e d b a c k

I'm guessing the subtle hp trick is a divided crank case with "windage" holes between cylinders and 2, and also between 3 and 4. These would serve to move crankcase air between cylinders opposing strokes and reduce pumping losses due to the piston having to push air out of the wa on the down stroke and vice versa on the upstroke.

Colorful site, by the way.

~ Bob
Santa Cruz, CA

Hi Bob !!

Excellent !! I couldn't have said it better myself !!

Thanks,
~ MotoMan !!!

A Power Secret of The Yamaha R6 Can Now Be Revealed ...

Here's a feature that Yamaha employed which was not mentioned in their sales literature.

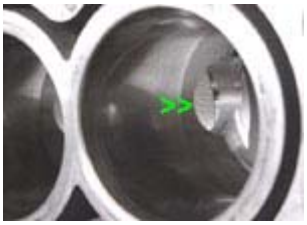
Due to the lack of a "tip off" by Yamaha,
this trick almost went unnoticed ...

Whenever you're taking a new engine apart, spend some time looking for things that don't have any apparent

Look:

purpose. Sometimes you might even "see things" !!

Be alert ... the world needs more lerts ... :)



It's the 'Subtle HP' trick !!!

This is a valuable technique for minimizing top end power losses, and Yamaha made some bo advances in '99 when they built the first production 600 to have a **15,000 RPM** redline.

It's possible to do this yourself if you're very careful & patient. I hand-machined out my '91 F superbike
cases the same way using a porting tool, but it took more than 4 hours !!

Philosophy 101

MotoMan, here's a quote is for you to use on your site.

~ Marcos
(Dominican Republic)

**"All truth passes through 3 stages.
First, it is ridiculed. Second, it is violently opposed.
Third, it is accepted as being self-evident."**

~ Arthur Schopenhauer, 19th Century Philosopher

Uh Oh ... you know what that means ...

... time for another installment of:

" Break In Secrets "

Part 4

Welcome To The Impossible Piston Museum !!!

Here are 14 pistons from 14 different bikes, some are from streetbikes and some from racebik

These specimens came out of 750 & 600's of the genus
Motorcyciluss and the species *Kawasaki, Honda and Yamaha* ... if you look hard, you may even spot an elusive *Honda* of the ultra rare sub species *Cosworth*.

According to our best scientific dating, we feel certain that these all must have existed some ti late
in the last millennium. Although some of these species are now on the verge of extinction, many examples can still be observed in the wild.

All of them defy the law of ... well I don't know what it's called, but ...
whatever law it is that says you can't have a phenomenal ring seal !

Take the museum tour by clicking on the small pics to see the larger version:

A few notes to make your tour more enjoyable:

It looks like there are more than 14 pistons, because the area in the photos overlap.
It's 3 segments of a panorama photo to give you multiple views of this extraordinarily rare collection.

The pistons have been stacked for display purposes only, they aren't going back into engines
Always be **super careful** when handling pistons, as the aluminum is soft and very easily dente causing combustion leakage, and friction ... neither of which is good for power.

All of the engines had the correct jetting, the reason some have black carbon deposits is becau they were run on "pump gas", which burns dark regardless of the jetting. Whereas the lighter c were run on oxygenated race fuel, which gives a very light tan to gray color. (Many of the bla carboned
pistons were from racebikes.)

As in any museum, some of the specimens are better examples than others,
but the point is that none have any leakage past the top ring, because they were all broken i by the method described in the *Break-In Secrets* article !
The only impossible thing about these pistons ... is that it's impossible to achieve this result with a gentle break-

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Disclaimer:

Absolutely no photo altering or physical cleaning of the pistons is allowed in the museum !!
We run a legit exhibit, and all the artifacts on display are 100% genuine.

... we interrupt our regularly scheduled program to bring you some ...

Really Bizarre News:

Have you ever noticed that some people seem have a natural "Engineering Instinct" ??

Warning: this isn't going to be one of those stories.

After parking the car in the middle of the lot, the driver mysteriously took off and left the car running, (notice the exhaust.) Witnesses said that the driver was seen **jogging up and down the road** in the background. Someone sleeping or perhaps **passed out** in the passenger seat.

The driver returned after the police were called, and was found crouched under the stack of wood **behind the re of the car**,
attempting to cut the **strings** he had used to secure the massive load !!! Fortunately, the police arrived and stopp him before the
wood slid off the back of the car and **crushed** him.

The materials were loaded at a popular building supply company. In order to release the company from the possib liability problems associated with helping to create a rolling death-projectile, the quick thinking store manager mac the customer **sign a waiver**. The huge ungainly load of lumber is bad enough, but look close in the back seat --- contains 10 bags of concrete weighing 80 lbs. each !!! The total load weight of the supplies was estimated to be o **3000 lbs**.

What about the car ?? Both rear tires **exploded**, the rims were **flattened** and the upper mounts of the rear shoc had been **driven** up into the trunk !!

They just don't make cars like they used to. ;)

The Astounding Honda 2003 CBR600 RR

Hello MotoMan,

Taking your advice on a controlled hard break-in, I was absolutely astounded to see the difference. I picked up my RR this weekend which will be my new race bike. I pushed it into the dyno with .4 miles on it.

