The Kawasaki Ninja 250 FAQ



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About the ZX-2R Model

What is the "ZX-2R"?

Jeb - Sun Sept 15 13:16:39 2002

The picture on the home page is not of my bike, exactly, but it's rather a concept image of what my bike is in the process of becoming. When I got my Ninja several few years ago, it was mostly stock. I then sat down and drew up a design in Photoshop for what I wanted the bike to look like. My real bike looks practically identical to the image on the FAQ home page, minus the seat cowl (not yet complete, but the prototype is coming along nicely), and the lower fairing (painted flat black right now; I might paint it red later).

I've dubbed my Ninja design "ZX-2R," but that not it's original meaning. ZX-2R was originally a nickname for the ZXR-250, which is not sold in the U.S. However, Ninjas of larger displacement follow this naming convention, as is described in more detail on the ZX-2R decal page.

Anyway, I like my design well enough to make it the mascot of the FAQ; a presentation of the potential of the EX250 as a motorcycle, not just as an excellent bike for the beginning rider, but also as a very capable sport machine with a little work.

The Ninja 250 FAQ has always been a site free of third-party advertisements, and it will remain that way. However, it does require a significant amount of work to maintain the FAQ, and so I feel justified using this space for promoting a few products of my own design, the ZX-2R decal kit and seat cowl.



Can I get ZX-2R decals?

Jeb - 13 May 2004

I've never particularly liked the model name "EX250." I think it's a shame that Kawasaki came up with a ZX# model designation for its line of Ninja sportbikes, but left out the 250cc and 500cc models. There's the ZX-12, ZX-11, ZX-9, ZX-7, ZX-6... and the EX250 & EX500. Well, I decided to come up with a ZX-2 logo, and combine it with some 'Ninja' and 'Kawasaki' logo decals, to make a kit to refurbish the look of the bike, and make it stand out a bit more.

The kit components were modelled after the current ZX-6R graphics configuration; simple, clean and attractive. The vector design for the ZX-2R logo itself is not as streamlined as the present ZX-6R logo; it is instead derived an earlier ZX-6 design, which is blockier. I did this because the Ninja 250 is built on a 1988 platform, after all, and I felt more rigid lines would better match the angular fairing design.

The kit comes with one pair of 10" 'ZX-2R' decals, available in white, silver or black. Also included are two 7" 'Kawasaki' decals in white, silver or black, and two 5" 'Ninja' decals in white w/ black shadow, silver w/ black shadow, or black w/ silver shadow. A 'ZX-5R' kit is also available.

The kit is $40 shipped, which is very reasonable if you compare to the vinyl kits available from www.tapeworks.com, for example. Please email me if you are interested in ordering a set, or would like more information.

Is a seat cowl available for the Ninja 250?

Jeb - Thu Sept 7 22:34:17 2003

The only seat cowl available for the EX250 at this time is made by AirTech Streamlining. It looks similar to this, and requires permanent seat mounting and alteration for the tail lights.

I am presently working on a seat model which will allow retaining the stock seat and tail configuration; the only part that will require removal will be the rear grab bar. It is still in the early modelling phases, but will hopefully be ready sometime in the Spring of 2004. It should look very similar to the cowl on the FAQ home page.

Newbies

I want to know more about the Ninja 250 motorcycle.

What is a Ninja 250?

Jeb - Thu Nov 11 3:48:42 1999

The Kawasaki Ninja 250R, or EX250/GPX250, is the smallest in Kawi's rather large line of sportbikes, both in weight and displacement. First released as the E in 1986, then the F after a redesign in '88, it has remained largely unchanged to this day.

The 250 is a light, quick bike, which the experienced rider can reap much performance from. Still, it is designed in its stock configuration with the beginner in mind, and is tuned to be easily manageable; it is a bike that grows with its rider. Emphasis with this Ninja is placed on its excellent handling characteristics and reliability, and less on acceleration and contemporary design.

While the 250R is the only sport bike available in its class in the United States, it well fulfils the need for a bike in that class. It has acquired and retained a faithful following of those who desire a fast, crisp ride, but don't require the high torque of a larger-displacement bike. With an MSRP of only $2999, easy maintenance, excellent fuel economy and insurance premiums among the lowest in the market, the Ninja 250 is full-featured motorcycle that is easily accessible to any wanting to ride.

What kind of performance can I expect out of it?

Chris - Tue Nov 9 14:38:13 1999

I'm 17 and I've been riding my Ninja 250 for about a year (my first bike as well). I had some limited experience on a Honda 400 prior to my MSF class. I had some time on both the 125's and 250's, I found it to be a lot quicker and better-responding then both of them; I think it also outperformed the 400 in both acceleration and handling.

It's a really light bike and handles like a dream. It will out-accelerate all but the most expensive sports cars... But it's also a great beginner bike because the power doesn't come until 8k RPM so it won't intimidate a beginner. Power is aplenty from 9k all the way up to the 14k red-line (peak hp is at 13k); if you manipulate the 6-spd properly you will rarely lack for acceleration... If you were going to get a 250 the Ninja would be it (except for an Aprilla RS250 or something expensive).

Am I too big for this motorcycle?

Duke - Sat Apr 29 05:12:18 2000

I'm not a tall dude, but Leon is about 6'2", and he's got over 100,000 miles on one of his 250's. Most of the other guys I've met on 250's (Jeb/Andrew/Daryl) are all around 5'10"-6' - but they're all skinny. I think weight is actually the more important factor; anyone over 250lbs or so might want to consider the ex500.

The ex250 is small, but so are most sport bikes. That's the whole idea - that they're fast and lightweight, and small. If posing is what's important, buy an R6. If having fun's important, buy a 250 - They're a blast!
Someone here made a good suggestion the other day. Since the dealer won't let you do any sort of test ride to see how you'll fit for a long ride. Sit on the bike at the dealer for about 30-45 minutes, and see how you feel. Or go find a used 250 and take it on a test ride.

Am I too small for this motorcycle?

Duke - Sun May 14 17:38:31 2000

I'm only about 5'2" and don't have a problem, even though I can only touch the ground with the ends of my toes. Once you get a feel for the balance of the bike it's not hard to keep everything upright. Only place I have trouble is pushing the bike backwards in a parking lot. Usually I just walk the bike (beside it) to where I can get on and get going.

How does the EX500 compare to the EX250?

Craig M. - Mon May 22 10:23:29 2000

I have both the EX250 and the EX500; both are Y2K models. The 250 is a screamer that performs well and can easily get me into trouble. My only complaints about the 250 are the excessive nose dive when getting on the front brake hard and the skittishness of the rear during high speed cornering. Both are easily corrected with suspension adjustments, I've just been too lazy to get the parts and do the work. A bit more wind protection would be great too.

The 500 addresses these problems, the diving of the front end (to a degree); the rear's skittishness and the wind protection. A plus for the 500 is the greater torque and power off the line; it pulls stronger (in my opinion) and will get you into illegal speed territory just a bit quicker than the 250. With greater weight, is has more stability in high speed and windy situations. Insurance is just about the same for both, with the 250 getting the nod for gas mileage.

Service requirements are almost identical for both as well, being that they're both parallel twins, the technology is the virtually the same. The downfalls of the 500: $2K more than the 250 (can do a lot to the 250 with that kind of money); buzzy mirrors, barely useful; heavier weight to have to push around the garage; lesser gas mileage (55-60 MPG; 250 pushes 70 MPG easily); engine is worse than a nervous dog shaking around at idle and at speed (here the 250 is far superior and much smoother).

In my opinion, the 500 is a better suited for a larger rider, from a comfort standpoint. I feel I can stretch out a bit more on it than the 250 (I'm 5' 9", 160 lbs). The 250's brakes are better tuned than the 500 and the shifter is much smoother. That may be due to the 3,500 mile difference between the two bikes. Bottom line, both bikes are great, the 250 is now my wife's ride (mainly) and the 500's mine (unless she steals the keys away). In time, I'll make the adjustments to the 250; she doesn't push it like I do.

What about the ZZR250; how does it compare?

Damo - Sun Oct 24 12:05:13 1999

My first impression of the ZZR when it was started was "wow, that sounds identical to a ninja," which is hardly surprising seeing as they share the same engine. Out on to the road and I was immediately impressed by the very powerful front brake and nice firm suspension. All was well in a straight line, the bike felt ultra stable when upright and very smooth, although the acceleration under any throttle setting other than fully twisted on would have seen any ninja fly past it; it felt quite gutless.

First impressions of cornering were that it didn't dip easily into corners at all like the Ninja; it took a lot of physical effort to drag it into a turn which wasn't nice at all. But the most disturbing thing was when moderately leaned into one corner, without any warning the bike gave a kick and tried to spit me off. I tried a few more corners with similar results, and just couldn't get the pig to give me any feedback on what was going on with the tyres. Every Ninja I have ridden (and I've ridden a few now) is brilliant at letting me know what my state of traction is; the ZZR gives none of this vital feedback until it is almost too late.

The verdict: when buying a more expensive machine with an identical motor to the 250R you would at least expect some kind of handling improvement or engine performance. The ZZR has neither of these things so don't bother being upset that they don't import them into the U.S.

Is it a good investment; will it retain its value?

John Harmon - Wed Oct 27 23:59:39 1999

I opted for a brand new Ninja 250 back in 1991 to use as a starter bike. Guess what... I ended up keeping that bike and I liked it so much that I just bought a 2000 model to replace it. In my opinion you can't beat it! Additionally, they have a very good resale price. They sell quickly, and you can get almost all of your investment money back.

How long will a Ninja 250 engine last?

Leon - Tue Jan 23 07:24:04 2001

The Ninja 250 motor is a consumable item, like the brake pads, chain, sprockets, tires and steering head bearings. Every 30K to 60K miles you need to put a new motor in it; just unbolt the old one and put a good used one back in.

At the Philadelphia motorcycle show, I asked Kawasaki about their 4 year unlimited mileage warranty. I was told that rings are not covered by the warranty but main bearings are, and he wasn't sure about valves.

Shouldn't I consider a bigger bike? Won't I want one later anyway?

Barry - Thu Nov 11 16:19:01 1999

Frankly, I'm a bit sick of this "you'll out grow the bike in a few months" stuff; where are people taught this? If this were true, everyone would be out to sell you a 250 knowing that you'd be back in a few months to buy a bigger bike; which means the dealer would get another sale, more profit, and a barely used bike as a trade in. It doesn't make sense.

What does make sense is that as a beginning rider, you need to be very careful that you don't get in over your head; saying you like speed suggests to me that could easily happen to you. The 250 is a great bike to start with, and to keep. There are more than a few on the board who have bigger bikes, but still pick the 250 because its so easy to handle and that much more fun than their bigger bikes. My own mantra is this: The 250 can give you a lot; when your riding skill and experience exceed what the bike can give, then you'll be ready for a bigger bike. But... that can take a very long time.

I fell in love with my 250; in 25 years of riding it is the most fun on two wheels of the four bikes I've owned. My last bike was a 750 and I rode it for 15 years; it was a nice bike, with plenty of power, but it was also heavy. My 250 is light as a feather in comparison, and for around town, and back road twisties, it's everything I want and need.

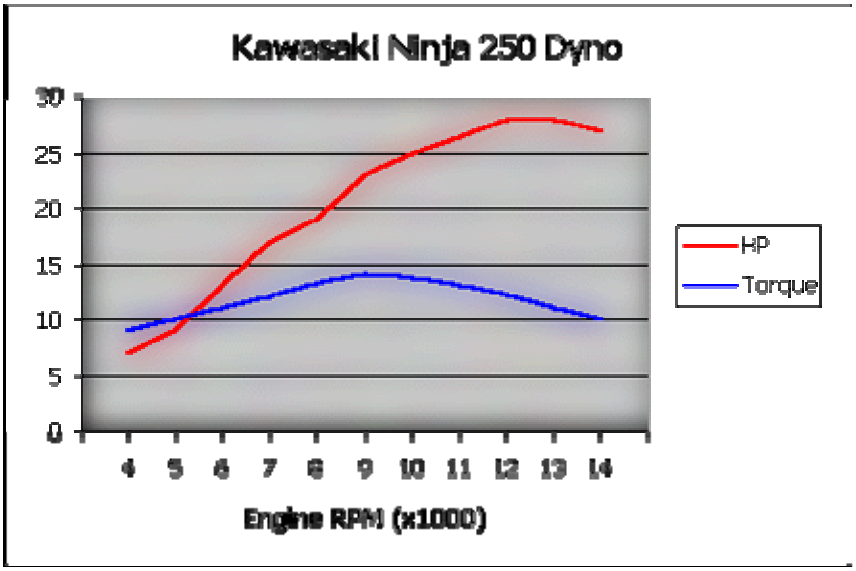
Can I get some stats/specs for the bike?

Specifications and Performance Statistics

Specifications	
Engine	4-stroke Parallel twin, DOHC, Liquid cooled, 8-Valve, w/ counter-balancer
Displacement	248cc
Starting	Electric
Bore x Stroke	62.0 x 41.2mm
Compression Ratio	12.4:1

Carburetion	Keihin CVK30 (2), Constant velocity, Diaphragm-type
Ignition	CDI (electronic advance)
Spark Plug	NGK CR8HSA, CR8HIX, CR8HVX option CR7HSA, CR7HIX
Transmission	6-speed, Constant mesh, Return shift
Clutch	Wet, Multi-disc, Manual, Cable-actuated
Frame	Tubular Diamond design
Rake/trail	27 degrees/3.3 in.
Suspension, front	Hydraulic telescopic fork
Suspension, rear	UNI-TRAK® system with single shock
Wheelbase	55.1 in.
Wheel travel, front	5.5 in.
Wheel travel, rear	5.1 in.
Tire, front	100/80x16
Tire, rear	130/80x16
Brakes, front/rear	Single hydraulic disc
Overall length	80.1 in.
Overall width	28.0 in.
Overall height	43.1 in.
Ground Clearance	6.1 in.
Seat height	29.3 in.
Weight Dry/Wet	304/355 lbs.
Max Load	340 lbs.
Fuel capacity	4.8 gal.
Fuel type	Min 91 Research / 87 Avg. Octane Unleaded
Oil capacity	1.9 liter
Oil type	SE-SG Class SAE 10W40-20W50
Performance Stats	
0-60 mph (0-100 km/h)	5.75 sec
1/4 Mile	14.6 sec @ 88 mph
Maximum Speed	105 mph (170 km/h)
Max Horsepower	36 @ 11000 RPM (26 @ rear wheel)
Max Torque	18 Ft/Lbs @ 10000 RPM (14 @ rear wheel)
Fuel Efficiency	55-75 MPG

Dyno Chart



What Colors Are Available?



Yellow/Purple (‘02/03)



Green/Black (‘02/03)



Blue/Black (’03)



Red/Black (’01)



Black/Teal (’99)



Green/Purple (’99-01)



Red/Purple (’97-98, ’00)



Black/Blue (’93-96)

Where can I find more info?

Ninja 250 Riders Club

Kawasaki Ninja 250 Discussion Board

Ninja 250 Resources

Ninja 250 Info Page

Official Kawasaki Ninja Site

Motorcycle Online review

Kawasaki Vehicle Information Site

I want to know more about motorcycling in general

I want to get a bike but I don't know the "process."

Gazoo - Thu Nov 25 23:41:28 1999

The order of events that got me riding was:

- MSF course.
- Motorcycle permit- DMV waives riding section with MSF course completion (at least in Virginia).
- Insurance- call and pay initial fee by credit card and give the insurer the fax number of the motorcycle dealer (also, MSF course probably gets you a discount).
- Insurance company faxes insurance confirmation to the motorcycle dealer.
- When the dealer has confirmation that you are licensed and are insured, the finances are next.
- The bike is paid for and you ride it home.

The requirements might vary depending on where you live and the dealer you are doing business with.

What riding gear should I have?

Helmet

I should wear a helmet, right?

VFR Pilot - Sun May 14 21:55:25 2000

Most motorcycle accidents occur at relatively slow speeds and in city traffic. In fact, the most frequent fatal accident involving motorcycles is the one where a car left turns directly into the bike's path, causing the bike to bury itself in the car's side panel and the rider to fly over the top, usually landing head first. You don't have to be going very fast for this one to kill you.

While I'd say that the State has no business telling us that we have to wear helmets under penalty of law, there is another much older law at work here. Known as "Selective Evolution," "Survival Of the Fittest," or just plain "Thinning the Herd," it means that those who always put on their helmets are more likely to survive and those who don't aren't. Your choice.

How much should I plan on spending?

VFR Pilot - Fri Nov 12 00:33:50 1999

Helmet prices are largely a 'you get what you pay for' proposition: The more expensive ones usually give you better protection, and are lighter, have better venting, offer removable padding (for cleaning), and so on. But a good full-face street helmet that has both DOT and Snell approval will still only cost you in the neighborhood of two to three hundred dollars and will have enough features to keep most of us happy. I personally use a mid-line Shoei RF800, but Arai and AGV also offer similar models.

It's probably a wise move to stay away from bargain basement brands. If you ever have to rely on your helmet to protect you in a bad crash you'll be glad you got a good one.

Should I get a full-face helmet?

Neal D - Mon May 15 06:48:22 2000

When I was sixteen a guy was wheeled into the emergency room and was a mess. He had fallen off his bike in a slow speed slip. His face was mangled and he had been wearing a helmet - an open face one.
I swore then that I would always wear a helmet and that it would only be a full-face.
I had the misfortune of going down on a slick and wet corner landing on my belly and scraping my face on the ground - My full-face helmet literally took it on the chin.

Yeah, it ain't gonna happen to you!

What are some good models?

gabe846 - Tue Apr 25 17:43:41 2000

How good a helmet you get depends on how much/how far you will ride the bike. If you want to ride more than 40 minutes at a time, and over 60 mph, you need a decent helmet. Either that, or never try on a quality helmet. Ignorance is bliss.

Other than that, there are two serious choices for helmetry. Arai and Shoei. You must determine if you have a Shoei or Arai head. If the Shoei feels like someone giving you a noogie right above your forehead after 10 minutes, get the Arai. I don't know what an uncomfortable Arai feels like, 'cuz I have an Arai-shaped head.

I think the RF800 is a pretty good helmet- it's not the best Shoei, but it's a far cry from the cheap ones. It should be good to wear all day, and it's really easy to remove the face shield.

How do I keep my visor from fogging up?

MattH - Fri Sep 27 07:57:53 2002

Rain-X makes a special formula for use on plastic but I don't use it. I use Nu Finish (car wax like stuff) or Lemon Pledge. You have to reapply Pledge more often, but it gives your riding environment a nice clean smell, especially handy in cow country. They both do the same thing - keep water vapor from collecting, and allow water to bead up and roll off more quickly. I also carry the breath deflector for the helmet, and only use it if it starts to fog up inside.
I've heard that Rain-X standard glass formula is not good for plastic.

Jacket

Leather vs Cordura

Jeb - Fri Jan 12 11:55:17 2001

It's difficult to say which is "better." Leather offers better abrasion resistance and sustains damage better in a getoff; it is also generally heavier, more difficult to care for, and not as versatile. Cordura (a high-denier nylon blend) breathes better, is waterproof, doesn't look as 'super hero' like, and is generally more lightweight and comfortable.

The best cordura suits (like Leon's aerostich) are certainly better than a cheap leather ensemble. Cordura clothing can be just as well padded as leather, and carry the same armor. I have a leather jacket, and wear cordura pants over my regular pants. The leather jacket probably gives me a little more peace of mind, but I still value the extra protection of the pants.

Again, leather will tend perform better in a crash, and cordura will perform better in everyday use. You have to get what suits you best.

Pants

Joe Rocket Ballistic Pants

Wes - Tue May 16 15:15:01 2000

They are a little loose, but very adjustable. I had to get Large because I have a 34" inseam, and the medium was just too short. This means that I'm wearing pants meant to fit like a 36-40" waist but it isn't too bad, I just had them altered to pull tighter on the elastic. (They also have a Velcro "belt" that you do up)

The pocket above your left knee is quite big and very convenient. The stiff pads at the knees should give good protection (they are the same as the elbows in my jacket), and soft pads in the hip give some padding but don't restrict your mobility at all. Of course, you still have the abrasion resistance from the 110 ballistic nylon.