Following your instructions, I started recording HP on the full throttle runs. 101, 102.5, 103.
Cool down... Ran another set of full throttle runs and hit 104. And it's STILL CLIMBING.

Absolutely amazing to see this out of a bone stock bike straight off the showroom floor. The thing that I found as neat was watching the HP increase as the rings seated in. Every run it gets stronger, and I'm confident that I still 1-2 more HP to gain as it finishes wearing in. It only has 9 miles on it, all of which from the dyno. I look forward t

getting it fully broken in and onto the track!

Your concept simply makes sense, and I'm glad that I found it and followed it.

Feel free to post this on your site or distribute it if you wish. People should really find out what they're MISSING!

Oh, another thing... In your article, you might offer up that a gentle street break-in (for the first 300-600, 1000 mi or whatever the manual says) is more for the RIDER and non-engine parts of the bike than for the motor. (as you realize) The tires, brakes and rider are breaking in together and a gentle few miles will keep the bike upright. This why I feel that manufacturer's include the "gentle break in" in their manuals.

Thanks. Talk to you later ...

~Jeffery

http://www.cbr600f4.com
http://www.cbr600rr.com

One often asked question is, how does the break-in technique apply to Yamaha's ceramic coated cylinders ??

Click Here To See:

Yamaha's Ceramic Coated Cylinders

Unlocking The Mystery

Actually, there's nothing "mysterious" about ceramic coated cylinders as they relate to break-in !

The ceramic coating is first applied, then honed out to achieve the exact same rough crosshatched finish as used in steel cylinders.

(Suzuki's Nikasil plated cylinders have the exact same crosshatching a break-in the same way also, they're just made of a different material

Without the roughness provided by the crosshatching, the hard meta rings wouldn't be able to wear into a perfect seal with the cylinder.

Why Does Yamaha Use Ceramic Coated Cylinders ??

The main advantage of ceramic coated & Nikasil plated aluminum cylinders over the traditional solid steel ones, is their lighter weight.

An additional benefit of ceramic is it's ability to insulate heat.
Coffee mugs are usually made of ceramic for the same reason

It's the expansion from heat which ultimately drives down the piston Since ceramic cylinders retain more of the expansive heat rather tha letting it
"soak" out into the water and oil, there is a small gain in thermodynamic efficiency, and therefore power.
.

What about the piston rings ??

The question of whether the piston rings are also made out of ceramic has been raised a few times ...

Magnetic Attraction
The rings Yamaha uses in their ceramic cylinders are metal.

How Well Does It Work On The Ceramic Cylindered Yamahas ??

Re: The *Break-In Secrets* Article

Yamaha FZ1
600 miles ago I asked...which is best way to break-in? Like the manual says or, ride it as described at
mototuneusa.com/ ???

I chose the Mototune USA method.

My buddy, who bought an identical 2002 FZ1 same day as I did, chose the owner's manual method.

I know other factors may be at play here but, My Fizzy SMOKES his in any gear at any RPM. He 100lbs heavier than I but we switch bikes and both feel the difference.

Note: Any weight difference between riders will make a huge difference. The reason I posted th is because the riders also traded bikes. This is an important observance of the scientific methoc

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Triumph Daytona
A Power News Reader Posted This on the Triumph Forum:

Has anyone seen the recommended break in method on mototuneusa.com ? I did it on my bike and I think it worked because I have 2 friends w/ Daytonas that did it the Triumph way and mi makes more power than theirs do. I think it makes sense.

Why ??

MotoMan,

I read your write up on the break-in period and while I think there may be truth behind it. I hav one single simple question; Why should people take your advice over the advice of paid, experienced, Honda (or Suzuki or Kawasaki or Yamaha or whomever) engineers who spent the

time, R&D, effort, and actually designed / built these engines?

I look forward to your response.

-JP

Hi JP,

Thanks for writing !! This is a very reasonable, and frequently asked question. Please don't be p off by my answer .... it may seem kind of harsh, but it's been backed up by massive amounts o scientific research and study.

Even with highly educated and intelligent adults:

Authority always trumps logic & scientific evidence.
Authority always trumps logic & scientific evidence.
Oooops, I said it twice

While the engineers may seem to always be at the top of the " knowledge food-chain ",
I assure you they're not.

Read on, my thinking out of the box friends ...

The Telephone Call

RRRRrrrriiiiiiiinnggggggg !!!! ..... RRRRrrrriiiiiiiinnggggggg !!!! .....
RRRRrrrriiiinnnnnggggggg !!!! .....

Oooh noooooooo the phone's ringing !! ..... Grrruuuuuunnnnnnt !!! .....

why does it always have to ring when....*RRRRrrrriiiiiiiinnggggggg !!!! .....* ... don't hang up ...

.... just another second ...
Grrruuuuuunnnnnnt !!! ....*RRRRrrrriiiiiiiinnggggggg !!!! .....*

I'm almost done in here ....

Grrrrrrrrrrruuuuuuuuuuuuuuuuuuunnnnnnnnnnnttttttttttttttt !!!