They are quite waterproof, and go over other clothing easily as they have zippers up the legs. They also will zip into Joe Rocket Blaster or Ballistic jackets. When I am wearing my whole outfit, I'm ready for either a sunny day or a rainstorm. They're quite versatile.

Draggin jeans

I have both the Draggin Jeans and Shirt. The shirt is 100 percent knit Kevlar and the jeans have the same Kevlar in the seat and knees. Kevlar is one of the best materials for abrasion resistance. Since most accidents occur at about 30 mph (Hurt Report) they should provide adequate protection from abrasion. They are well made and ideal for hot weather riding. I got mine from Competition Accessories and they take returns if you don't like them.

Gloves

Street gloves

Catchy - Mon Jan 21 23:36:42 2002

I had a pair of SP3 Alpine Stars for street work. Sure they were cheap at $99, but that was no excuse - worst made gloves I have ever owned. They fell apart after three months, had no feel, were really loose once they wore in, and slippery on the controls. They split in my last crash at about 55 km/h. The gauntlet on the left glove was useless, wore through on impact. The Kevlar part of the palm was

torn off and the thin leather underside was knackered after a relatively short period of tarmac time. At 60 MPH I hate to think what the result would have been. As it was my wrist was badly knocked about, I had all manner of minor abrasions on my finger tips where the leather just gave up. I was shocked it was like wearing fabric mittens rather than leather.

I recommend getting some Spidi Carbotech gloves, inexpensive at about 179 AUD; they should be cheap in the US. As for Teknic, owned a pair of Violators for about two months; they were okay, but expensive, though they did hold up well to getting crashed at the track.

Widder heated gloves

Wolcott - Sun Feb 20 07:44:47 2000

I've had Widder Electric gloves and vest for 6 years now, and they are great. They extend my riding season a full month at both the beginning and the end of the season.

I just got a Competition Accessories catalog and they have them listed. They're at http://www.competitionaccessories.com; your local shop should have them too. The prices seem to be about what I paid.

Their prices are: gloves $90, electric thermostat $70, vests vary; see the catalog. I recommend the electric thermostat as I have the old one and it cycles on and off so you get cool periods. The new one is constant and reduces flow from the battery as you adjust it down.

Comes with a harness, with a connector lead to the battery. Snake the lead under the seat from the battery out to the tank; plug it in or out when you get on or off the bike. I also use the battery connector lead to attach my Sears Battery Tender ($27).

I recommend the vest too. If you get one, fit it snug so you feel the warmth directly on the body. Mine is a little loose and it is bulky under outer garments. You want to wear it close to the skin, over a turtle neck and under a fleece. The vest with the collar can be bulky at the Aerostitch collar closure. I notice the new collarless vest has a higher neck than the old one had.

Boots

Are boots really necessary?

Brandon Scott - Sat Feb 19 19:19:10 2000

The answer to this question is simple...

Do you need your feet & ankles?

Quality boots provide a good deal of protection for riding and the possibility of going down. I have a friend who almost lost his foot due to a retread coming off an 18 wheeler and hitting his foot at speed. He was wearing sneakers at the time. Since then, he only wears boots when he rides.

I personally use western horse riding boots with rubber soles. They are relatively cheap (approx. $100.00) and can be worn with all types of clothes. They also provide the protection I want.

What are some models to consider?

Alpine Stars

Barry - Mon Feb 21 12:18:45 2000

It's been several years since I last bought boots, so my info as to what models are available is probably out of date; however, when shopping for boots, I started by looking at the brands the top riders wear. In my opinion, AlpineStars is the brand worn most often. There used to be three models (with increasing price); GPS, GP-Pro, and GP-Tech, about $180, $225, $250 respectively. The big accessories houses all carry them. The Tech has gel pads over the ankles. I have both the Pro and the

Tech; neither are all that comfortable for doing a lot of walking around in, but I've the impression that most sport boots aren't. The biggest hassle with these boots is that they are all made for wearing with full racing leathers (pant inside the boot); and if you wear trim fitting jeans, you can't always get the pant leg over the boot because of the hard shin armor.

I'm sure other brands like AGV, Spidi, Dainese, etc. offer many of the same features as AlpineStars, but they may be harder to get. www.newenough.com currently lists quite a few used boots; also check www.alpinestars.com for their current line up.

Army Boots

VFR Pilot - Tue Feb 29 22:30:08 2000

Despite having walked many miles in them, I wouldn't recommend them for biking: They have no ankle cups or armor of any sort. If you do decide to use Army boots make sure that you're using the all-leather boots, not the largely nylon "Nam boots". 'Nam boots were evolved for tropic heat, and provide very little protection except to the sole of the foot. As Wolcott mentioned, tuck in or duct tape your laces to prevent tangles. Imagine pulling up to a stop sign, starting to lean to one side, and then discovering that your shoelace is tangled in the peg and you can't put your foot down to support the bike...

Parachute Boots

Barry - Fri Mar 3 11:39:36 2000

Also called "paratrooper boots", or "jump boots." The original paratrooper boots were made by Joseph Corcoran Shoe Co / Stroughton, Mass during WWII; they still make them, and they are called "Corcoran Jump Boots." I believe most military people think of them as the best around. Better military surplus stores carry them, or you can buy them on-line. US Cavalry lists them in their catalog at $115. (www.uscav.com 800-777-7172). Be aware that there is a "Corcoran II Field Boot" which has speed laces, otherwise the styling is very nearly the same. ($130. from US Cavalry).

These are very good, tough looking boots that will take a lot of abuse; however, they are not purpose made for motorcycle riders. The original boot has a small ridge tread which may slip if you put your foot down; the field boot has a much deeper tread which may make it less slippery. The original boot has laces, and unless you buy a "zipper lace insert", can take a few minutes to put on and take off, though the field boot with speed laces is faster. Neither of these boots have steel toes; though there are other brands that do. In my opinion, the biggest problem these boots have is that they do not have the kind of protection (extra padding, gel packs, hard plastic ankle/shin/heel armor, etc.) that purpose made motorcycle boots have (such as Alpinestars, Dainese, AGV, etc.)

Other

Rain gear

gabe846 - Fri Aug 4 12:28:49 2000

Who says no riding in the rain? I love riding in the rain! You learn a lot about braking and leaning, and it's fun to look at cagers staring at the idiot on his bike in the rain!

It's important to have good gear to wear if you're riding in the rain. When your crotch, feet, and hands are soaking wet, your muscles cramp and shiver, which is bad for being smooth with the controls, which is what you need to ride well in the rain. Get a sturdy pair of rain pants, and rain gloves or covers. XXX-L dishwashing gloves are good to pull over your regular gloves for short distances. Two plastic grocery bags make great emergency rain booties- they're tougher than they look, and free!

Another must-have is a FogCity shield for your helmet visor- it ends fogging completely, and I mean completely. It's just $15 or so, and is a great thing to have.

Just ride like you usually do, just smoother and a little slower. You'd be amazed at how far you can actually lean on wet pavement, and modern brakes work fine once they heat up. The important thing is to practice. Sell your car, and ride everyday!

Earplugs

VFR Pilot - Tue Sep 19 13:11:37 2000

There is absolutely no doubt that exposure to noise levels in excess of 100 db causes cumulative hearing damage. Worse yet, this is hearing loss that you can never recover. Once it goes away, it's gone forever. Eventually you are likely to develop tinnitus, a constant 'singing' or 'whistling' in your ears that overlays everything you hear. No fun.

The best solution that I've found is a pair of custom fitted earplugs made by an audiologist. These are cast out of silicon (?) from moulds made in your own ears, and contain a tiny valve that allow low level sounds to be heard while at the same time cutting out everything that's above a given sound pressure. Mine cut in at 80 db, and make life a lot easier during those long high-speed freeway runs. You can still hear sirens, horns, and so forth; but the wind noise is pretty much gone. (And that constant wind noise really tires you out. Try it and see.) Best of all, these things are legal -at least in California- under the provisions of the law, whereas store-bought plugs are not.

Aerostich suit

Paul 311 - Tue Jun 6 13:10:49 2000

I'm not sponsored by Aerostich, but I am a big believer in their gear. I tossed my CB-1 down an offramp at 70mph about two weeks ago on my way to work. I had my Aerostich on, I was wearing Daytona race boots and Held gloves. I had a bruise on my left hand but that was it. I wasn't even late to work because of the crash. The 'Stich costs about $700 and you have to wait a while to get one. They are worth every dollar. They have a website at www.aerostich.com.

They only sell their suits direct through rider warehouse (which I think is the retail side of their company).

If you plan on crashing at speeds over 70mph, I would recommend full leathers. I have a set of Erbo leathers which I have crashed on the track about 7 times and I have never needed to repair them.

You can't typically fit regular clothes on under leathers, but Aerostich suits are made to be worn with clothing under them. A few times a month I wear a business suit to work under my Aerostich. The 'Stich is also holds off hard rain for about 30-45 minutes.

Full leathers

Brian (F3) - Sat Aug 5 20:49:56 2000

AGV makes a 1pc "Spark" suit for $349 in Motorcycle Accessory Warehouse (www.accwhse.com). A better suit would be the 2pc Fieldsheer X-speed for $599 from New Enough (www.newenough.com). You can find pretty cheap leathers in a lot of places, but most of them don't have good ventilation. The Spark suit doesn't have that good of ventilation, but the X-speed has plenty of it! If I buy a leather suit, its definitely going to be a Fieldsheer - you can't beat it for the money.

As far as textiles... First Gear makes some pretty good stuff that doesn't cost an arm and a leg; Joe Rocket would be another option. First Gear's site is www.intersportfashions.com and Joe Rocket's site is www.joerocket.com.

Back protector

gabe846 - Wed Apr 26 22:34:58 2000

The point of a back protector is to protect your spine and ribs from hard blows. The point of a hard shell is to disperse the force of impact, much like the shell of your helmet.

Too bad the US is too backwards to have any kind of standards for back protectors. Luckily, the European Union (EU) has a standard for motorcycle armor, called the "CE" standard. You can buy CE rated back protectors in the states, and I recommend it. That Dianese 7-plate thing with the flimsy foam isn't worth shit, as is the junk that comes with Firstgear jackets and suits.

Make sure the back protector covers more than just your spine- remember it's for the ribs, too. Also, consider wearing a chest protector as well.

Knox is a good company, and I have one of those. It's not cheap, but neither is missing 3 weeks of work because of broken ribs.

Do I really need to wear all this stuff?

Gabe846 - Tue Jun 27 23:39:17 2000

People don't wear protective gear because they are ignorant, crazy, or both. It's a simple rule to learn. Before you get on your bike, look down at yourself and ask, "Am I ready to crash?". If the answer is no, then don't ride. Easy as that.
You'll either learn the easy way (by listening to me), or learn the hard way (by experiencing excruciating pain or permanent injury). Most of those guys you see are waiting to learn the hard way. After they learn the hard way, they inevitably give up motorcycling for good. "Too dangerous" they say. And for them, they're right. This is no place for idiotic, irresponsible people, and they are better off playing golf.
So what will it be for you, EX250 or a 9-iron?

What factors should I consider when looking for these items?

Gabe846 - Mon Jan 22 00:15:55 2001

I've preached about riding gear a lot, and I think 4 crashes in a year (most on the race track) qualifies me to say a few words about what you should wear while riding.

First of all, let us be clear about one thing: crashing is an unplanned event, and that's why vehicular mishaps are called "accidents." Therefore, you should assume that a crash could happen at any time, whether you're in the corkscrew at Laguna or riding down to the corner for the proverbial quart of milk. Crash #1 this year was exactly one block from my apartment.

What all this means is that if you swing your leg over your machine, you need to dress as if you are going to crash at 80 mph (because that's about as fast as most people ride) as soon as you start moving. That gives you a little margin.

Protective gear should be a balance of protection, comfort, style and value. These four factors should be balanced according to your needs and tastes. Let's examine each factor.

First, and most heavily weighted should be protection. It should resist abrasion to 80-100 mph, and should provide impact protection at all the likely and fragile impact points- head, spine, hips, elbows, hands, ankles and knees. The best materials are heavy cordura nylon, Kevlar fabric, and leather. The leather should be something specifically made for motorcycling, not fashion leather. Fashion leather is selected for softness and light weight, not abrasion resistance. A well-selected piece of leather offers more abrasion resistance than a thicker, lower-quality piece.

Hence, a Z-Custom suit will tear less easily than a thicker, but cheaper Pakistani-made suit. The armor in your back protector should have a CE label on it, or should be made to that standard. CE is the European agency that writes standards for thousands of consumer products, like our Underwriter's Laboratories. But the USA has no standard for motorcycle armor. What that means is a lot of "armor" in the cheaper gear, like the Firstgear and cheap AGV suits are actually just flimsy foam rubber of limited use in an accident. Good armor will save you weeks of pain and suffering, and may even save a limb or your spine.

The next most important factor is comfort. If your gear is unwearable and impractical, it won't do you any good because it's hanging in the closet or strapped to the back of the bike. You can break down comfort into two categories, fit and temperature control.

The fit should be comfortable when you are on your bike. The tiniest irritation can swell into a big pain after a few hours in the same position. Also, the clothing should not "balloon" at high speeds- that can add to fatigue. Leathers need to be skin-tight for the best abrasion resistance, since the leather can give you a burn when it moves on your skin in a crash.

Your suit should be comfortable over the range of temperatures you ride in- again, your gear won't protect you if you don't wear it. Leathers should be perforated to flow air, and nylon suits should have lots of vents. Buy your textile suit loose enough for a layer or two underneath in cold weather, and you can layer over your leathers with a windbreaker or raingear for those chilly Sunday mornings.

Why is style important? Well, I don't know about you, but if I wanted to look like a special ed student, I'd trade my Ninja for a short yellow bus. Pick gear that reflects your tastes and fashion sense. This is less important for us straight guys, but it's important for our riding partners of the fairer sex.

Lastly, buy the cheapest gear that meets all the above requirements. Don't buy stuff from third-world countries if you can avoid it- almost all the stuff I've seen from China, Pakistan, India, and Malaysia (sorry if Malasia isn't 3rd-world) is pathetically shoddy and falls apart after a season or two. Japanese, American and European made stuff is more expensive, but only by about 20-30%. It's worth it, since you only have to buy well made stuff every 10 years, instead of cheap stuff every two.

What do I need to know about insurance?

How much is insurance going to cost me for the Ninja 250?

Barry - Sun Nov 28 21:35:08 1999

Insurance cost depends on a lot of things: age, state, driving history, bike, etc, etc. Also, in my opinion, some companies just don't like to cover riders with certain profiles - even if they are good otherwise - so they price their coverage outrageously high. I guess a good price would be something like $300US for six months; but, I have heard of guys being quoted as much as $4000US a year. Get a cycle magazine and look for the ads from insurance companies - all of them have 800 numbers - and give them a call. When you talk to them ask about coverage for an EX250; if you call it a Ninja, they might put you in with the bigger sport bikes, and that can cost big $$.

The bright side is that the Ninja 250 will be cheaper to insure than any other sport bike; and if you take the MSF (Motorcycle Safety Foundation) course, you can usually get a discount.

Should I get any extended coverage?

Patrik - Tue Feb 15 00:27:06 2000

I hit an #$%hole making a left turn when he was behind a van and in a right-hander. Don't ask me what he was thinking, if he was. (Probably wasn't, he hadn't been thinking for the preceding 4 days when he got his car but no insurance...)

Get uninsured motorist coverage! I would gladly have paid the extra hundred bucks a year that it would have cost to escape my current situation. I'm out of pocket about $2k, my health insurance has claim of another $2k on me in case I ever get any damages from the driver, and I have no bike. My chances of getting damages seem slim, as most lawyers won't touch a lawsuit against an uninsured poor (economically speaking) loser that already has earlier court judgements that he's paying off, and even if I was to win such a lawsuit, the wisdom seems to be that collecting is unlikely.

I should reemphasize this: UM is worth getting! The current estimate of the uninsured vehicle rate (in California) is something like 34%. That's 1 OUT OF 3!!! It makes me pissed off that I need to get insurance for something that is someone else's responsibility, but that's the situation!

What insurance companies should I check out?

Geico

Progressive

Should I take an MSF course?

What is an MSF course?

Leon - Fri Nov 12 13:15:04 1999

The Motorcycle Safety Foundation course teaches the basics of riding a motorcycle, then extends those basics to interacting with other road users and finally dealing with 'unusual' things. This course is designed for those who have never ridden, but does expect some familiarity with driving. Some beginners find even the beginner course intimidating, but that's usually because the class sizes and time don't allow for any 'falling behind.'

If you have already ridden on the street and particularly if you already have your motorcycle endorsement, you might wish to skip the basic MSF course and go directly to the Experienced Rider Course. The beginner course is 16-20 hours long, the experienced rider course is about 8 hours. Most of the things covered in the experienced rider course are a review of what's in the beginner course. Many of the exercises are slightly different so those who have had the earlier course will still find it interesting and challenging.

Who should take the beginner course?

- Anyone who has not ridden a motorcycle, but can ride a bicycle.
- Anyone with less than a year or so of riding experience and is interested in learning more about riding.
- Anyone who needs a motorcycle endorsement on their driver's license. Many (but not all) states will take the course as proof of the riding part of the licensing process. The instructors will probably be familiar with the licensing process for your state.

Who should not take the beginner course?

- Anyone who cannot ride a bicycle; there isn't enough time to learn this during the course.
- Anyone who has health or physical fitness problems such that riding a bicycle for more than a couple of miles would be dangerous. Riding all day is strenuous.
- The guy who has been riding for 20 years and is taking the course with his wife, so she can learn to ride. Please don't, you'll make her nervous; she can't listen to both you and the instructor.
- The guy who has been riding for two years or more and just heard about the course. Take the experienced rider course instead.

Is the course hard; will I be able to pass?

Leon - Wed Aug 8 15:37:09 2001

I've sent a few people home; here's why...

Biggest reason is not showing up on time. If you're late for the course, I cannot let you stay, if you have an accident after being late and missing part of the course, the program office says they'll hold me responsible for your injuries. That won't happen.

Riding a bike is an important skill, I've only had one person pass the course that had never ridden a bicycle. She had done a lot of practice on a little dirt bike at home, and had taught herself to ride that.

Finally, you have to progress. When you fall so far behind the rest of the class that you endanger them, I cannot allow you to stay. The circle riding that happens on the first day is relatively difficult, if after a couple of hours you can't reliably make the bike go in the direction you want it to go, I have to pull you out of the course.

The only other thing I can think of is the one guy that I had to pull out because he completely lost confidence in both himself and us. He was riding quite well, he had been cautioned a couple of times to slow down and take it easy, but then locked the front wheel and fell at about 15 mph. About 10

minutes later, the same thing happened again. After the second incident he wouldn't use the front brake anymore, plus he was so spooked by the first two falls that he wasn't paying attention to what we were trying to teach, I had to ask him to leave.

This year, I've taught 3 courses, 10-12 people per course, all have completed the course and taken the riding test, but about 1 per class has failed the test. To my knowledge all of them passed the retest when they returned the next week. Initial failure rate in Maryland is 10 to 20%. More than half of those that return pass the retest.

The best advice I can give you before taking this course is study the material before you get to class, arrive in class ready to take the written test that way you don't have to study at night. Get plenty of rest between sessions. This is a very physical class, sleep is more important than studying, if you live more than 20 miles from the course, consider getting a motel room so you can rest instead of commuting. Finally if it's hot, drink plenty of fluids, dehydration tires one out and gives muscle cramps.

What benefit will I get from it?

Kevin - Sun Nov 14 05:06:25 1999

I totally support the course. Not only do you learn critical life saving skills during the course, you might be able to pick up a huge insurance discount as well. There are many little things you learn in that course that you could never pickup from learning from friends or especially by yourself. I've read that the course equals about 2 years riding experience or something.. personally I think that's kind of far fetched..but..its definitely worth the money. I learned a lot in the crash course. I think they should make that course a LAW or mandatory for all motorcycle riders. A lot of accidents could be prevented and riders saved if it was.

The course is basically designed for the new rider, but, most of the time, people who show up for it are those that have ridden before. In a class of about 15, it was only me and this other guy that had never ridden before. One guy even rode his brand new Harley to the course! (He was doing it for insurance.. supposedly his company gave him a ridiculous discount)

Hope this helps in your decision.. nothing but good things will come out of taking that course.

But aren't those courses just for total newbies?

Craig - Sat Nov 13 12:08:27 1999

Even a seasoned veteran will glean something from the course. Tim is correct it does break bad habits and teach he proper set of skills necessary to safely interact with other traffic. I took the course last weekend, 12 in the class, two which had never rode before, me being one of them. We had an experienced rider dump it during the Maximum Breaking exercise. Some of the experienced riders had tight cornering problems too. I say if you want to sharpen your skills and become a more alert and aware rider the course is the way to go. It's too bad all states don't require this or a simular course before issuing a motorcycle endorsement on their licenses. Just my two cents...

What are some good riding techniques?

Basic Controls

Jeb - Sat Apr 22 02:17:56 2000

It goes like this:

- Left hand lever - clutch
- Right hand lever - front brake
- Right hand grip - throttle
- Left foot lever - gearshift (from neutral, down once is 1st gear, and up five times will put you in sixth).
- Right foot pedal - rear brake

Turning and leaning

Speed control

Che - Fri Jan 21 06:22:29 2000

The key thing here is to slow down before you start turning. While you are still going straight, get the bike slowed down to a speed you feel comfortable going around the corner at. Now, let off of the brakes (especially the front!), and as you start to make your turn you need to also gradually accelerate too! Increasing your speed slightly throughout the turn will add stability to your bike. If you slow down while you turn, the bike's dynamics get worse, not better.

Looking through the curve

HJ - Sat Jan 22 16:36:33 2000

Look where you want to go. That would either be the exit of the curve/turn, or as far up as you can see if it's a blind curve.

If you stare at the guardrail, curb or divider lines because you are worried about hitting or crossing them, strange and bad things happens. a) your subconscious mind seems to fight you and go towards what you are looking at but trying to avoid; b) you scare yourself; and c) you won't see what's coming up ahead, e.g. debris in the road, curve tightening, oncoming car, etc.

Countersteering

VFR Pilot - Fri Jan 21 00:53:09 2000

A motorcycle is turned by leaning it in one direction or the other and then maintaining the lean by steering the front wheel into the curve until the forces of gravity and inertia balance out. Exactly how far you lean and how far you turn the front wheel are determined by both the radius of the corner and how fast you're moving. (Anybody who can ride a bicycle can do the above without even thinking about it. The hard part is using words to describe something that most of us do instinctively.) Which brings us to countersteering, which is how we all get into corners, but is a technique that almost nobody ever actually practices.

To see countersteering at work, simply proceed down a straight -and traffic free- stretch of road and shift your weight a bit to the right; then steer ever so gently to the LEFT....Yikes! The bike suddenly tried to turn right, didn't it! In fact, if you neglected the part about steering left ever so gently, you probably scared the s--- out of yourself. So now you know how we get into corners: We overbalance the bike and steer it out from under us at the same time; only steering into the corner once the lean angle has been established. The trick is to do this quickly, precisely, consistently, and, above all, smoothly. And the way we gain that ability is to practise it over and over and over again until it happens without thinking.

But start out by practicing and thinking about what you're doing at the same time, preferably in an empty parking lot. Set up a slow wide turn, and practice tightening it by steering slightly to the outside to drop more of your weight on the inside of the corner; you will find that you can then steer further to the inside and turn more tightly. (And you'd better know how to tighten up a corner before you get into a decreasing radius curve on a two lane highway at a high rate of knots. You would have a limited future as a hood ornament.)

Things like weighting the footpegs and hanging off the bike to maintain a better contact patch are techniques that must wait until you can get into and out of corners consistently, safely, and again, smoothly, every time.

Scraping Pegs

Duke - Tue Apr 25 13:43:15 2000

On our last trip to Deal's Gap I touched down both pegs once each without the feelers (the feelers are missing from my pegs). You really have to have faith in the bike that it will stay under you, but it will, as long as you have the correct tire pressure and are on dry, clean pavement.

Try making circles in an empty parking lot at about 10-15 MPH, much like Leon suggests. Keep making the circle tighter to gain confidence - and eventually it won't go over any further...scraaaape.

Dealing with crosswinds

VFR Pilot - Tue May 2 19:57:49 2000

Motorcycles in general, and cowled sportbikes in particular, are subject to weaving in crosswinds. (I've ridden in gusting 65mph winds that were blowing directly across the road, and it's no fun at all.) When the wind gusts it forces you in the direction that it's blowing, so you naturally must lean into it to prevent being blown into the next lane. Then the gust will abruptly let up, and the bike will suddenly dart in the direction that you were leaning, tracing a weaving path that makes a slobbering drunk look like the picture of sobriety (I thought that I was worried that day until I realized that the cagers around me were looking panic-stricken and getting just as far away from me as they could...).

But there are several things that can help:

1. Stick your windward knee out, effectively making yourself asymmetrical to the wind. Basically, when you get hit by a gust, your leg scoops some of it up, so the wind pulls you in at the same time it pushes you away... it cuts the effect substantially.
2. Slow down. At lower speeds crosswinds have less effect. What I found downright dangerous at 70mph proved to be controllable, though exciting, at 50.
3. Find a moving wind-break. Following a tractor-trailer rig can help, but not if you have to tuck right in behind him to get any benefit. This will depend on the angle and speed of the wind. (do not get right alongside one and try to stay there! These guys often can't see you and will change lanes right on top of you with no warning. They also occasionally blow right over in high crosswinds... Not a good time to be on the downwind side unless you've always wanted to be a waffle.)
4. Watch the upwind side of the road ahead of you. Billboards, parked trucks, cuts, and stands of trees will cause the crosswind to suddenly stop and you to suddenly zig. If you know that it's about to happen, it's much easier to cope with.
5. If you absolutely *must* ride in a heavy crosswind, take a short break every twenty minutes or so. Your concentration will need a rest.

Note: Forget Beaufort. In the Southern California deserts we have our own wind scale:

- Tumbleweeds blowing across road = mild crosswinds.
- Sand blowing across road = moderate crosswinds.
- Jackrabbits blowing across road = stiff crosswinds.
- Rattlesnakes blowing across road = heavy crosswinds.
- Trucks blowing across road = time to get off and walk.

Maximum lean angles

VFR Pilot - Tue Jun 20 15:58:17 2000

If your tire pressures are correct and the tires are in good shape you can safely lean a Ninja 250 over until the peg feelers start to scrape. It's not a good idea to go much further than that, as the centerstand will drag at really high lean angles, and can lever the rear tire right off of the ground; introducing the words "low side" and "road rash" into your vocabulary (avoid this).

While the 250 won't generate modern levels of cornering force due to its narrow tires and outdated stock suspension components, it will certainly get into and out of corners faster than most other

sportbikes, and has no bad habits to speak of. Altogether, you couldn't pick a better bike on which to learn cornering techniques.

Downshifting in a turn

Duke - Mon Aug 7 23:04:27 2000

Last spring while riding at Deal's Gap there were several times that I locked up the rear tire going into very sharp turns when downshifting a little too aggressively. As someone else mentioned here, it causes the rear tire to skip to the outside of the turn just as you release the clutch. Nothing unmanageable, but something an expert rider probably wouldn't do.

Since then, I've been working on bliping the throttle slightly while downshifting hard through each gear. This allows the RPMs to quickly raise to match the wheel speed for each gear as you downshift, and eliminates rear wheel skid. It's still effectively using engine drag to slow you and also maintains the proper gear to exit the corner.

The way you do this is: While downshifting through the gears hit the throttle hard and then let off (very quick) just at the instant you release the clutch. You'll want to give it enough throttle to raise the rpms by about 1,500. If you do this in quick succession while going through the gears (downshifting), it will become a rhythmic second-nature habit that occurs simultaneously to braking. Once this is perfected, it's possible to brake hard into a turn (before the turn) and downshift at the same time avoiding any rear wheel slide. This works best in the lower gears where it's possible to quickly downshift through three or four gears much quicker than the bike slows down.

Entering a turn too fast

Leon - Mon Jun 4 15:15:37 2001

I've heard of a lot of things to do when trying to recover:

1. Use the rear brake to tighten up the line a little bit. It feels right to me, but the real racer guys say this is not the answer because if the rear wheel breaks loose the rear end will go wide and cause you to crash.
2. Reduce throttle and use both brakes to slow slightly realizing that most of the traction is being used for turning. It will slow you down, but uses additional traction.
3. Lean to the inside and continue to apply the throttle, leaning in will cause the bike to straighten up giving more ground clearance so hard parts don't scrape, takes lots of courage to go faster when your brain already says you're going too fast.
4. Straighten up, brake in a straight line to scrub off speed, then release the brakes and turn in tighter. Requires some room to run wider than you're already going.

I don't know the right answer, but it looks to me like practice should be done before you have to do it in traffic. I've used all of the above at different times and under different conditions. Your mileage may vary, trained rider on closed course, don't try this at home, etc.

Dragging a knee

VFR Pilot - Mon Sep 17 22:09:55 2001

There's almost no way to safely drag a knee on the street; much less so on a Ninja 250.

- If you're leaned over enough to get your knee down you've generally left no traction reserve available with which to change your line or brake when something unexpected pops up. And it will. (Which brings up the second form of traction: the kind used on broken bones.)
- Unless you are hanging completely off of the bike, a street stock Ninja 250 will generally drag hard parts, such as the centerstand, before you get far enough over to reach the ground with your knee. If you drag those parts hard enough they will neatly lever the rear tire off of the ground, introducing you to the term "lowside".
- The guys who race 250's do get knees down on the track, but their bikes have been modified, with stiffer suspensions, better tires, removed center stands, etc. If you're curious, there are racers here and on the other Ninja board who can answer your questions in detail.

Best answer: Ya wanna learn racing techniques, get a bike that's set up for the same and get yourself to a good track school. Once you've been fast on a track you'll never want to go back to the street; there simply isn't any comparison in terms of either fun or safety.

Losing traction

VFR Pilot - Sun Jun 16 02:41:29 2002

If you think your tires are "slipping," you are almost certainly mistaken. When a motorcycle's tires actually lose traction in a corner, the bike almost invariably lowsides, bang, right then and there.

Unless you're leaned way over, and are dragging parts hard enough to lever the rear wheel off of the ground, or unless you've just hit a gravel patch, the tires aren't likely to be slipping: what you're feeling is probably just the 250's frame and suspension flexing and/or the tires "walking" sideways a bit across irregularities in the pavement. All motorcycles do this to some extent, and it's generally nothing to worry about. (Huge chuckholes, frost heaves, or nasty tar snakes being obvious exceptions.)

While it's impossible to make one statement that can cover all the variables in these situations, you are usually much better off to hold your line through a corner rather than run off of the outside. While you might go down if you attempt to hold your line, you will almost certainly go down if you run off of the pavement. Sliding down the road from a lowside will probably damage both yourself and your bike, but not as badly as would laminating yourself to a common roadside object such as a tree, rock, cow, or Armco barrier.

If it's possible for you to attend a track school such as Reggie Pridmore's CLASS, I would strongly recommend it. Getting out on a track with fresh tires will allow you to learn exactly what you and your bike can (and cannot) do in a reasonably safe place, where you don't have to worry about oncoming traffic or gravel. Most riders who haven't done any track time really have no idea of just how hard a motorcycle can corner (very) before the tires actually do lose traction.

Accelerating, Changing Gears

Upshifting

Jeb - Mon Aug 7 14:57:36 2000

You can shift anywhere from 5 to 13k, depending on how fast you're going (accelerating). If you're poking along behind a grocery-getter from a stop light, a shift point of 5 or 6k makes sense. If you're accelerating normally and want a good compromise between performance and fuel efficiency, shift around 8-10k. If you're trying to quiet the rowdy kids next to you in daddy's 318i, cook it up to 13k before hitting the next gear. Cruising revs should be between 4-10k.

Downshifting

Jeb - Tue May 30 20:34:36 2000

There are two kinds of downshifting: downshifting to slow down, and downshifting to speed up.

When slowing down, you should ride your current gear to about 4k, then quickly kick it down as you pull in the clutch and blip (quickly open a bit) the throttle; this will bring the revs back up to about 4500, which you can again ride down a bit before going down to a lower gear. Using this method, you can stop more quickly, and will not encounter a jolt. When I slow down from 60 mph, I kick down a gear every few seconds until I'm in 3rd, at which point I'm usually doing about 10 mph or less, and can pull in the clutch to drop down the last few gears as I come to a stop. With practice you can put it back in neutral before putting your foot down.

When accelerating, you can pretty much downshift whenever you want a power boost. However, downshifting when doing anything over 11k rpm is pretty pointless, as you're already in your powerband. You want to try to downshift to keep revs between 9 and 12k; this is where you get the most tug for each twist of the wrist. You should to let off the throttle momentarily while quickly

disengaging the clutch and kicking it down, then opening the throttle up wide to match engine speed as you release the clutch lever again; this will give you the power you need to accelerate effectively.

Clutchless shifting

VFR Pilot - Thu Mar 2 11:42:15 2000

Clutchless shifting can easily be done on a motorcycle: it's just a matter of matching the rpms. On upshifts it's just a matter of backing off the throttle for an instant as you bang the box into the next gear. On downshifts you have to rev the engine up a bit as you drop a gear. Of course, the clutch is there for a reason, and shifting without it will wear your tranny out more quickly. In short, the only place this technique really has is on the racetrack, where tiny fractions of a second can make the difference between first and second place.

My advice? Learn how to do it and then don't, unless some large person named "Mad Dog Al" is chasing you with a chainsaw.

Shifting when stopped

Barry - Fri Nov 17 09:10:36 2000

It's completely normal to have trouble getting the bike into first from a higher gear when stopped; from time to time it happens to me.

What I do is this: When stopped in a gear higher than first, press down on the shift lever; if the bike goes into the next lower gear, fine. If not, slowly let out the clutch till you feel the engine just start to move the bike; then pull in the clutch and press down on the shift lever. The bike will then go into the next lower gear. Repeat as necessary till you get to first. Rocking the bike back and forth works, but for me, this method takes less effort and I think its probably faster.

Braking

Using front and rear brake

gabe846 - Wed May 3 17:50:23 2000

You have to overcome the car-derived impulse to mash the brake pedal with all your might in a panic situation. That's going to mean a rear-wheel skid, and then a highside when you release the back brake.

Learning to ride well is all about suppressing your survival instincts and replacing them with new ones. One of them is to not tense up and clamp down on everything in an emergency situation. Smooth, progressive braking will save your ass most of the time.

Your front brake gives you 80% of your stopping power. As you brake harder, weight transfers to the front of the bike, compressing the forks (except telelever BMW'S) and taking weight off the back wheel, giving the rear tire even less traction. That's why it's easy to lock-up the back.

So, when you are learning braking, focus on using the front until just before skidding the front. Do this in a warm, empty parking lot free of gravel or sand. Practice stopping from 30 or 40 MPH until you can stop as quickly as possible.

Two front discs on a 250 is overkill- I can lift my back wheel in a panic stop, even with a rubber brake line and a warped disc. Two discs would leave you wearing your bike as a hat!

Maximum braking

Patrik - Tue Feb 29 00:42:20 2000

Remember that when maximum braking, all braking power comes from the front wheel (unless the surface is slippery); this is the case because all weight is on the front wheel. If you still have weight

on the rear, you're not stopping as fast as you could. You have to be *very* careful with the rear brake when doing maximum braking.

You are normally taught to use 75/25 or 80/20 or something as the distribution of brake power. I claim that on our bikes, when panic stopping, that should be 99/1. I'm not advocating doing "stoppies," that's poor control, but close.

My advice to you: go to an empty parking lot and practise stopping from 25 - 35 - 45 mph (carefully). It's an essential survival skill to have!

If you want to check how you are doing, a deceleration of 1g is a canonical number for good tires, I believe. This means that your stopping distance should be 7m @ 25mph, 13m @ 35mph and 21m @ 45mph (Americans - multiply by 3 to get feet... ;)), not counting reaction time. Note that I think these are good distances; don't get frustrated and lock up the front brake trying to achieve them...

Trail braking

VFR Pilot - Tue Jul 10 13:10:44 2001

It's perfectly possible to brake safely while leaned over, and to do so without the bike straightening up; but you have to practice doing this before that sudden emergency pops up (if it's not second nature, it's not going to happen when you most need it). The trick is to countersteer as you brake so that the bike remains balanced at the same angle as before you applied the brakes.

You practice this by finding an empty road and applying the front brake gently and smoothly as you go around the curves. After you've done it for a while you will find that you begin to automatically add more lean as you add more brake. When it begins to feel more natural, start hitting the brakes a bit harder and faster until you can bring the speed down quickly without the bike suddenly heading straight for the outside guard rail.

Note that there are times and places where trail braking can put you on your head: If you are already at full lean, suddenly hitting the brakes will probably cause a lowside, and so can hitting a patch of frost or moisture.

On the other hand, trail braking can save your bacon. I came around a blind corner last summer to find the road full of spinning cars, and a motorhome sideways across both lanes. I got stopped with just about three feet to spare, and felt the "thump" as my rear wheel came back down from the involuntary stoppie. Never lost control, but I never had time to think about what I was doing, either. Wish I had a videotape...

Stopping in traffic

Patrik - Wed Apr 26 23:20:26 2000

Remember to always check your mirrors whenever you stop for a light to make sure the guy behind you isn't sleeping (this is taught in the MSF). I think that risk is smaller (and can be battled) if you blow through a yellow light than the chance of someone making a right turn and not seeing you . Remember that most people making right turns have a lane of straight or left turners blocking their view as well.

Stopped in traffic

VFR Pilot - Thu Aug 2 15:24:03 2001

To avoid being squashed:

1. Always leave the bike in first gear while you're stopped at an intersection.
2. Watch your mirrors.
3. Stay to one side or the other of the car ahead of you. It gives you somewhere to go if you must make a quick exit.

4. If you're in California, lanesplit. The drunk can't hit you if you're between two other cars. (But even then, still pay attention to items # 1 & 2 and get the heck out of Dodge before any impact.)
5. Work on developing your situational awareness. (That's knowing exactly where all the traffic around you is located and constantly updating your mental map of where they will (or MIGHT) be in the next few upcoming seconds.) The only real defence a biker has in a bike-vs-cage collision is not to be there when it happens.

In the Rain – Basic Differences

SteveS - Fri Aug 4 10:27:59 2000

Learning to ride in the rain is just like learning to ride. It just takes a little time to get accustomed to it. I believe a lot of the traction 'lost' in the rain is actually psychological. Commuters (who get stuck in the rain regularly) are usually quite comfortable in the rain.

Things to definitely watch out for:

- greatly increased stopping distance (do not want to risk a lockup, obviously).
- road oils rising to surface (when rain first starts).
- puddles in the slow lanes (near the gutters)
- reduced visibility (watchout for the cages)
- hypothermia (cold weather/long trips)
- Replace tires timely (should be done regardless of rain)

Pick a rainy Saturday and go to an empty parking lot... practice turning, leaning, (very) slow (rear wheel) skids.

What's the meaning of some of this bike vocabulary I'm hearing?

Technical Jargon

What are "clip-ons"?

Gabe846 - Sat Nov 25 00:32:50 2000

Clipons are handlebars that clamp individually to each fork tube, rather than a single handlebar held by clamps.

Racers and sport-bikers prefer them because they are stronger than tube handlebars, are easier to adjust for position, and place you lower and closer to the front wheel, putting more weight over the front for better road feel and lower wind resistance. Also, since you can just replace one side, clip-ons are cheaper if you crash a lot. (ahem)

The EX250 has (soft, pot-metal that bend easily) bars that bolt into risers bolted to the top triple-clamp. For a better idea of what I'm talking about, look at the parts microfiche for the EX250 on www.buykawasaki.com, then look at a bike with real clip-ons, like the ZX6-R.