RRRRrrrriiiiiiiinnggggggg !!!! ..... *RRRRrrrriiiiiiiinnggggggg !!!! .....*

Whew ... I'm done .....

this better not be a telemarketer !!!!

(MotoMan puts the wrenches down .... slams the garage door ..... and sprints into the house like a Olympian going for the 50 meter gold medal.)

Cooool ..... it's long distance from Norway !!! It's Jørgen !!

Jørgen: Hi Buddaaaay !!! Good ..... how's it going for you ? M-M: Fantastic, what's up ???

J-Man: Well, Power News is looking good, but you're missing something big.

M-M: What's that ???

J-Man: Well, you mentioned the embarrassing fact that at the factories in Japan, the new engin are full-throttle revved to redline at the end of the assembly line on a rear wheel load dyno ...

M-M: Yup ... I don't pull any punches when I write Power News ... I think the readers appreciat that.

J-Man: Of course, but ... actually:

The manufacturers don't just rev the new engines to redline once, they redline then many times through the gears !

That's a lot of full throttle trips to redline !!

This amazing factoid courtesy of:

~ Jørgen Johnsen
Fast Bikes /// Oslo, Norway

Now ... you were probably **wondering** about something while the phone was ringing ...

" Why didn't MotoMan just run into the house and answer the phone right away, instead of continuing to struggle to torque those last 3 really big engine bolts ???

Huge Safety Issue:

A bolt that's been installed "finger tight" looks exactly the same as one that's been fully tighter Many major mechanical failures and bolts falling off have happened from the mechanic bein distracted
by ringing phones, conversations, curious bystanders ...
... and pretty girls walking through the pits at the racetrack ;)

Remember:

Someone's life is in your hands whenever you're working on a motor vehicle.

Never leave a motor with untightened bolts ... and never talk on the phone while wrenching

... and that's no joke

" The Big Picture "

A factory technician gives a shiny new bike the
" Pin-It-To-Win-It "
high RPM blast thru the gears !!

Meanwhile, the next one in line gets ready for the same treatment.

Yep, It's True:

The Manufacturers Have Been Totally Contradicting Their Own Rules About Break-In Since At Least The Early 80's !!!

According to conventional wisdom, all new engines are severely-damaged right at the factory

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5 Different Explanations For This Photo:

1) That's MotoMan in the photo.
He managed to find an early '80's motorcycle which was never used, bought it, set up a fak motorcycle factory in his basement, put on the white suit, and had one of his buddies photogr it !!

2) MotoMan truly is the Evil Master of Photoshop.
Pixel by pixel, in a stunning display of artistic deception, he has painstakingly created an artificial scene which has never actually existed !!

3) This is a motorcycle factory in a parallel universe.
The manufacturers don't redline new engines in this dimensional plane ... no way... period !

4) The Manufacturers only use a light throttle setting and gently rev the engine to 4,000 RPM
It's true that we can't determine the RPM and throttle setting being used in this photo.

But, then that would mean that all of the actual witnesses to the full throttle MAX rpm treatm can't tell the difference between the sound of an engine at 1/3 throttle and 4,000 RPM and or that's being screamed at full throttle all the way to redline.

There is one more possibility:

5) The Manufacturers have been full throttle revving new bikes to the MAX for at least 20 yea which directly contradicts what they say in their owner's manuals.

This can be an uncomfortable bit of info, because of the much stronger tendency toward automatically believing what we're told, instead of actually thinking about what we're told.

What if what "we're told" is wrong -- what happens then ???

In racing, this is a recipe for what I call

" the mid-pack blues"...

Most people automatically do what "were told" ... so most people automatically do exactly the same things.

If you only do what everyone else does, then you'll be permanently stuck competing in the middle of the pack against "everyone else" !!

The winners are somehow able to break free from the pack,

and fearlessly search for ways to do things better !!

Winning becomes much easier once you realize that most of your competitor's actions are easy to predict

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Screeeeeeamin' All The New Car Engines

Re: The *Break-In Secrets* Article

I often visit car manufacturers assembly lines and when the engines are assembled they are all tested for various faults, oil leaks, ignition faults, compression, etc. These hot test beds are basically computer controlled dynos and take the engine ***several times through the entire r range*** as well as holding at preset rev points for preset amounts of time.

What I cannot reconcile is the harshness on the factory hot tests with the ease/duration of mar of the manufacturers break in procedures.

All The New Ducatis Must First Sing Soprano In Bologna

Re: The *Break-In Secrets* Article

I toured the Ducati factory a year ago, I remember being shown a booth near the end of the assembly process where each engine was put into through ***several high rpm runs*** while hook up to some fancy looking (to me anyway) equipment. Each bike went through this.

At the time I though it was odd since it was clearly not being treated in the way
the owner's manual suggests for a new engine.

The Closed Information / Knowledge Loop

At first look, it's hard to believe that the Manufacturers could keep a big secret like this ... leas all keep it well hidden for 20 looooong years. We are led to think that since it's impossible fo people
to keep a secret, this sort of thing can't happen.

Many people criticize this site because:
" If it were true, someone in the motorsports press would have revealed this info by now. "