Many new riders do not like the low position clip-ons provide, since you need to build up muscles in your arms, back and wrist to get used to it. The 250's position is much more comfortable for new riders and shorties.

How does a "carburettor" work?

Duke - Wed Jul 5 22:35:52 2000

The Ninja uses a Constant Velocity Carburettor, which means the velocity (speed) the air flows through the carb remains constant, however the volume of air moving through changes as the slide raises. It's a mutual relationship; the more air is drawn through, the more vacuum there is to pull up on the diaphragm, thus raising the slide and allowing a greater volume of air through.

The actual throttle cable is connected to a metal butterfly valve which resides in the carb throat just inside the slide. As the butterfly opens, more air is allowed to enter. The Jet Needle, which is

attached to the bottom of the slide, raises out of the Needle Jet as the slide raises. Thus, more air -> more gas. The needle has a precise taper to it, being thick at the top and thin at the bottom. This taper is crucial to the bike having good power through the RPM range. This is where all the money is spent buying a DynoJet kit. Their needle has an excellent taper for the 250's needs. As the needle is raised to it's highest point it no longer has a part in controlling mixture, and the job goes to the Main Jet which resides at the bottom of the tube from which the Needle Jet was raised. This is the maximum amount of fuel which can be delivered to your engine. Thus, the main jet affects your engine's performance at the higher RPM range, and is critical in tuning your engine to deliver maximum power.

The point of this is to deliver the optimum mixture of air and gas (14:1 ratio I believe) at every RPM. The process is difficult - which leads to your carburettor having the three different fuel circuits which are each used for a different part of the RPM range (pilot, needle, main). Thus the invention of fuel injection in which this is all figured out by a computer.

What is "jetting"?

Duke - Tue Jan 11 15:39:41 2000

Carburettor jetting is the fine art of adjusting the jets inside your carburettors to provide optimal fuel flow into your engine. A couple different companies sell jet kits that include 2 adjustable jet needles and [4 sets of 2] different sized main jets to allow you to accomplish this goal.

If you modify your exhaust or intake you will need to also adjust your mixtures in your carbs due to the increased airflow, which will cause a lean mixture. Depending on what mods you make, you'll use 'Stage 1' or 'Stage 3' (Both are included in the kit; the 'Stage' business is just marketing hype). The carb kit may also improve your stock performance by smoothing the low and mid-range response. With a Muzzy exhaust system, the Dynojet kit in my bike makes a very noticeable difference. Instructions for installation and adjustment are included in the jet kit, plus they have a 1-800 number for help. If you have a little mechanical aptitude, you can install it in a Saturday afternoon. However, plan on taking the time to make a few adjustments to get it just right.

For $90, it's worth a try, and you'll have everything you need (carb-wise) to add a hi-flow pipe or intakes in the future.

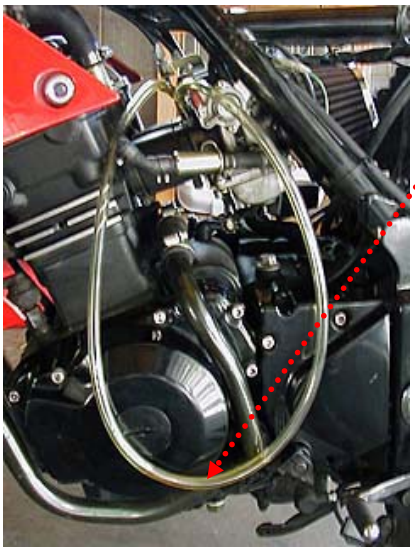
What is "carb sync"?

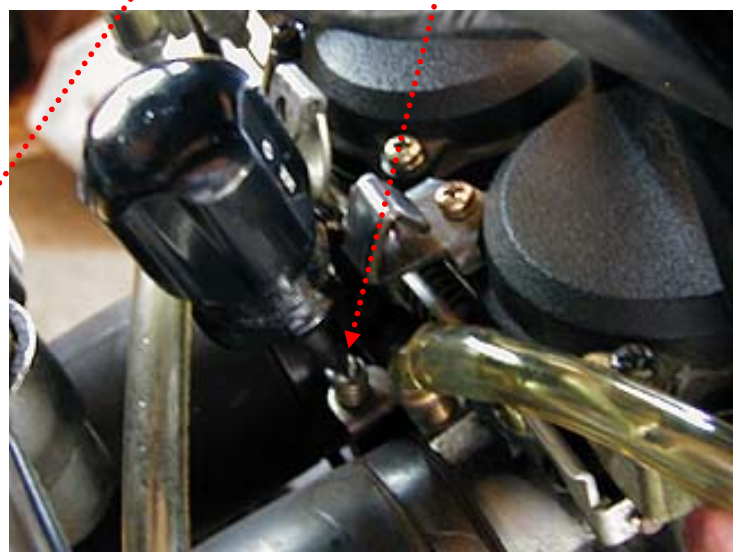
Duke - Thu Jan 13 12:53:14 2000

Carb Sync is matching the butterfly valves in the two carburettors so they both open the same amount. Your bike will not run to it's optimum level if one cylinder is running harder than the other.

The easiest way to understand how the adjustment works is to take your carbs off and look at the linkage. There's a screw adjustment in between the two carbs that adjusts one butterfly in relation to the other. Carb sync is adjusted by measuring vacuum through each carburettor and setting the butterflies so vacuum matches. There are fancy gadgets to do this, but there's also a quick and easy way to do it at home...

Get a piece of clear plastic tubing about 3' long. Place some thick liquid in it like motor oil (something that won't hurt your engine if it gets sucked in). Remove your fuel tank. On the top side of each intake - in front of the carbs - is a vacuum nozzle. Remove the black hose from each (plug the hoses for the duration of the job) and place one end of the clear tube on each fitting. Let the clear tube hang down so the oil gathers at the bottom of the loop. Start up your engine for a moment, and if your carbs are in sync the oil will not flow one way more than the other. If there's more vacuum from one carb or the other the oil will flow that direction. Turn the linkage adjustment screw (you'll need either a very long screwdriver, or a stubby one) in between your carbs so the vacuum is equal and you are all set. It may help to periodically turn off the engine for a few moments, so the oil can regather at the bottom.





How does a "choke" work?

Chris 2 - Tue Feb 29 19:20:51 2000

The choke and throttle are different. The choke reduces air flow and increases fuel delivery, richening the mixture; the throttle adds fuel and air. If you have a flooded engine the worst thing to do is pull the choke. The full throttle trick works by increasing airflow to lean the mixture enough to get combustion.

If you take the choke off too soon on a cold engine and try to substitute, you'll notice that it is virtually useless; the mixture is too lean.

What is a "fairing"?

Zaq - Tue Mar 21 11:32:11 2000

The fairing is the plastic (usually) covering on the motorcycle. There are a lot of different kinds, but the Ninja 250 is fully faired. It has a windshield, a covered engine and plastic that goes all the way down to the bottom of the bike.

Biker Speak

What is a "Squid"?

Ninja Grrrl - Fri Oct 29 08:15:06 1999

A "squid" is a youthful rider that gets ahold of a high powered sport bike and does a lot of stunts and extreme riding - not fully realizing that without training and experience, disaster is near. We worried about one of our young riding partners when he got his F3. He turned out to be a very good rider - only a small squid - therefore gaining the name of "Johnny Calamari." Me on the other hand, being such an overly cautious rider, was constantly referred to a "jellyfish". At least I still have all my cells :-)

What is a "burn out"?

Terry - Thu Dec 21 18:49:04 2000

Stand on the ground while squeezing the front brake and pressing down on the handlebars with as much weight as you can. Rev it to 8-10k and "dump" the clutch while at the same time twisting the throttle wide open.

There you go; start with the rear wheel on wet asphalt to make it even easier. Have fun wasting your back tire if you choose. I'll admit I did it myself a few times because I was curious, but I quickly realized there is no skill involved in a burnout. A trained monkey can learn to do one. Since it is such an easy act anyone can perform, most motorcyclists that see another will quickly lose respect for that individual unless they see a truckload of rear tires behind him with a sign that says "free to use today only".

I would much rather practice wearing my tires on the sides than in the center. It's much more rewarding. :)

What is a "stoppie"?

VFR Pilot - Fri Oct 29 15:04:26 1999

Stoppie: A trick often performed by squid, I.E., intentionally lifting the rear wheel off of the ground by hitting the front brake. This is sometimes followed by the squid being ejected over the handlebars directly into the path of his own motorcycle.

What is "lane splitting"?

VFR Pilot - Fri Wed May 24 22:00:48 2000

"Lane splitting" can also mean more than one thing:

- Riding between lines of stopped or moving cars (legal in California).
- Passing a car that has moved over to give you room (as long as you don't cross a double yellow line to do it, this is legal in most states).

What is a "highside/lowside"?

gabe846 - Tue Jun 20 18:25:40 2000

There two kinds of non-collision motorcycle crashes. A "lowside" happens when the bike is leaned over so far that the tires no longer grip the road and the bike falls on its side. This is the better kind of accident, since the rider has a short distance to the pavement and can gently slide to a halt (you do wear protective gear, right?). I should know, I had two last weekend.

A "highside" is when the bike's front or rear tire loses traction and suddenly regains it with one of the wheels out of the line of travel. The bike reacts with a whip-like action, spitting the rider off the "high side". This is bad, as the rider is usually catapulted off the bike at a higher speed than he or she

was travelling, sometimes in a high arc, resulting in tumbling/bouncing/flopping. This is where the worst injuries occur, and why we wear good-quality, CE approved armor in our protective clothing (you wear protective clothing, right?).

How do we avoid highsides and lowsides? By making smooth, gentle control and steering inputs, maintaining headbearings and suspensions, having good quality, serviceable tires, and not riding overpowered bikes like R1's.

I want to get a bike but my parents won't let me.

Jeb - Fri Jun 1 9:36:23 2001

This is a question that comes up from time to time, but in fact, a relatively small percentage of those who ride the 250R are under 18 years of age (and therefore require parental consent).

My answer would not be to "just buy one," in any case. If you are not 18, you cannot insure or register a vehicle without a parental signature anyway (in most states). The best route, in my opinion, is to ask if you can enrol in an MSF course (most parents will say yes). After this, parents are more likely to accept the purchase of such a vehicle, since they know you are properly trained, and responsible enough to take the class to begin with. If the answer is still no, see what they think about a moped (bicycle with a very small motor; not very dangerous), or a scooter; you can then trade up in a few years.

If all else fails, you can do what I did: wait until you are legally and financially independent; then you can buy whatever you want.

I just got a Ninja 250, & I have some other questions about it

Do I really have to follow this break-in period?

Jeb - Sun Jan 16 17:40:50 2006

It has been pointed out that every motorcycle model Kawasaki makes comes with the same, 4000 RPM initial break-in limit sticker on the tach. This really isn't fair, because of gearing. Some bikes do 50 mph or more in top gear at 4000 rpm, while the Ninja 250 only does 35 mph, so the bike that does 50 mph in top gear will consume 500 miles sooner. It's really backwards, because EX250 works harder, and would break itself in sooner than, say, a 2-liter, 5k RPM-redline Kawasaki Vulcan. But a mindful break-in is still important.

This is a much-debated topic; some say baby it, some say ride it like you stole it. I'm just going to put up my take on the matter, backed up with a few empirical items.

The fact is that an engine is not fully broken for several thousands of miles. During that period, you have to respect it more than you would a fully broken in engine. That said, the Ninja 250 is probably 95% broken in by 500 miles. And it's probably 90% broken in by 50 miles. Still -- and this is really beside the point of this article -- the engine is not fully broken in until 5000 miles or so, when everything in the engine is completely seated, at which point the engine begins to ever-so-slowly deteriorate (just like you grow until you're 27 years old, then you start to die).

Now, what does "respecting the engine" mean? Generally, it's all about friction and lubrication. Until the engine is run in, there is more friction and less lubrication on critical parts (valves, cams, rings, bearings, etc). These parts must be in good shape for the engine to run efficiently and for long periods of time. Exceed the proper RPMs, and the unworn components will get too hot too fast; you will get hardened rings, scored cylinders, and valves that do not seat correctly. This may not make a huge difference at first, but the increased wear will encourage more advanced wear. Loss of compression, noisy bearings, leaking seals... the list is extensive. But it adds up to less power and shorter engine life span in the long run.

So again: What is the proper respect? What are the proper RPMs? This is a matter of much disagreement. But here is what is usually agreed upon: Do not mess with an engine until it is fully

heated up, fully lubricated and ready to be pushed. No one will disagree that multiple, progressive heat cycles are a Good Thing™, and that frequent oil changes early can never hurt.

Is there a formula for all this? Not exactly, but here's a good method I would use: make the engine work harder the more you break it in, always keeping the temperature and friction inside in mind.

Example: Start the motor, and let it work up to running temperature. Shut down, and cool off completely. Repeat, this time, revving gently, more as the temperature increases. Shut down, cool off. Repeat, this time riding the bike gently. Shut down, change the oil, cool off. Take the bike for ride again, pushing it harder this time; start exploring the upper half of the tach. Never push it until it has warmed up bit. Repeat this cycle several times, each time pushing the motor harder. Try out the redline for a moment here and there; you won't hurt it. Change the oil after another half-dozen runs. Then ride as you would like, but always being more gentle on the machine until it is warmed up and ready for the abuse that Kawasaki's are famous for taking.

Again, this is my take on the issue, how to break in a motor well without breaking it. Do your research, and decide what is best for you and your machine.

How long do I have to wait before switching to synthetic oil?

Duke - Wed May 17 22:46:04 2000

I put about 700 miles on my new rings before changing to synthetic oil, and it began to burn oil like crazy. I was burning nearly a quart every 500 miles!

I've now switched back to mineral oil, and the oil consumption has slowed way down. I'm at about 1,000 miles and I've only gone through about 3/4 quart. This bike (as is the case with most modern bikes) takes a good long while to get everything seated. I've heard mechanics say to never go to synth oil before 5,000 miles. Won't hurt anything, but you'll wind up burning more oil than you should and parts won't seat completely. I didn't believe them... but 'tiz true.

What is the correct way to apply choke at startup?

Jeb - Wed Oct 3 14:23:53 2001

Turn ignition key to on position; leave choke off. Press starter button with one finger (no throttle) while gradually turning up the choke. After about three seconds, the choke and carb priming should be adequate to start the engine. Use no more choke than necessary to keep the bike idling.

The gradual application method is better than just turning on the choke and then trying to start it, because the ninja rarely needs full choke to get going. You don't want to give it too much choke, because you risk flooding the engine and encouraging carbon deposits on the valves.

As soon as the engine is in the rhythm (60 seconds or less), ride off; do not idle the engine to warm it up. Keep the revs low, and turn off the choke after you're a few blocks from home. Increase revs as the bike warms up.

Choke should only be needed to start a cold engine. It may take some practice to get your starting technique perfected.

My bike jolts forward when I put it in gear after first starting; is this normal?

Barry - Sat Jul 15 21:42:55 2000

It's "normal" for the bike to jump forward when it has sat for a while. The Ninja 250 has a wet clutch; the same oil that lubes the engine also flows in/around the clutch. If the bike sits for a while, the oil will be forced out from between the clutch plates; the bike jerks when you shift from neutral into first because there is not enough oil between the plates for them to slip.

You can avoid the bike jerking by pulling in the clutch after you start the bike, and then holding in the clutch while the engine warms up. If the oil is cold, pumping the clutch a few times isn't enough. After the bike has been fully broken in (after say at least 5000 miles) you could switch to a synthetic oil; that will lessen the tendency of the bike to jump forward.

Why does my bike take so long to reach normal running temperature?

Jeb - Sat Jan 27 8:51:48 2001

The ninja runs cool; the temperature needle will normally stay very close to the cool end of the normal range.

After startup, don't wait for the bike to warm up at idle; this will take too long, waste fuel, and encourage carbon buildup on the valves and spark plugs. Instead, start it up, give the engine a few moments to get into the rhythm, then ride away. Do not apply excessive throttle, or make sudden throttle changes; be smooth. Keep the tacho below 6k until the needle is over the cold mark, and then below 9k until it has reached the normal range (6k and 9k are my limits; you must choose what works best for you). Riding the bike will help it warm up much more quickly.

Additionally, during the colder months, a piece of cardboard can be placed over front of the radiator to partially cover it; this will make the radiator less efficient, and increase the rate of heat build up. If after doing this the temperature needle goes over the mid-point while riding, use a smaller piece of cardboard.

How far can I go after putting the fuel petcock on "reserve"?

Leon - Sun Aug 6 03:09:34 2000

I usually get 35 to 50 miles on reserve.

Reserve should be used frequently. When the petcock is switched from main to reserve, the fuel that goes to the engine comes from a lower part of the tank. The lowest part of the tank is where the water and dirt go if left alone. If the reserve is never used, the level of the water and dirt in the bottom of the tank continually rises. If it gets above the level of the reserve fuel line, it goes into the carbs when the petcock is switched.

Personally I prefer to have a little water and dirt go into my carbs every tank of fuel rather than a lot of it at a time when I'm already in trouble because I let the fuel level get a lot lower than normal.

I think this is one of those messages that needs a disclaimer. Don't do this with your own bike; dirt and water shouldn't be put into the carbs. The correct method is to remove the tank, remove the petcock, then completely drain and rinse the tank. This should be done more frequently if the bike is stored outside where it gets rained on. Dispose of contaminated fuel in accordance with local laws.

What kind of fuel should I use?

Jeff - Sun Aug 6 21:26:36 2000

The owner's manual suggests using 87 octane unleaded gasoline.

Having too high an octane is never harmful but having too low can be harmful. That said, there's still no point in using an octane higher than what the factory says unless the engine's knocking. With an older engine, sometimes you get knocking unless you go with a higher octane. You're not going to get a performance gain with a higher octane fuel. If anything you'll get a performance *decrease* since the higher octane gas may not fully combust.

What are those tubes hanging down from the bike for?

Jeb - Sat Sep 2 22:14:41 2000

There are a variety of tubes that are bound together at the bottom of the bike. These can include fuel tank overflow, coolant system overflow, carb drainage, and battery vent. These hoses are usually a little longer than necessary when you first get the bike; you can trim them a few inches if you like, but be sure to leave enough slack above the lower routing bracket, and a few centimeters of travel beneath.

Should I use the side prop or centerstand when I park?

Jeb - Tue Nov 13 20:07:33 2001

Use the side prop for everyday parking, and the centerstand for storage and maintenance.

The side prop creates a larger tripod than the centerstand does, and is more stable for parking on the street. The centerstand creates a smaller parked footprint, and takes the rear wheel off the ground; this is the better position to have when doing work on the bike, and when parking it at home. Some people do use the centerstand exclusively, though.

Why does my gas tank sometimes whine when I stop?

Jeb - Mon Sep 3 07:57:05 2001

This is due to vapor expansion, and it is normal, especially on warm days. The pressure inside the tank is always changing and restablizing as fuel is pulled out by the carbs, and air gets in to fill the space left. Add the slow process of gasoline vaporization to the mix, and you get a slight whine coming from the vents.

Maintenance/Repair

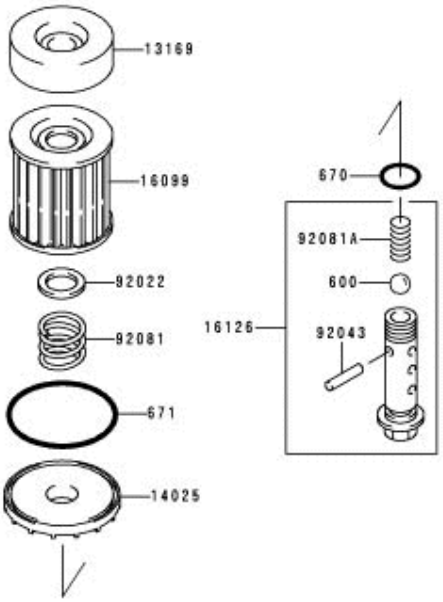
I need advice for maintaining my bike.

How do I change the oil?

What is the oil change procedure?

Jeb - Sun Jan 7 07:55:33 2001

Here is a diagram of the filter assembly (right):



Warm up the engine. Turn off the engine and let it sit for a few minutes; place the bike on centerstand. Remove the drain plug bolt on the bottom of the engine over a 3+ qt container (don't burn yourself). Once the oil flow has slowed to a drip, replace the bolt and tighten to 14.5 lb/fts; don't overtighten it unless you really dig oil leaks. Remove the oil filter bolt and filter retainer, just in front of the drain bolt. More oil and a dirty filter element will come out. Be sure to keep all the springs/grommets in order.

Place the new filter (STP SMO-12; SMO-09 will work if you can't find the SMO-12) on the retainer, and replace the assembly, again torquing the bolt to 14.5 ft/lbs. Open the filler cap on the right side of engine. Fill w/ 1.5 qts of your favorite oil. Wait a minute, then add a very small amount of oil at a time until oil is halfway up the level-check window. Replace the filler cap. Start up the bike for a few minutes, then shut off the engine and wait a few more minutes before checking the window again. Put another few ounces of oil in. Repeat until oil level is consistently in the center of the view window. Centerline in the window while the bike is on centerstand is the same as full with both wheels on the ground. Do not overfill (you could blow a gasket).

How often should I change the oil? What kind should I use?

Leon - Wed Mar 15 18:09:35 2000

The book calls for 10W40 to 20w50. The consensus here is not to put synthetic in the bike until the break-in period is finished. I have also heard that you shouldn't switch an old high mileage bike to synthetic as some of the crud may be plugging leaks.

Personally I believe that synthetic oil may increase the life of the motor by up to 50%, but the extra cost of using synthetic oil exceeds the cost of replacing the motor. I use synthetic automotive Mobil 1 15W50 or 10W30 because I don't like changing motors. I change both oil and filter every 3000 miles, unless I'm on a trip, then I wait till I get home.

Are there preferred brands of oil for motorcycle use?

Daryl - Thu Nov 9 16:58:20 2000

Oils $5.00 or less that rate above average at a discount price: Belray EXP Blend M/C $4.99, Motul 3100 Blend M/C $5.00, Golden Spectro Blend M/C $4.95, Mobil 1 Tri-Syn Auto $4.29, Shell Rotella 15w/50 Auto $1.39.

- Golden Spectro ranks highest in anti-wear additives with Shell Rotella second, the others rated well.
- Best in Extended Oil Changes is Moble 1 Tri-Syn, second Motul 3100, others rated well.
- Best in Low Mileage Extended Sit Time is Shell Rotella, second Motul 3100, others rated well.
- Best in Hot Running Evaporative Losses is Moble 1 Tri-Syn, second Belray EXP, others rated well.
- Best in Viscosity Retention is Shell Rotella, second Belray EXP, others rated well.

This doesn't include all the data, but most of it. Remember, this list is of oils $5.00 or less; there may be better oils, but you will have to pay $7.95 to $9.95 a quart, and the difference in protection is not that much greater if any at all.

Is synthetic oil really all that great?

Jeb - Sat Apr 1 22:35:19 2000

Synthetic oils have better resistance to thermal breakdown than petroleum-based oils, which is important in small-displacement, high-revving engines like ours; synths work almost as well under high heat as when relatively cool, while fossil oils can turn to goo.

There are more advantages. Synthetic oil has better residual properties; it clings to engine components better than fossil oils (more cohesive), which means cold clutch plates are less likely to stick. Synth oils get to cold engine parts faster than fossil oils, which means less damage at startup. And because of the better synth cohesive properties, those components that don't get fully lubricated during the first few seconds after startup (while pressure is established) will suffer less frictional wear. Synth oils also maintain their viscosity more effectively over time, and under different engine loads. Ultimately, synth oils just lubricate better.

What oil filters are available?

IanJ - Thu Jun 19 17:17:33 2003

You can find the following oil filters, which are a direct replacement for the Kawasaki unit sold by dealers. Most are around half the price of the Kawasaki filter:

Amsoil: SMF 101
CarQuest: CFI-89941
Emgo: 10-37500
Fram: CH6012 of CH6009 (12 is ideal; the 09's o-ring is oversized)
Hastings: LF571
Honda: 15410-426-010 or 15410-300-024
Kawasaki: 16099-003
K&N: KN-401
NAPA: 4941
Perf-Form: J-501
Purolator: ML16812
STP: SMO-12 or SMO-09 (12 is ideal; the 09's o-ring is oversized)
Triumph: 1210031
Yamaha: 36Y-13441-00

At least one of these filters will be available at any reasonable auto parts store, such as AutoZone, Pep Boys, Schucks/Kragen, NAPA, WalMart, etc. If you can't find these brands at your favorite auto parts store, check to see if they have a cross-reference chart for the brand of filters they carry -- most filter manufacturers do. Cross-reference their brand to one of those filters listed above.

How do I service the final drive?

How do I clean the drivechain?

VFR Pilot - Fri Nov 2 01:43:28 2001

I use a spray can of WD40, a spray can of O-ring chain lube, and a handful of old rags to clean my chain.

First, put the bike on the centerstand and make sure it's in neutral. The engine is not running, and the pipes should be cool to the touch.

Then rotate the rear wheel by hand, spraying a liberal amount of WD40 onto the exposed section of the chain as you go. (I hold a "mask" cut from scrap cardboard behind the chain while I spray to prevent getting WD40 all over the rest of the bike, and the rear disc in particular. In fact, if you do this over pavement you'll also want to put down a bunch of old newspapers to absorb the runoff. Otherwise you end up with WD40 *everywhere*!)

Once the chain has been soaked, keep rotating the rear wheel and wipe the chain down thoroughly and repeatedly with the old cotton rags, getting off all of the dirt that you can. This is really messy, takes a while, and you should plan on tossing the rags when you get done. And washing your hands for about an hour.

Try not to catch your thumb between the chain and the rear sprocket more than once or twice as it *really* hurts! **#%!!

Once the chain is clean (sort of) and dry, spray on the chain lube; again using the cardboard mask to keep the lube more or less where you want it.

Let bike stand for a few minutes and then go ride.

You will hear some people tell you that the world will end and your bike will probably rape the neighborhood children if you let WD40 come anywhere close to it. All I can say is that I've used it to clean (*not* lube!) motorcycle chains for a looong time, and have never had a problem. In fact, my VFR's chain just turned 14,500 hard miles old, has always been maintained this way, and was pronounced as good as new by our local Honda experts just this afternoon.

How often should I lube the chain; what should I use to do so?

Ninja Grrrl - Tue Dec 7 16:58:02 1999

I clean my chain and sprockets thoroughly with kerosene every 800-1000 miles, and apply chain wax every 300-400 miles.

Chain wax comes in a spray can and is applied with a red tube fitted on the nozzle like WD-40. It is just one method - although a good one - of keeping a chain lubed. The chain should be warm (like after a 10 minute ride) and properly adjusted. Spray the wax on the inside of the bottom run, lubricating the rollers well. NOTE: Watch out you don't pinch your fingers between the chain and rear sprocket! Wipe off the excess then wait about 20 - 30 minutes. This allows the liquid "carrier" of the lubricant to evaporate, leaving the chain "waxed."

Yes, kerosene is flammable, but not nearly as much as gas or other solvents; it's fumes are quite hard to ignite. "Gunk" engine cleaner is similar. As always use caution and you'll be fine.

What are some good chain lubes?

Wolcott - Sat Aug 18 09:02:58 2001

Motorcycle Consumer News just did a full test of a bunch of lubes. Their "best buy" is PJ1 Chain Lube (black). It got 25 points.

Their "recommended" list is: Yamaha Performance, Pro Honda HP Lube, Kawasaki K-Kare Foaming, PJ1 Chain Lube (blue), and Torco Power Slide Titanium. All these scored 21.5 to 23.5 points in their tests for clings, rolling resistances, grit resistance, etc.

How do I measure chain slack?

Jeb - Wed Dec 5 12:16:33 2001

Cut out a piece of cardboard approximately 1" x 4" long. Draw a line on it, and put markers at 0, 30, and 40 mm points. Place the end of the cardboard piece against the bottom of the swingarm, toward the front (above the center of the bottom chain run).

Put the bike on its centerstand. Gently tug the chain taut, down and then up, noting the entire amount of slack present. Less than 25 mm is too tight, more than 45 is too loose; 30-40 mm is just fine.

How do I adjust chain tension?

Leon - Wed May 31 18:40:07 2000

Remove the cotter pin from the rear axle. Loosen the nut on the rear axle a couple of turns. Loosen the 17 mm nut that retains the brake calliper arm just a bit. Loosen the two 12 mm lock nuts, one on each side behind the axle. The nuts are actually 8mm nuts, but it takes a 12mm wrench to loosen them. Back the nuts off about 1/2 in (10-15mm). Tighten the chain tension bolt on the *left* side of the bike until the chain is almost right. Look at the mark on the chain adjuster above the axle. Adjust the right side so the mark on that side is the same. Recheck the chain slack. Adjust it again if needed. Tighten the locknuts, brake arm nut and axle nut, replace the cotter pin with a new one (they're only 25¢ each) check everything one more time and go ride.

Yes, I know the right way to line up the rear wheel is with a couple of straight edges. But this is about chain tension, wheel alignment is a separate topic.

How do I replace the chain?

Jeb - Tue Mar 19 12:22:18 2002

You don't need any special chain breaking or riveting tools; a dremel with cutting wheel, two 2" c-clamp and 2 hammers work just fine.

Use the dremel to carefully trim off the excess linkage from the new chain, if any. Take off the front sprocket cover so you can get a good look at how the new chain should be threaded on. Use the dremel to cut off the old chain; it will help to remove the left exhaust canister if you have one.

Loosen the rear axle, put the bike on centerstand, and kick the wheel forward (after loosening the swingarm adjusters and rear brake torque arm). Put the new chain over both sprockets, and bring the ends together under the top run. Grease and assemble the o-rings and master link.

Hopefully you got a riveting master link, and not a clip-type link; the clip-type is fine, but more likely to fail spontaneously (not likely to fail, just more likely). Both are assembled similarly, using the c-clamps to compress the link and plate. Using one c-clamp per pin, put the flat side of the 'c' against the far pin (the one that's already riveted) and the cupped side of the 'c' over the pin that you're pushing through (so you don't squish it as it gets squeezed out). Tighten each side one turn as a time until you just can't do it anymore more; at this point the clamp turn bars may be bent from the torque (!), and there should be a good mm of pin exposed. Remove the clamps.

If you have a riveting master link, then take the biggest hammer you have, and put it behind the link. Using another hammer, repeatedly hit each pin until it mushrooms out to about the size of the other rivets. it may take a while. If you have a clip-type link, use needle-nose pliers to carefully pop on the clip. Keep some spare clips on you, and check the chain at every gas stop.

Another option is to buy an endless chain (without a master link), and drop the swingarm. If you've had the swingarm off before and are comfortable with the procedure, then this method of replacement may actually save time over the above options.

What replacement chain/sprockets should I consider?

Dweedlebug - Thu Feb 22 08:47:48 2001

As far as the best chains out there, I don't think anything really comes close to the DID ERV2 Gold X-ring. It has superior tensile strength and excellent lubrication properties. There is a guy that runs the DID ERV2 on his turbo R1 without any hint of failure. I would think any decent parts supplier, whether locally or on the web, could get you the 520/106 chain you need. I would not trust any other type of brand other than a DID. You may not want to cough up the dosh for the ERV2 as it is not cheap, but I'd take a serious look at what DID has to offer in the rest of their product line-up before I made any decisions.

As far as rear sprockets go, lower weight is indeed a benefit; the looks are subjective. If you do go with an alloy sprocket, make sure that it is hardened. I don't know for sure what processes they use to harden them (hard anodization, cyro, ??), but I take it on reliable advice that the hardened ones have much better wear properties than the unhardened. There are a lot of people that have run both hardened and unhardened rear sprockets and the hardened ones always last much longer.

My preference is for AFAM sprockets, as I have never heard a bad word in regards to their products, ever. They sell a hardened rear sprocket, but the looks of it are an individual thing; it only comes in a dull grey finish, but I'll take performance over looks any day of the week.

Second on my list of sprocket manufacturers is Renthal, a lot of European riders like this brand as it is readily available to them, but I have heard a few (like 2 or 3 in the past 3 yrs) complaints that the tolerances were off. I'm not sure if they offer hardened sprockets, but assume they do.

Third is Sprocket Specialists sprockets. In the past year alone, I have heard multiple complaints regarding tolerances and the sprocket as a whole being out of round (was not flat). They offer a lightened rear sprocket that many people swear by, and as I have no personal experience I am no authority, but it sounds like a crap shoot to me and I ain't no gambler.

If you wanna get really flashy, look at what ProTek sells. Bright dip anodized, lightened rear sprockets. I have no info on anyone that has ever used these, but they are the looks (if that is what you are after). Check out the bar ends they offer, too; nice stuff, eh? Their billet ones make any of the other aftermarket bar ends look like crap, in my opinion.

How do I adjust the valves?

Why do the valves need to be adjusted?

VD - Sun Jun 15 02:22:58 2003

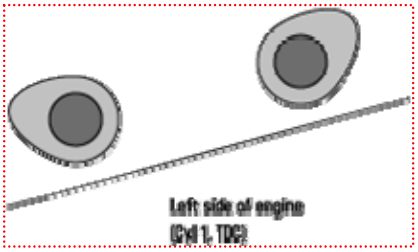
The valve clearances determine, to a degree, when the valves open and close, how long they stay open and how far they open. Your engine "breathes" through the valves, as these are the openings that allow the air/fuel mixture from the carburettor (intake valve) into the combustion chamber and for the piston to expel what's left after that combustion takes place (exhaust valves) out through the exhaust pipe, to make room for the next fresh charge of air/fuel mixture.

Technical crap aside, the most important reason on the 250 is that the parts inside the combustion chamber (valve heads and or valve seats on the cylinder head) wear at a faster rate than the parts under the valve cover (valve nibs, rocker arm pads, cam lobes, tappet screws). Wow, that sounds like more technical crap. Translation, the valve clearances get tighter (on the 250) as you rack up the miles, and if they get so tight that there's zero clearance, they'll melt. They valves need to fully contact the valve seats to get rid of some of the intense heat (through conduction) that builds up in them or they're toast. Many engines are just the opposite, in the fact that clearances get looser and start to make more noise, because the parts I listed above are reversed as far as wear rates are concerned.

What is the adjustment procedure?

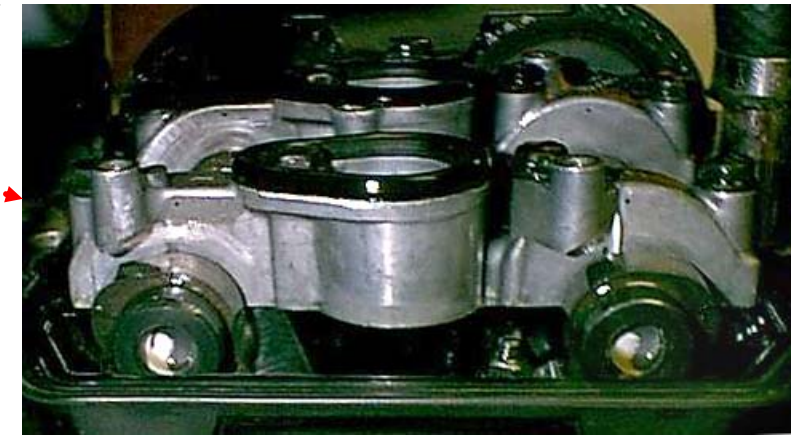
Jeb - Sun Apr 22 21:53:40 2001

Put the bike on centerstand. Take off the lower and upper fairing, side covers, and fuel tank. Carefully pull the spark plug wires by their boots, and remove the left and right coil packs (two 12mm bolts each). The service manual suggests draining the coolant so the radiator can be removed to make it easier to reach the exhaust valves, but it is possible to avoid this. I also remove the 'wings' from which the front of the engine is hung (one long 14 mm bolt), which makes it much easier to reach the exhaust valves.



Remove the alternator cover and flywheel view cap on the left engine side cover (use a very large flathead screwdriver). Take off the four valve cover bolts and lift the valve cover (do not remove the cover gasket; leave it on the top end). Using a torque lever (large socket driver), turn the engine using the alternator bolt inside the left cover housing; turn the bar forward (counter-clockwise) until the cam lobes over the left cylinder cam lobes point out and slightly up (they should mirror each other, **like this**). When this is done this correctly, a "1T" mark will be visible on the flywheel through the view hole (you'll need a flashlight to see it), and the tappets below the cams will wiggle when you try to move them under your finger.

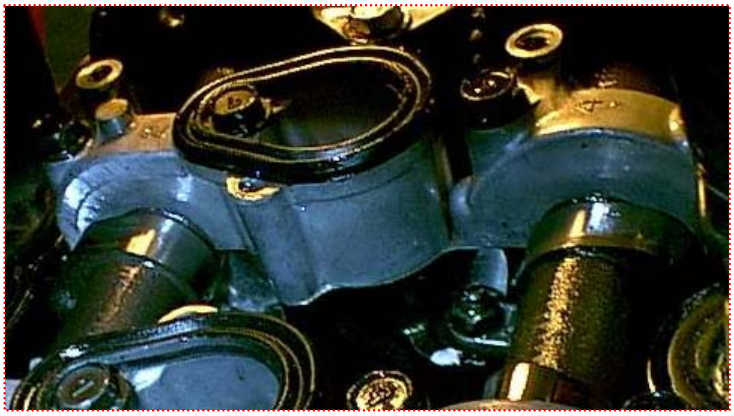
Here is a photo of the engine at TDC for cylinder 1



Now take out your feeler gauges, and slide the proper gauge finger under the first cam (of four for that cylinder), between the cam lobe and the top of the valve tappet; it should slide in with little effort, and drag slightly when the clearance it correct.

If the clearance is not correct, grab a 9mm socket and loosen the tappet locknut; there's a small screw on top of the nut. Use a very small flathead screwdriver to turn the screw out a bit until the clearance is correct (if you use the looser end of the acceptable adjustment range, it will take longer before the valves need adjustment again).

Rotate the engine again until the right cylinder cam lobes are in the **proper position** (a "2T" mark will be viewable on the flywheel), and repeat the check/adjustment process. If the exhaust valves need to be adjusted, you may need to remove the radiator retaining (four 10 mm) bolts to move it out of the way (the coolant hoses will keep the radiator loosely attached to the bike); the exhaust valves tend to take longer to work on.



Wipe the valve cover gasket clean of oil and put everything back together carefully when done. Use very little torque on the valve cover bolts; the book calls for 87 in/lbs (if you don't have a torque wrench, then tighten them by hand followed by a 1/8 turn with a 10 mm wrench to seat them).

Is there a special tool to make this easier?

Jeb - Wed May 16 01 23:32:34 2001

Here are a couple of pics of the adjuster tool from Kawasaki (part number 57001-1220):





It's not cheap at $35, but it does make the job a lot easier. It's basically just a low-profile 9mm 12-point socket welded to an extension that is just the right length, a with a hollow shaft so the matching screwdriver can be inserted through it.

It helps because there are no sockets to lose into the top-end, and it allows less work to get the adjustment correct without changing the adjuster setting while tightening the retainer nut. I would recommend it if you plan on doing all of the adjustments yourself.

Kawi also sells a special feeler gauge (57001-1221), which has the maximum and minimum clearance thicknesses on it; it gets pushed in, and when the thin end goes but the thick end won't the valves are set. For $40, it's not really worth it, though; I use a standard set of gauges from Sears that cost less than $10.

What are the acceptable clearance ranges?

Paul 311 - Sun Mar 5 17:05:48 2000

.08mm - .13mm for the intake valve clearance
.11mm - .16mm for the exhaust valve clearance

I think somewhere else in the manual it says that the intakes are 0.10mm and exhaust 0.13mm. Anything in the range listed is probably okay, but I always make sure mine are set to a consistent number. The valve clearances are the same for all 250 Ninja's.

Are there any advantages to selecting a specific setting within that range?

Lou - Sat Mar 25 02:31:12 2000

The valve clearances affect valve timing and overlap (the period that both intake and exhaust valves are open). With everything stock on the bike, the maximum amount of air gets trapped in the cylinder at about 9 grand (peak torque).

Before 9 grand, the overlap actually lets a little air go backwards through the intake valve before it closes, reducing the amount for combustion.

After 9 grand, the valves are opening and closing too fast, so less air goes in per cycle.

One way to shift this slightly is with the valve clearance. If the clearance is at the minimum, the overlap will be more, and the valves will open more. This shifts peak torque (and therefore peak horsepower) up slightly, at the cost of low to midrange performance.

If the clearance is at the maximum, the overlap is less, so it will trap the most air in the cylinder at a lower rpm, boosting the low to midrange, but at the cost of the higher rpms (because the valves aren't opening as far). Having the valve clearance at its maximum also allows the valves to stay in contact with the valve seat longer (transferring heat during that time), and help to prevent burning an exhaust valve. It will idle smoother, because there is less overlap that allows exhaust gases to go into the intake, and lean out the mixture for the next cycle. This is why an engine with cams that put peak torque at 9000 won't idle smooth at 500 rpm.

The exhaust system used also plays into this, because it determines the amount of time the exhaust valve can be open before the gases start flowing backwards. If you change the exhaust, it changes the rpm at which gases will reverse, and let exhaust gases back into the cylinder. AR (anti-reversion) exhaust systems are supposed to give the broadest range of power, because the can prevent reverse flow at a lower rpm.

Anyway, tighter clearances will increase top-end power, and the chance of burning valves, reduce low-end power, and adversely affect idling.

Looser clearances will make it idle better, increase low to mid power, and help to prevent burnt valves, at the cost of top end power. Of course if you go too loose then you will have a lot of valve train noise.

You can always try both extremes and see which works best for the kind of riding you do, and the exhaust system you have.

What happens if the clearances are too tight/loose?

Lou - Sat Mar 25 02:31:12 2000

Generally running them too tight will increase top-end power for a while until the valves overheat. Then the valve and seat will erode, allow the valve to start to tulip, which will close the clearance even more.

Running them toward the loose end of their tolerance will normally increase low-end power (at the cost of top end), make the valve train noise louder.

One of the most important things (aside from staying within the tolerances) is to set all the intake valves clearances as close as possible to one another, and do the same of exhaust. This, just like synchronizing carbs, has a big effect on how smooth the engine runs, especially at low speeds. Without going into great detail, this is because the carb sync only determines that the intake valves have the same pressure upstream, but the timing point at which the valve opens and closes determines how much of that air will get into the cylinder. These combined ensure each cylinder is doing equal work, and therefore run smoother and more efficiently.

My recommendation to those that are mechanically inclined is to learn how to do this yourself, because nobody will pay attention to detail (or be more concerned about scratching your bike) than you. If you have a friend that knows how to do this, seek help for the first time (preferably have him demonstrate on his own bike first, and see if it still runs afterwards).

After valve adjustment, resync the carbs, because if the valves weren't set correctly then the airflow may change slightly, requiring the carbs to be rebalanced.

Do I really need to adjust the valves every 6000 miles?

Leon - Wed Jul 12 13:34:34 2000

If you're taking it easy with the bike, I wouldn't think that the extra miles will make much of a difference. I try to adjust the valves every 10,000 miles but do so more often if I've been riding faster than normal. I would guess that fewer than half of the Ninja 250s sold ever get their valves adjusted.

I never did mine until I discovered how much of a difference it made in the way the bike performed. With the valves set wrong, the bike runs just fine in most cases, with them right it runs noticeably

better. There are probably several other adjustments the bike could use that I just don't know about. The valves are also rather intimidating to the novice user. They need to be adjusted within a couple thousandths of an inch or else the bike won't run at all, measurements of that accuracy are not normally done by the average person.

What is the "hot soak" valve cleaning method?

Jeb - Wed Jul 23 01 12:15:37 2001

Over time, carbon deposits and varnish can build up on the valves, piston crowns and intake tract. These deposits are usually greater when the bike is frequently used to make short trips, as the engine does not reach full operating temperature. Frequent idling and low-rpm riding, especially when the engine or ambient temperature is cold, can also contribute to advanced carbon build-up.

Some carbon on the valves is not harmful, but as the deposits accumulate they can cause poor performance. Valve surface area increases, creating turbulence and disallowing complete intake and exhaust of fuel mists, causing incomplete combustion and further deposits. Eventually, valves may stick, or the sharp edges or hardened deposits may cause hot spots and damaging preignition.



Rather than waiting for an engine rebuild to clean the valves, a simple treatment process can be used every 15000 miles or so to keep the system relatively clean. Basically, a valve cleaning solution is fed directly into the intake manifold of a hot, running engine; this "hot soak" quickly breaks up deposits.



For this job, a 3" length of 1/4" I.D. clear tubing, a 1/4" O.D. T-fitting, and a bottle of valve cleaner are needed. Cut a few pieces of the tubing off, and use the T-fitting to make a configuration like this.

After warming up the bike, kill the engine and pull the intake manifold vacuum hoses, then connect the T hoses to the nozzles. Put the other end of the hose into the bottle of cleaner, and use a small vise-grip or clamp to close it. Start the engine, and turn up the idle to 2K RPM. Slowly release clamp pressure, so that the cleaner is drawn up into the engine; do not let too much be taken in at once, or the engine will stall. It is normal to see a white smoke exiting the exhaust pipe.

After several minutes, the engine will start to labor as the carb bowls become empty. For a longer interval, the free hose connected to the tank petcock can be reattached to one of the intake nozzles to refill the bowls. When the intended treatment time has been reached, open the clamp so that the cleaner stalls the engine; do not start the engine again for several hours.

Reconnect the carb hoses and pour the remainder of the cleaner into the fuel tank, if desired. When next starting the bike, the engine may cough and sputter a bit, as well as belch out some nasty stuff from the tail pipe; this is to be expected. Go for a ride, and fully warm the engine up, then change the oil. Smoother idling and better efficiency may be noted thereafter.

How do I change the spark plugs?

Jeb - Sun Jan 7 13:39:58 2001

Spark plugs are recessed into the top of the engine. The owner's manual suggests they can be changed w/o removing the gas tank, but if you've never done this before, I think it's easier to remove it first.

Remove the seat, and remove the two bolts holding the back of the tank to the frame under where the front of the seat attaches. Also, there is a bolt on each side of the gas tank that holds it to the upper fairing; these must be removed as well to get the tank off. It should not be necessary to remove the fairing. Pull the fuel and vacuum hoses off the petcock, and slide the tank rearward and up.

Now you see the top of the engine. Gently remove the two ignitions wires by the boots where they attach to the plugs. Then take your handy spark plug wrench that came with your bike's toolkit, and remove the old plugs.

Examine the plugs. See of they are dark, white, bent, oily... plug condition can point to engine problems. Installation is reverse of removal; apply very little torque to the plugs with your wrench. Permatex anti-seize is recommended to protect the plug threads.

NOTE: use only the recommend spark plugs listed here. There have been accounts of plug failure, including detonation, when using Champion or Autolite replacements.

How do I service the brakes?

How do I bleed the brake lines?

Steve - Fri Oct 22 03:14:25 1999

Ok, first you need 3 tools: phillips screwdriver, cresent wrench to fit the bleeder screw on the caliper, about 18" of clear tubing that fits tightly over the bleeder

Grab some good, clean brake fluid and a bottle of Coke, Dew, etc. while you're out.

First, clean the master cylinder, caliper, bike, and maybe the garage while drinking the Coke. When done with the bottle, clean it out and fill it about halfway with brake fluid then drop the end of the tubing into it. Now remove the cap on the master cyl. and top off the fluid. Put towels, rags, etc. under/around/near anywhere the brake fluid could possibly go if it leaves the master cyl. at high speed (and it will!). Now CAREFULLY squeeze the brake lever and open the bleeder screw. Pump the lever a few million times while keeping the reservoir full. Eventually there will be no bubbles coming out of the hose in the bottle of brake fluid. Squeeze the lever one more time, hold it back, and close the bleeder screw. All done.

Bleeding brakes is annoying, but necessary. We generally depend on ONE brake to stop us. Cars have 4 and can afford to lose half of the braking power and still slow down enough to stay mostly out of trouble. We're screwed if we lose any power ;)

How do I change the brake fluid?

Jeb - Wed Mar 22 12:44:54 2000

Okay, this is not hard, but it can take a long time; set aside an hour if you plan on doing front and rear. You need to change the brake fluid every two or three years, or when you want to bleed the brakes but don't know what kind of fluid is presently in use (you should bleed the brakes whenever they start to feel weak or soft). I used:

- 12 oz. bottle of DOT4 brake fluid (new)
- 3 ft of clear, 3/8" vinyl hose
- small toolkit cresent wrench
- small toolkit phillips-head screw driver
- sealable plastic container (I used an empty milk chug bottle)
- a few old rags

Put the bike on centerstand, attach the hose to the front bleeder valve, and run the length of hose into the empty bottle. Carefully open the valve with the wrench, and repeatedly squeeze the brake lever until no more fluid comes out. Close the valve.

Now comes the lengthy and frustrating part- new fluid has to be poured into the master cylinder reservoir, and pumped back into the brake line. Two things make this a pain: there is no pressure in the line any more, so it takes twice as long to put the fluid back in as it did to pump it out; also, you must constantly monitor the reservoir level, and not let it empty, all the while avoiding any spillage (brake juice is corrosive), and quickly wiping/washing any surfaces/hands that are contaminated (don't let fluid contact the brake disc or pads!).

Open the reservoir cap, and remove secondary cap and rubber seal; fill with the reservoir with fluid. to fill the brake line, you must repeat the following sequence at least 20-30 times:

- open the bleeder valve
- squeeze the brake lever
- close the bleeder valve
- release the brake lever

This process allows the fluid to enter the line, but not let the vacuum retract it again. Slowly line pressure is re-established, and eventually the fluid will begin to exit the valve again.

Now you can do what you ultimately wanted to do in the first place - bleed the line - this isn't hard at all. With the valve closed, pump the brake to establish pressure, then quickly open and close the valve to bleed it; repeat. You basically just keep feeding fluid through the line until no air bubbles are seen exiting the line with it anymore.

Tightly seal the reservoir cap and bleeder valve to deter air entry. Repeat above for rear brake (my rear brake took half the time of the front). You should notice improved lever/pedal feel, and your stopping distances should decrease as well.

How do I replace the brake pads?

Jeb - Wed Aug 16 21:21:25 2000

This is a pretty straightforward job, but you need to be careful with the brake caliper. Do not drop the caliper, suspend the caliper from the brake line, put your fingers between the caliper, or apply the brake with the caliper removed.

Remove the two bolts holding the caliper to the bike, and remove the caliper. Use a C-clamp to compress the pistons. If you don't have a clamp you can use a small wrench, wrap a cloth around it, and insert it into the caliper between the two used pads; gently apply pressure down toward the two pistons, prying the caliper apart. Now you to easily remove the used pads, and fit it back onto the brake rotor back with the new pads in place.

Turn the caliper upside down. The small pad will probably fall right out; the larger pad you may have to work off the retaining posts, as there is little room between the ends of those posts and the caliper 'claw.'

Installation is a snap. Put the large pad on the retaining posts, then place the small pad against the pistons and nestle it into the defined spot. Slide the caliper back onto the disc, and line up the bolts to the caliper holes. The bolts don't need much torque to seat them.

What replacement pads should I consider?

Jim Race - Wed Mar 7 02:33:23 2001

The stock pads aren't too bad, Until they become bad. They tend to fade really fast. Don't race on them, if you can help it.

Galfer greens are nice, and a good excursion into improved braking. I found they were very "progressive" in that increased level pressure was very measured in the way the brakes grabbed.

EBC HH's are braking overkill. Grab a handful and you have a handful. I like to brake really, really late so for me the HH's were a good fit. YMMV.

I've never used a Ferodo on my EX, but I had a set on my RZ350 and was quite pleased with them. If the HH acquisition situation heads the way of the Dunlop K591 rare species, I'd say go with the Galfers. At the very least it seems that there is always a Galfer dealer at every race. I like working with dealers that provide that kind of support.

What other components should I check?

Lou - Wed Mar 22 23:14:31 2000

When changing the brake fluid, the book says you should also replace the master cylinder and caliper dust covers/seals. If you replace these items before they crack and let moisture in, it can save you big trouble later caused by water corroding the callipers and pistons.

If you put a light coat of grease (compatible with the seals) between the seals and the dust covers it will prevent water from getting in during rainy day rides or washes (unless you use a high pressure sprayer, in which case, never mind). This is something that can be done the first time you replace the pads, while you are inspecting the dust covers for damage.

How do I service the carbs/filters?

What carb components do I need to check?

Paul 311 - Sun Jan 23 22:33:21 2000

The carbs on the Ninja are really simple things, and should never need to be completely replaced. There are a few components which may wear out though. The float valves are these little spring loaded aluminum parts with a little rubber nub at the end. There is a float attached to this valve that pushes it up and closes it when the float bowl has enough fuel. These little tiny parts cost about $25 each, so your best bet is to remove them clean them and re-install them if you think they are the source of the problem. Another problem Ninja carbs tend to have is that the rubber O-ring that seals up the float bowl will get dry and shrink and suddenly you will find that it looks like gas is raining down from your carbs onto your starter.

The third fuel problem Ninja owners are likely to have is when the vacuum operated petcock fails. The vacuum petcock keeps fuel from flowing out of the tank unless the bike is drawing a vacuum. This keeps the bike from flooding itself when parked. The needle valves should also keep this from happening, but don't always do their job.

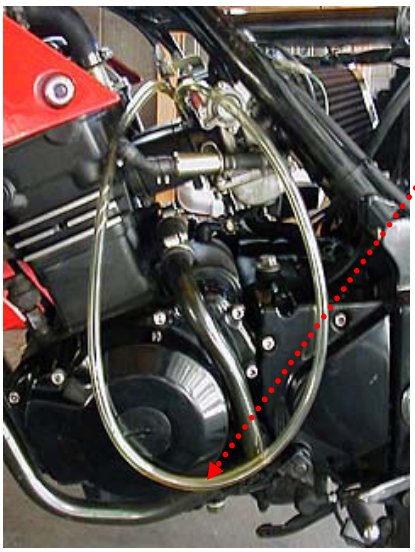
How do I synchronize the carburettors?

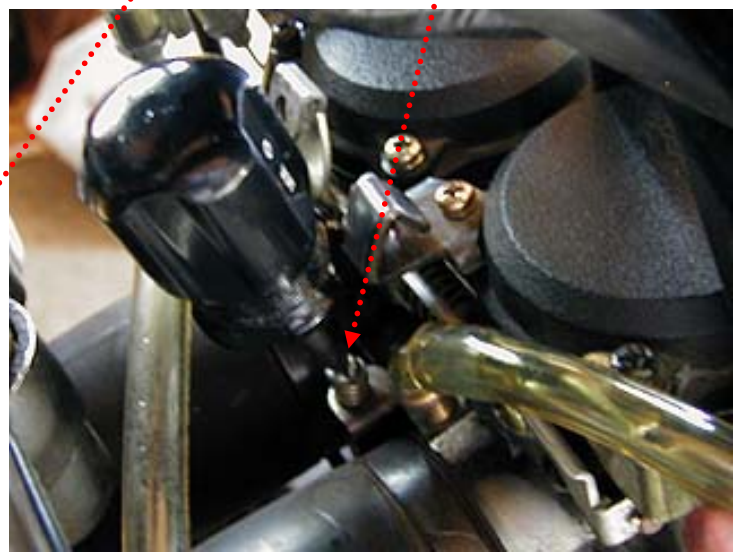
Duke - Thu Jan 13 12:53:14 2000

Carb Sync is matching the butterfly valves in the two carburettors so they both open the same amount. Your bike will not run to it's optimum level if one cylinder is running harder than the other.

The easiest way to understand how the adjustment works is to take your carbs off and look at the linkage. There's a screw adjustment in between the two carbs that adjusts one butterfly in relation to the other. Carb sync is adjusted by measuring vacuum through each carburettor and setting the butterflies so vacuum matches. There are fancy gadgets to do this, but there's also a quick and easy way to do it at home...

Get a piece of clear plastic tubing about 3' long. Place some thick liquid in it like motor oil (something that won't hurt your engine if it gets sucked in). Remove your fuel tank. On the top side of each intake - in front of the carbs - is a vacuum nozzle. Remove the black hose from each (plug the hoses for the duration of the job) and place one end of the clear tube on each fitting. Let the clear tube hang down so the oil gathers at the bottom of the loop. Start up your engine for a moment, and if your carbs are in sync the oil will not flow one way more than the other. If there's more vacuum from one carb or the other the oil will flow that direction. Turn the linkage adjustment screw (you'll need either a very long screwdriver, or a stubby one) in between your carbs so the vacuum is equal and you are all set. It may help to periodically turn off the engine for a few moments, so the oil can regather at the bottom.





How do I remove the carbs to work on them?

Duke - Tue Aug 29 22:33:47 2000

The carbs are a little difficult to get out if you have the stock airbox. After doing this about 10 times, I think I've found about the easiest method.

You have to loosen the rear fender/battery holder and move the whole thing back about an inch to get the carbs out. There are two bolts directly in front of the back wheel that hold the fender on. You'll need a really long socket extension to get them out. Remove those two bolts on the lower part of the rear fender, as well as the two fender bolts just under the seat, and the two bolts under the battery. That allows the airbox/fender to move back just enough to get the carbs out without bending any of the rubber parts too severely.

However, I believe the last time I had the carbs out, I did it without moving the rear fender. You just have to get somewhat forceful with the rubber boots. If you push the rear ones into the airbox, it can be done by forcing one of the front boots off, and the other one slips right off. Remember this procedure for re-installing them.

How do I adjust the bowl floats?

Wes - Sun Jul 2 08:10:30 2000

Fuel Level: 0.5 +/- 1.0 mm above the bottom edge of carburettor body
Float Height: 17mm

- Drain the fuel out of the carburettors into a suitable container.
- Remove the float bowl by taking out the screws with lockwashers.
- Slide out the pivot pin and remove the float
- Bend the tang on the float arm very slightly to change the float height. Increasing the

- float height lowers the fuel level and decreasing the float height raises the fuel level.
- Assemble the carburettor, and recheck the fuel level.
- If the fuel level cannot be adjusted by this method, the float or the float valve is damaged.

How do I clean the carb parts?

Duke - Tue Aug 29 22:33:47 2000

Crash course in carb cleaning:
Take off carbs. Take apart. Spray carb cleaner inside. Put back together.

Okay, now for the long version:
Once you have the carbs out of the bike, turn them upside-down and remove the phillips head screws and take off the float bowls. Inside are two 'floats' each connected to a 'float valve' that allows fuel into the float bowl. When full, the float valve shuts off the fuel supply just like the float in a toilet tank. With some needle nose pliers, gently pull the pin out that holds in the floats, and remove along with the float valve plugs.

Now remove the tops of each carb and carefully remove the slides/jet needles. Be very careful with the rubber diaphragms which are very fragile. Once everything is apart, use a can of carb cleaner spray (available at any Wal-Mart, K-Mart, etc; I think I used the B-26 Chemtool last time) to thoroughly clean the inside of the carbs. Be sure you get the can with the little tube on the nozzle so you can spray it in all the little spots in your carbs. Spray cleaner through every jet you can possibly find. Be careful you don't get the cleaner on any plastic parts on your workbench; it will melt them (I learned the hard way - sorry dad). Do not use any sharp objects when cleaning carbs; the pressurized spray works fine. Also, you can clean the tips of the float valve plugs by rubbing against a piece of cloth. The tip is rubber, inspect for damage.

Once clean, inspect everything and put it all back together. You can get the carbs and carb boots back on in the opposite order you removed them.

Poof! Instant clean carbs, except that it will actually take you 3-4 hours to do it right.

How do I get the vacuum pistons back in correctly?

Jeb - Mon Oct 2 13:19:16 2000

After pulling and disassembling my carbs probably 10 times, the diaphragms of my carbs' jet needle vacuum pistons have started to become a little misshapen. Not a big deal, but reseating them has become more of chore each time.

This time I thought I had them seated adequately, but when I went for a ride that night, I found that the throttle input wasn't lifting the guides as much as it should have been, so the needles weren't rising out of the jets enough and I was running lean and sluggish.

I pulled the carbs again today, and sure enough, the diaphragms were kinked and out of round under the top boots. After another several attempts to get them back in properly, I gave up and tried to figure out what to with them. I wasn't about to replace them; they were still in decent shape and usable (plus new ones are very expensive), but I couldn't get them back inside the carbs!

Then I remembered something I read several months ago, about getting them cold so they would shrink enough to be put in correctly. So I put mine in the freezer for an hour, and sure enough they did shrink a little and stiffen up enough for me to get the rubber rims lined up with the groove on the carb body; if I'd left them in another hour it would have been even easier, I imagine.

So if you ever have trouble getting your slides back in, try putting them on ice for a bit. My bike is running fine now.

How do I clean the air filter(s)?

Daryl - Thu Jan 11 19:09:11 2001

I use a little bit of Tide powder detergent and water, and mix it up in a pan. Let the filter sit in it for 10 to 15 minutes, and then run the filter up and down in the mixture a few times. Use a water hose to rinse the filter thoroughly from the inside out. I use a hairdryer to dry the filter, then use K&N Spray oil to lightly and evenly oil it. I've used this method on two filters with over 130,000 miles on them with good results. I clean filters about every 15-20,000 miles. Tide's good for your cotton shirts and ok for your cotton filters!

How do I install a fuel filter?

Jeb - Wed Aug 30 22:12:55 2000

Go to any auto parts store and get a Purolator filter model F-10024; it's a brass filter that is small enough to fit between the tank and carbs, and costs about $3. There is also another similar Purolator filter that is transparent and accepts replicable elements, but I do not know the model number. Dennis Kirk sells some smaller, see-through filters for $2 each (part number 18-515); a local small engine shop might also carry these.

Turn the fuel petcock to off, then pull the tank-side of the fuel line and empty the hose. Reattach it and cut the hose about halfway between the carbs and tank. You will have to trim a bit of hose to fit the filter in there, but it should fit snugly with about 1 or 2 cm cut from each side. Be sure to attach the filter so that the arrow on it points toward the carbs (if you can't find an arrow, the side with the larger diameter goes toward the carbs). You should check the filter every 3k miles for need of replacement.

Note: Post-2000 models have an inline filter stock, at the very end of the fuel line going to the carbs. It is very small, however, and could still be assisted by a replicable aftermarket filter (though it's certainly better than nothing alone).

How does weather affect jetting?

Here's the skinny on weather:

- Cold air is more dense (less activity w/ the molecules, thus they're closer together)
- Hot air is less dense (More activity between molecules)
- Moist air is lese dense (more H2O molecules between the O2 molecules)
- Dry air is more dense (more O2 per volume of air)

So... dry cool air is more dense, moist warm air is less dense.

Your carburettors mix a certain amount of fuel with a certain volume of air. There is an ideal ratio of fuel to air called the stoichiometric ratio, which is about 14.7:1. At this ratio, theoretically, all of the fuel will be burned using all of the oxygen in the air. In reality (your bike/my bike), the fuel to air ratio varies from 14.7:1 quite a bit. More air = less gas (lean); more gas = less air (rich).

Your job when jetting your bike is to get as close to this ideal 14.7:1 ratio as possible, (which also produces the most power). The problem is denser air (Cold/Dry) produces a leaner condition and thinner air (hot/wet) produces a richer condition. The other problem is that the weather is constantly changing. So in the end, yes you can constantly chase the perfect mixture (thus the advantage of fuel injection which is constantly adjusting for weather) or you compromise and set up the jetting to work well at about 70 degrees... a happy medium.

A lean condition can hurt your engine over time, but you would certainly know it's lean (spitting, sputtering, etc.). I ran 92 mains in my carbs for a long time and had no problems until I pulled my airbox top (allowing more air to flow - thus creating a leaner condition) and I could immediately tell it was too lean. 105's (stock) are in it now and it runs very well. Why did I pull my airbox lid? Why do people use K&N pods? More air in = more O2 in = more gas in = more power.

How do I check/change coolant?

How do I check the coolant level?

Thundercat - Wed Dec 8 16:41:23 1999

Your coolant tank will have two marks on it - a low or cold level, and a high or hot level. When the bike is cold (has not been run) the coolant level should be no lower than the low/cold level. When the bike is hot (just been shut off after a significant ride) the coolant level should be no higher than the high/hot level. This is a normal operating range - coolant level will fluctuate as it expands/contracts. If you need to add coolant, add a 50/50 mixture. Never use any coolant other than one specified for motorcycles!!! Other coolants may have abrasives in them that clean other systems, but will damage a motorcycle system.

Fluid levels should always be checked with the bike straight up, resting on its tires unless the manual states to do so on the centerstand. The slight elevation a centerstand or swingarm stand gives may give you an erroneous reading. When in doubt, follow the manual, then check the other way to see if there's any difference.

How do I change the coolant?

Patrik - Mon May 15 23:02:47 2000

There are 2 coolant drain plugs. First open the filler cap, then remove the first one. It's on the water pump, it's a 10mm bolt (as opposed to the 8mm mounting bolts). Watch it, the water comes out with quite a bit of pressure; it goes straight out the side. Then drain the coolant in the cylinder; the plug is on the front, between and slightly under the pipes. The expansion tank is probably most easily drained by taking it off and pouring it out the cap. If you want to be sure to get all coolant out, you should probably flush once with water as well.

You can't fill it at the expansion tank. Just fill at the filler cap at the radiator, and when it's full start the bike and let the engine idle; this will make the air bubbles come out and you can fill more. When the water starts getting hot and you can rev the engine without having bubbles come out you're set. put the filler cap back on.

How do I work on the suspension?

How do I remove the fork pistons?

Gazoo - Wed Aug 30 17:42:27 2000

1. Go out and buy a gear-puller (Sears has them for about $30). If you're on a budget you might also try a battery terminal puller from Autozone for $3.
2. Jack up the front of the bike so you don't have to worry about the front forks collapsing while your taking the springs out.
3. Remove the handlebars by unscrewing the four hex-head bolts on top of the upper fork holder.
4. The fork springs are held inside the forks by a piston (that thing with a dimple in the top) which is secured by a snap ring. Use the gear-puller to push the piston down so you can pop the snap ring out with a pair of pliers.
5. Once the snap ring is out you can loosen the gear-puller - but not too fast! The piston will rise very slowly because its in there tight, but once it reaches the top it will want to shoot out like a champaign cork. Just in case, don't put your face over the fork tube while doing this. Let the gear-puller slowly ease the piston out.
6. Underneath the piston are some miscellaneous hardware like a large washer and a spacer. The spring should be visible once the hardware is out. Replace it and assemble in reverse order.

How do I replace the fork seals?

Brent - Tue May 28 18:09:36 2002

Disassembly:
Remove the top plug and fluid from the forks before removing them from the bike.

Once the forks are removed, take the allen bolt out of the bottom of the tube. Be careful not to strip this bolt as it is very tight!! There should be a copper washer/seal with this bolt. (You may need to stick a wooden/dowel or handle down the tube to hold the inner part of the fork from moving... I did it without this).

After removing the allen bolt, the inner fork assembly will slide out (rod thingy & spring).

Remove the rubber dust cover from the top of the black portion of the tube using a small screwdriver. Remove the clip above the fork seal using a screwdriver.

Now you need to pull the tube out of the shock. Hold onto the silver tube part with the black shock part facing down and pull up and down with a rapid jerking motion. The black portion of the shock should move freely up and down with each jerk. Keep doing this until the black shock portion falls to the floor. (May wanna put a towel down to protect it when it falls.) The small tube that completes the rest of the inner shock should now be free inside the black shock portion.

After the removing the silver tube, the fork seal should now be on it. Remove it by hand and clean everything up using a lint-free towel.

Check the fork tube and guide bushings for damage/scratches. If there are any scratches or nicks on the fork tube, sand them smooth with very fine grit sandpaper (1500+ grit). Sand in an up and down motion. If there are major gashes in the tubes or the bushings look damaged, replace them.

Installation:
Drop the lower portion of the inner shock assembly (small 1.5" aluminum tube) into the shock with the flat part facing down. Place the silver tube back into the fork. Slide the bushing down the silver tube and align the notch facing toward the right or left side. It is important not to face the notch to the front or rear as this will cause premature wear to the fork tubes upon sudden stopping or acceleration.

Drive the bushing into the fork using the PVC pipe. Apply oil to the new seal and slide it down the silver tube with the spring facing up! Slide the old seal down on top of the new seal and use it as a cushion to protect the new seal when you use the PVC pipe to press the new seal into the shock. Slide the old seal off and install the retaining clip and the dust cover.

Slide the inner fork tube components back into the tube. Spring and larger rod (golf-tee thingy). Screw the allen bolt back into the bottom of the tube. *Apply some silicon sealant to the copper washer to help seal it* Tighten the allen bolt to the proper torque. (Again, you may need to hold the inner fork tube using a wooden dowel or the proper tool from Kawi.) Once you have tightened up the bolt, slide the silver tube up and down. It should bottom out when pressing it all the way in and it should hit the spring when pulling it out. If it doesn't, something is assembled wrong.

If everything slides smoothly, reinstall the forks, fill them with the appropriate amount of fluid, drop the springs in and cap em off. Put your bike back together and ride away happy.

How do I service electrical components?

How do I replace the headlight?

Leon - Thu Jul 13 18:54:40 2000

Pull the wiring plug off first, then the dust cover, the bulb is held in place with a little wire retainer. The bulb pulls straight out the back once the retainer is loose. It is much easier to do all this with the whole assembly removed from the bike.

I think the factory puts some extra paint or other goop to keep the light glare from escaping back into the fairing. With the fairing off, you should be able to see where some of that got scraped off. Some more rubbery black paint should stop that extra light from escaping.

How do I adjust the headlight beam?

Vernon Dozier - Sat Jul 27 20:48:39 2002

Look at the back of the headlight. See the white plastic pieces in the upper right hand and lower left hand corners? Those are the guides to adjust your headlight aim. The vertical adjuster is the one on the lower left corner and the horizontal is the other. Stick a phillips screwdriver in the guide from the bottom and turn the screw that can't be seen. You're turning a screw, not trying to pry the guides off. Those plastic pieces are just guides for the screwdriver.

What kind of battery should I use?

Jeb - Tue Dec 18 18:45:14 2001

After over 3 years and 27,000 miles of service, my stock Yuasa YTX7L-BS finally stopped retaining a consistent charge. I could ride around all day on it, but if it was parked for more than a few days, it was dead.

Instead of spending $70 on a new one, I decided to go to Wal-Mart and sears and try to find some suitable replacement. Wal-Mart carries a fine substitute for the '88-'94 stock battery (Yuasa YB9L-A2), which is about $20. They do not carry a comparable part for the '95+ model, however (the '88-'94 battery will fit the '95+ bikes, but it is larger and heavier).

Sears has a good one, though: part 28-44353. It's a bit smaller in size than the stock '95+ battery, and it's a wet-type unit (not maintenance free, like the stock one). Benefits? Well, for starters it's $17 - very cheap. It has a 5 amp/hour rating ('95+ has 6 Ah, '88-'94 has 9 Ah), a 90 CCA rating (vs 85, 124), and it's smaller and lighter than the other two.

Actually, this could be a good replacement for any year Ninja battery; it would have to be 'shimmed' if used in a '88-'94 model, though. It has a shorter standby time, but a comparable amount of cold cranking amps to the others.

After almost a year of use, I can report that the new battery works just fine.

How do I work on clutch components?

How do I lube the clutch cable?

Jeb - Sun Jan 7 07:55:33 2001

Remove the bolts holding the clutch lever/cable to the handlebar. Remove lever-end of cable, so that you can hold the little knob on the end of the cable between your fingers.

Grab a can of WD-40, and a can of 3-in-1 oil. Take the WD-40 and spray a nice bit off it down the cable line; you'll see a few drops exiting the clutch-end when you've given it enough. Now squirt a little 3-in-1 oil into the same place you just doused w/ WD-40. Work the cable in and out of the sheath several times; squirt more oil in there, repeat. Do this about 10 times. Your clutch cable is now lubed; it should not need another treatment for many months. A well-lubed cable should last 15k miles or more.

How do I replace the clutch cable?

Leon - Sat Mar 25 17:18:53 2000

The first difficult item is threading the new cable into place where the old one was. I find this easiest to do if I put the new one in place as I remove the old one. It also helps to remove the seat and fuel tank to see where it goes.

The other difficult part is adjusting the free play. I usually adjust it at the handlebars so it's about in the middle of it's adjustment, then use the two nuts down near the engine to set the initial free play. That way there is plenty of movement in either direction at the handlebar end for later adjustment.

How do I refurbish a slipping clutch?

Leon - Fri Jul 5 09:51:12 2002

The consensus here is the springs go first. If it's a high mileage bike, the fingers on the basket might have some grooves worn in them.

Remove the clutch cover and see what's wrong (have a new gasket on hand before doing this). The manual has service lengths for the springs and thicknesses for the plates. If it's the springs, replace them. If it's the basket, file it smooth (take it out of the bike when you do this, you don't want the aluminum filings in the motor).

It's probably not the clutch plates or steel plates; these should last as long as the engine if not abused.

How should I clean the bike?

Ninja Grrrl - Tue Dec 7 08:40:03 1999

You can easily clean you bike with a garden hose, just make sure you don't use too much pressure. Don't be afraid to wet it down good, just don't concentrate the spray on the switches, wiring or airbox.

Hose it all down, then with a clean mit, wash it from the top down with car wash detergent. Never use dishwashing liquid or any other detergent formulated to cut grease - it will cause deterioration of the natural oils found in your tires, hoses and seals, causing them to become brittle and wear out faster. For dirtier areas like wheels, chain guard, swing arm, kick stand, etc., use an older wash mit (using your good one might contaminate it with grit). Rinse the bike thoroughly and dry it with a chamois (real or synthetic). It doesn't hurt to run the bike for a few minutes either to better dry it out.

A good coat of wax will help protect the painted surfaces as well as the polished, chromed and glass. I also wax the windscreen, but don't wax any textured plastic like the mirrors or rear fender - it's hard to remove. I use Eagle One wax; be careful, some waxes may be too abrasive.

There are a lot of specific cleaners out there - some good, some bad and some hazardous. Try them with caution, they may damage finishes or penetrate into seals where you don't want them.

How do I service the tires?

What tire pressures should I use?

What tire pressures should I use for everyday riding?

Wes - Tue Aug 1 05:06:58 2000

For normal use, Dunlop recommends 30/34 for the (stock) K630s on our bikes, but have no recommendations for the K591s. That said, they do recommend 30/34 for the EX500 K591s, so I doubt you can go wrong.

I ran 28/32, as the owner's manual suggests, for a while, but I like the higher pressure better; it makes it easier to cross cheese-grater-bridges, not get stuck in pavement snakes, etc.

What tire pressures should I use for touring, high speed riding, etc?

Joe - Mon Jul 31 19:37:54 2000

Here's what Dunlop's web site says:

"For high speed, fully loaded or dual riding touring motorcycle applications, inflate front tires to maximum recommended by vehicle manufacturer for Dunlop fitment and rear tires to maximum load inflation pressure on sidewall. Rear touring tires must be inflated to a minimum of 36 psi for light to medium loads and 40 psi for dual riding and other loads. Never exceed maximum load indicated on tire sidewall or vehicle capacity load found in owner's manual."

How often should I replace the tires?

Leon - Wed Jun 7 19:07:04 2000

It depends on how hard you ride. I've heard that some of the racers replace tires after only a several hundred miles. Most of the sporty street riders replace tires in the low thousands of miles. Old guys with touring tires can sometimes go farther than that on a set of tires; I've got 27,000 on the Metzler ME33 and ME88 on my bike now.

I think it's a good idea to replace any tires older than two years; rubber deteriorates over time.

What do I need to know when looking for replacement tires?

What tire makes are available that fit the 250?

Avon Super Venom (Gammagirl - Sat Aug 26 14:30:11 2000**)**: The Avon Super Venom is still available in 130/90 and 100/90 for the 16" tire. These tires stick to the road and are also relatively inexpensive (and in my opinion outperform and outlast Metzlers and K591's); they are very popular with European racers! My ex-husband races them at Mosport in Ontario on his TZ250. I had them on my RG500 Gamma and the bike held the road like a fly on flypaper, while lasting over 20,000 KM with lots of rubber left when I sold the bike! And ask anyone at the flying saucer in Niagara Falls -- I rode my gamma hard.

Cheng Shin (Jeb - Wed Aug 16 06:02:30 2000**)**: Cheng Shin tires are what you might call a 'value' line of tires. The thing is, they're not that much cheaper than a good set of Dunlops (not cheap enough to justify their lack of grip, anyway).
I bought a new (used) set of wheels, and one of them came with a Cheng Shin tire still on it. I thought, 'Heck, it still has a few miles left on it,' and so decided to save the $15 cost of a tire swap and wear it down. I soon after decided that the tire is only worth about a K630 in the performance department, if that. Don't skimp and get one of these; spend another $10, and get a good tire.

Bridgestone BT45 (Jeff - Sat Feb 19 00:59:16 2000**)**: The BT45s were new last year and they fit the Ninja (100/90 front, 130/90 rear). Bridgestone markets the tires as geared towards mileage rather

than performance. I put a set on and the feedback is greatly improved as compared to the stock tires. I felt much more comfortable leaning the bike over (as far as I dared to) the on BT45s. I took the bike to a track day and I didn't have any problems but the dual compound rear showed more wear than I would have thought but I'm no expert.
The mechanic who put on my tires (no, I bought them from another shop) thought they were a good choice for aggressive riding. He said that he would have sold them to me over the Dunlop K591s.

Dunlop K630 (Duke - Thu Sep 21 17:16:27 2000**):** Many folks have described how terrible the stock K630s are, and admonish everyone else to throw them away and buy 'better' tires. I for one haven't found the reason the 630s are so bad, with exception of wet weather where they do slide around a bit. But for dry riding they are just fine - fully capable of peg-scraping, full-lean turns. Unless of course you are pushing at racing levels, which very few of us are capable of doing (at least I'm not) you will not feel them slide.
As far as the predictability of a slide/drift, I've never really experienced much of a slide short of having low tire pressure at the Gap last weekend. And even that front-end 'push' was not severe, just enough to make me think 'was I really sliding?'. Point is, the 630s are fine for all but the best of us. They are also about 35% less expensive than other Dunlop tires.

Dunlop K591 (Paul 311 - Tue Feb 8 23:03:13 2000**):** On the race track there is no other choice in 16" tires but Dunlop K591's

Front 100/90-16
Rear 120/80-16 (front tire) or 130/90-16

There is no other combination of tires presently manufactured for 16" wheels which will work as well as these two tires. They're cheap too.
I don't have any sort of tire sponsorship, so I'm not trying to sell anyone Dunlops.
Every single Ninja 250 that races with the AFM runs Dunlop K591's (except for a couple people I've seen running stock tires on their very first race weekend)

Dunlop GT501 (Paul 311 - Thu Sep 28 20:31:09 2000**):** The K591's are now out of major production, though will still be available for a while... the GT501's are their replacement. Here's a quick second hand review:

> *Fast guy Robert Kennedy tested out the new Dunlop GT501's at the track last weekend. He thought they felt as good or better than 591's, and they also seemed to wear pretty well. The smallest front is a 110/90-16 which required fender modification (moved it up) to keep it from dragging. The choices for the rear are the same as before 130/90-16 or 120/80-16.*

He did comment that the larger front tire made the bike steer more slowly. I think the increased tire size and the pinched profile probably offset each other so the contact patch is about the same (Robert did his best ever lap times on these tires Sunday). He had to lower the front end a little to make the bike turn in more quickly, in order to compensate for the fatter tire.
Robert used these tires to just barely beat me, my trick wheels and my trick Dunlop D207GP and GP* tires. Skill wins over technology again.

Kenda (Jeb - Wed Sept 5 10:23:22 2003**):** The Kenda K657 Challenger and K671 Cruiser tires are both decent quality tires with solid grip, good water dispersion and neutral profile. They are inexpensive (a little over $100 a pair), and come in 100/90 and 130/90 sizes for front and rear, respectively.
These tires are heavy, 6-ply units that are best used for touring, in my opinion. They don't match the quality of Metzeler touring tires, but are cost effective with good tread wear, and can handle heavy loads.

Pirelli MT75 (Jeb - Fri Sept 5 10:49:59 2003**):** If you're looking for an inexpensive, sporty replacement for the stock tires, this is it, IMHO. The Pirelli MT75's are cheap (about $100/pair), offer good treadwear (about the same as stock), excellent grip (not quite as good as GT501's, but still very good), and light weight (less unsprung weight means better suspension response).
These tires fit the EX250 rims absolutely spot on (100/80 and 120/80 are what the wheels were designed for), and steering response is awesome with them. High speed straight-line stability will not be quite as good as with a larger 100/90 & 130/90 setup, but turn-in rate and agility will be better.

Pirelli Strada MT68/69 (Ian - Wed May 14 09:39:20 2003**):** Last summer, I had surpassed 12k miles on the stock Dunlop K630's, and had completely killed the rear treadwise, but the front could have kept going, if I could have stomached it. Unfortunately, working in McD's for 4 years as a manager back in the mid 90's didn't stiffen up my stomach that much.

So I did some searching for decent tires at a decent price. The price needed to be the more important factor, with quality being close behind. I wanted decent tires that would offer good wear, stick, and especially feedback after dealing with the stock rim protectors for so long. I did some searching around, and liked the sound of the Pirelli Strada MT-68/69 series tire, and ordered a set. Unfortunately the place I ordered from couldn't get the front tire anymore, so I just went with the rear, and had them slap on a Bridgestone BT45 front, for $1 more than the Pirelli would have cost. Front tire size is a 100/90-16, and the rear is a 120/90-16.
After a little difficulty mounting the tires and getting the beads to seat on the rear tire, I was off on new rubber. First thing I noticed right away after scrubbing the tires in is that the front end of the bike no longer feels like its just there. You can actually get a feeling for what's going on between the front suspension and the ground. Turns at speed became enjoyable, instead of feeling like work. I didn't have to wonder if I'm going to fast for the curve anymore because the tires are actually telling me what's going on down there.
I put lots of miles on them in various different conditions. Rain, slow speed commuting, fast speed commuting, twisty mountain roads, and everything in between. They seem to be pretty decent in all conditions, save snow. I decided to "retire" the Strada after 10k miles of daily use after a mishap with a nail and a plug that failed. It still sits mounted on a rim, fully inflated in the event of an emergency, tons of tread still on it. The BT45 is still going strong at 12k miles, but I'll probably replace before the winter sets in.

Pirelli Sport Demon (Brent - Wed Apr 16 16:28:04 2003**):** Pirelli has a new tire option for the 250 in a 100/90-16 front and 130/90-16 rear. It's the Sport Demon tire and seems to be marketed as a sporty touring tire. It seems wedged between the MT66 (which they list as a cruiser) and the MT75 (which they list as sport). The MT75 treated me well so I see no reason to why the Sport Demon would not perform well.
Three of the online tire dealers I checked list this tire: www.mawonline.com, www.discountmotorcycletire.com, and www.denniskirk.com; they average around $160/pair.

Metzeler (Daryl - Mon Jan 3 15:55:24 2000**):** I've gone through two rear and one front Metzeler tires and I like them very well. I'm ordering a set here in a few weeks. Front is a Lazer 100/90-16, Rear ME-55 130/90-16. I get 20,000 miles from the front and 10,000 miles from the rear. Best rain tires I've ever used, with good ride and very good feedback and grip. It raises the bike a little with no tire clearance problems.

Michelin (Jeb - Sun Mar 6 01:35:27 2000**):** Michelin no longer makes tires that will fit the EX250 rims.

How do I determine tire size?

Duke - Sat Apr 22 09:48:54 2000



130/80-16 means that the tire is 130mm wide and is 80% as tall as it is wide (aspect ratio) and fits a 16" rim.
A 130/90-16 is the same width, but is slightly taller, and has a slightly larger diameter. Many folks have switched to the 130/90-16 rear and 100/90-16 front due to better tire selection in those sizes. No one has reported problems using the larger tires. It's unadvisable to change only one of your tires, as it's always recommended they be changed in pairs (however I've seen a couple folks who have mixed tires w/ little problem).

The largest rear tire I've seen is **Leon's 140/90-16**. However, it rubbed against his swingarm at speed (the tire 'grows' slightly when spinning) and wore a section off the tire; I believe he had to do a little bending of the webbing on his swingarm to make it work. To be honest, when riding around with him, it doesn't really look any different than the stock tire (if looks are what you're after). The racers (like **Paul 311**) are actually using a 120/80-16 rear tire, as it said to perform better than the 130 size.



To be honest the K630 tires (stock/OEM) are fine for all but the most aggressive riders and the racers. I've ridden mine fairly hard with no problems at all. The only place they've wandered was riding Deal's Gap in the rain, but that's to be expected.

Do taller/wider tires work better than the stock sizes?

Jeb - Wed May 2 23:03:47 2001

The stock tire sizes are pretty good. It's getting harder to find 100/80 and 130/80 tires, though, so it's good to know what the other options are.

Taller tires alter your steering geometry; this can be good or bad depending on which tire you change. A taller rear tire will steepen (decrease) the geometry, making the bike turn faster; a taller front will increase the steering angle. Increasing both front and rear tire heights can be good, because you get an even steering angle (close to stock), and get added road clearance and trail length (provides stability). A taller rear tire will also increase the final drive gearing a bit (lowering cruising revs), while a taller front will increase speedometer accuracy.

Wider tires generally slow the steering of the bike down. They also alter the contact patch, as the tire is 'pinched' in the rim. Wider tires can provide better straight (non-leaning) traction. Wider tires are necessary when carrying heavy loads or if the bike makes a lot of power; the EX250 typically does neither of these things, so wider tires are usually of no benefit.

Taller and wider tires both weigh more, so you have additional unsprung weight to deal with (slows down suspension action). Considering all of these points, I use a 90 profile front tire on my bike, with a 120/80 tire on the back, and suspension setup that offsets these changes (lower front suspension, higher rear). This provides the best performance and handling, in my opinion.

Do 120-width tires really work better on the rear?

Jeb - Sat Nov 3 11:39:09 2001

The Ninja 250's rear rim was designed for a 120 width tire; the EX250-E model came stock with a (now discontinued) Dunlop K530 120/80 rear tire. The EX250-F (1988+) model, however, has the same size rim, but comes stock with a Dunlop K630 130/80 tire mounted. Kawasaki actually put a wider tire on their own rim than is ideal for the wheel width; the 130 is slightly pinched in the rim, while the 120 is right at home.

The 120/80 tire is better than a 130/90 (usual rear stock replacement) in many ways. First off, the 120/80 tire typically weighs four pounds less than a 130/90 of the same model. This means less dead weight on the chassis, less rotating mass for the engine to turn, less unsprung weight for the suspension to carry. The lower profile is also more rigid. The tire width is the ideal size for the 2.5 inch-wide rear rim, so the contact patch may be better depending on the model, while a quicker steering response is effected. The bead-to-tread height of a 120/80 tire and a 100/90 (usual front stock replacement) is almost identical, which makes it a great rear/front size combo.

The 120/80 tire also just looks better on the rim than a huge 130/90, in my opinion. Why some people think a bigger rear tire makes the bike look bigger I don't understand; a bigger tire should technically make the bike itself appear smaller by comparison.

Downsides to using the 120/80 include a loss in final gearing (3% less than a 130/80, 6% less than a 130/90), 30% lower tread depth (assuming a front tire mounted on the rear; there are only a few manufacturers of 120-width tires made specifically for the rear wheel anymore), and a loss in ride height (about 1/2"). A 120-width tire is a good choice for around-town riding, where the quicker performance can make a difference. For sport-touring, a 130-width tire will improve high-speed, straight-line stability.

How do I raise the front fender to fit a 110-width tire?

Jim Race - Mon Feb 25 17:58:22 2002

1. Remove the front wheel and fender.
2. Using a drill bit slightly larger than the hole in the four pop rivets, drill them out from the outside of the fender.
3. Remove (and discard) the internal steel bracket.
4. Get a drill bit the same size as the bolts used to mount the fender to the fork legs.
5. Carefully measure and drill new holes approximately 13/16" of an inch down from the original holes. The measurement should be taken from the center of the old hole to the center of the

proposed new hole. [note: The fender does not mount parallel to the ground. The center of the new hole should be equidistant from the vertical mould mark of the fork recess. Mine measures appx 1 1/8"]

6. The front holes are difficult to drill without a right angle chuck. I remounted mine with only the two rear bolts, but I do not recommend this for street riders. I check my fender for tightness a lot.
7. I would suggest you either invest in a right angle drill chuck or use a dremel tool. Do it right, or don't do it at all.
8. When remounting the fender, place a suitable flat washer between the outside of the fender and the mounting point. This will help prevent gouging the plastic.
9. Remount the fender and tire and verify clearance. Do not re-use the steel bracket. Make sure you check often that the mounting bolts are tight.

Here is a picture of the completed project:



How can I change the tires by myself?

SteveS - Tue Sep 12 11:58:58 2000

Mechanically, doing the tire yourself isn't bad at all. It does take a bit of physical effort and some time, and a few special tools.

Heres what you'll need:

Bead breaker
3 GOOD tire irons
3 rim savers (plastic sheaths to protect the rim lip)
Soapy water

1. Elevate the rear end (centerstand)
2. Remove the brake
    a. Disconnect the 2 bolts that hold the unit over the rotor - just leave it connected to the brake line.

3. Remove the axle-nut cotter pin
4. Remove the axle-nut
5. Slide the wheel/axle slightly forward; lift the chain off the sprocket and place to side.
6. While supporting the wheel, remove the axle
7. Simply slide the wheel rearward to remove

At this point, if you bought the tire from the bike-shop, you can take it there to change, they'll probably charge you 20-30 bucks to replace.

If you want to do it yourself:

Now you want to remove the tire from the rim. The tire is 'sealed' to the rim by air pressure; the 'bead' is sealed to the rim. it requires tremendous pressure to break the 'bead.' I recommend buying a bead breaker rather than the "I'll jump on it" method, which can result in serious damage.

Through this whole process, make sure never to put undue pressure on the sprocket, or more importantly, the rotor. I use a milk crate (not stolen from wawa, I promise), open side up, to place the wheel on such that there's no pressure on the rotor. Also, you don't want tire-irons directly on the rim lip, this can result in damage and an inadequate seal. Always place a rim-saver on the rim before prying with the iron.

1. Use the breaker to break the beads. You'll know when this happens because the tire suddenly has a loose spot.
2. Wet the entire bead with some soapy-water (nice lubricant). Use an iron to pry the tire bead of one side of the tire over the rim lip.
3. Using the other two irons, "leap-frog" around the rim, prying the bead over the lip. Repeat until the entire bead for one side of the tire is off the rim.
4. Now turn the tire over. Using the iron, push the opposite side (the side of the tire you didn't work on) over the rim-lip (the same lip you just did work on).
5. Leapfrog again to get the whole thing off.

Congratulations!! The tire is off. Now time to reinstall.

Remove all balancing weights from the rim. Soap/water up the beads again (not too much this time)
Using your hands and body weight, push the entire one side of the tire over the rim. (tire should now look like it did after step 3, above).
Using the tire irons, rim-savers, and leapfrogging, push the other bead over the same lip. (this can be very physically demanding... its a very tight fit).

Now, the entire tire should be properly sitting inside the rim lips. It will looks 'loose,' however, because the bead hasn't been set. This can be tough.

1. Remove the valve-stem cap
2. Using an air compressor (the good kind with the tank, not the little thing you plug in your cigarette lighter - if you don't have one, go to the gas station that has one), pump 40-60 pounds into the stem, praying the bead will set (you'll know this because you'll hear two loud and distinct POPs (one for each bead)).
3. If that didn't work, don't sweat it. Use a ratcheting tiedow, compress the tire down into the rim (this will force the beads towards the lips). Repeat step 1 above.
4. If that didn't work, put your tail between your legs and go beg the shop to do it for you. While your there, ask them to balance. (they'll probably do both for a couple of bucks).
5. Balance the tire (whole other tutorial). Or ask the shop to do it.

Congrats!! Now reinstall the tire (exact reverse of above). Be sure to use a new cotter pin.

How can I balance the tires by myself?

Jeb - Fri Nov 30 21:28:38 2001

Static balancing (balancing without a machine) isn't hard, but can be a little time consuming.

The first step to balancing the tire is to mount it in the proper position. There should be a paint spot on one of the sidewalls; this is the lightest point on the tire per the manufacturer. The heaviest point on the wheel is usually where the valve stem is. So when mounting a tire, if the paint mark is positioned next to the valve, it's likely the balancing will already be pretty darn close.

After seating and inflating the tire, I then just mount the wheel loosely on the bike, and spin the wheel several times, noting each time where it comes to rest. If it stops in random places each time, the tire is balanced; if it repeatedly stops at the same place each time, a wheel weight needs to be affixed (I have a strip of 7-gram stick-on weights that break apart like a Hershey bar). The weight should be placed on the side of the wheel opposite the heaviest point (the heaviest point will be at bottom, so the weight goes at the top).

Usually one weight is enough, and often 1/2 of a weight will suffice. Occasionally 1.5 or two weights will be necessary to even everything out. It takes a bit of time, but when you're cruising smooth at 80+ mph, you'll know where that extra time went.

How do I remove the fairing, fuel tank, etc?

Wes - Wed Nov 21 13:58:02 2001

Bar ends: Remove master cylinder and electrics from handlebar; remove handlebar from riser. Soak handlebar in very hot tap water for 10 minutes, then remove bar end screw. - or - Use very good #3 Phillips bit with ratchet and/or impact driver; very hard but may take less time.

Lower: Two screws per side to the upper fairing, one bolt per side near the exhaust header/pipe joint, one bolt in the middle under the radiator.

Upper: Remove four screws holding lower fairing to upper fairing. One bolt under each mirror, two gas tank bolts per side. Disconnect signal light wires from their harnesses. Carefully pull upper off the fairing stay (bracket that also retains the headlight and gauges) and work around the forks.

Side Panels: Remove seat. One screw each side. Carefully pull from rubber stoppers front and rear.

Fuel tank: Remove side panels. Remove four bolts (two per side) that connect upper fairing to tank; it is not necessary to remove the upper fairing. Remove two 10 mm bolts holding back of tank to frame bracket. Turn the petcock to 'off,' pull the petcock vacuum line, then carefully pull the fuel line; a few cc's of fuel will be in the fuel line, so be prepared to pour it into a gas can or something. Then simply pull the tank back off the rubber frame stoppers as you lift it up and free of the fairing.

Tail: Remove side panels. One bolt each side, four bolts underneath, bungee hook bolts must also come out. There is no need to remove the grab bar. Disconnect wiring harness, pull and stretch to reach over the key lock.

Front fender: Two bolts on each side of the tire. With a little patience, you can remove/replace the fender without dropping the wheel, even with 90-profile tires.

WARNING: Be sure to use the right bolts/torques when reassembling the bodywork, or it may be damaged. Be especially careful with the upper fairing gas tank bolts, or you might puncture the tank.

What is involved in removing/rebuilding the engine?

What is the engine removal process?

Jeb - Sat Aug 16 4:31:05 2003

It takes about 3 hours to do this; having a helper for the actual lowering process helps a lot:

- Remove fairing, sidecovers and fuel tank.
- Remove exhaust headers (canisters can stay in place).
- Remove carburettors.

- Disconnect shifter; remove countershaft cover and sprocket.
- Unbolt radiator; radiator can be left attached by hoses.
- Temporarily pull the top main hose going to the radiator filler neck, and reroute it below the frame (you'll lose a few ounces of coolant); reattach. Pull the small overflow hose. Unbolt the thermostat from the frame.
- Remove the front engine mounting bolt, and two front mounting "wings," along with their coils/wires.
- Disconnect remaining wiring: two connectors at rear of engine, starter, battery ground, temperature sending, oil pressure, radiator fan and neutral position wires.
- Support motor with a floor jack under the oil filter; remove 2 rear motor mount nuts/bolts.
- Lower it slowly and see if anything else is attached.

Note: If you are removing the engine to rebuild it, it makes more sense to drain the coolant and oil before pulling it. The steps above to avoid draining the coolant are assuming a basic engine swap procedure.

What parts usually need to be replaced in a rebuild?

Paul 311 - Mon Oct 8 19:26:17 2001

These are the things I replace during my annual race motor rebuilds:

rings +0.5mm
new pistons +0.5mm

connecting rod Big end bearings, 4 halves
main bearings; 1 & 3 Need 4 halves, 2 Need 2 halves
(usually don't replace the balance shaft bearings 4 halves)

cam tensioner spring, 92081-1984
cam chain, 92057-1210
head gasket, 11004-1312
base gasket, 11009-1572
clutch cover gasket, 11009-1872
alternator cover gasket, 11009-1873
shift shaft seal, 92051-005
copper exhaust crush washers, 11009-1866 qty 2

There are three choices for Ninja 250 pistons:

1) Stock Kawasaki pistons
2) +0.5mm Kawasaki pistons
3) +1mm pistons (available through G-Force)

You can also use Cosworth +2mm pistons, but they are illegal for production racing and make the cylinder walls really thin, so if the wrist pin comes loose it can work it's way through the cylinder wall and suck in a bunch of water and... I actually bought the bike with +2mm pistons in it back in '96. I didn't know at the time, and raced it that way for about 1 year before it blew up and I built it to production spec.

How much work is involved when rebuilding?

Paul 311 - Tue Oct 9 12:54:44 2001

The top end part of the rebuild is mostly labor. I usually pop the valves out, run them on a wire wheel to get the carbon off, clean out the exhaust ports and combustion chambers then lap the valves back in. It's a lot of work. G-Force did the original valve job and I've been using the same valves and seats since I bought the bike in 1996. Their porting work is amazing. The biggest increase in hp you're ever going to see out of a Ninja 250 comes from good porting and then selecting the right main jet.

I spend way too much time doing rebuilds because I'm totally anal about getting everything clean and making sure all the gasket surfaces are pristine. Saves a lot of time chasing leaks later. I can take a raceable race bike, drop the motor and strip it down to the main bearings in about 2.5 hours. Then I spend about 4 solid working days cleaning and building. In between are several unexpected parts orders. Now that I'm rebuilding for the 5th or 6th time, there are less unexpected parts to be ordered, but always some sort of gotcha.

How do I line everything up after rebuilding the top end?

James - Sun Jul 2 17:37:14 2000

You want rotate the engine counterclockwise until the 2T mark shows in the window, then go clockwise 90 degrees. Remove the tensioner (you probably already have it off). You want the EX mark to line up with the head towards the front of the bike and IN mark to line up at the back (this sounds backwards but it's straight out of the manual and it worked on my bike).

The cams can should only fit into the cam gears one way so they should be exactly where you want them if the gears are lined up correctly with the head. You should be able to count 33pins in the timing chain between the two timing marks on the gears. Once this is done you should be able to put the caps on and timing chain cover along with the tensioner (do the tensioner as soon as you have the chain, cams, gears timed), then the caps. Tighten the caps in this order top bolts on the 2 and 4 caps then bottoms then tops on the 1 and three then the bottoms. then torque them in that order as well (torque specs are pretty tight it's like 104 in/lbs).

I'm having trouble putting my bike on its centerstand...

Wes - Sat Nov 10 16:09:57 2001

1. Put bike on sidestand
2. Stand to left of bike
3. Put left hand on left hand grip
4. Put right hand on handhold. Handhold is either the metal bar by the passenger peg/helmet lock (my choice), or the grab bar (Bend at the knees, not with your back!)
5. Push down on centrestand footpad until one of its "feet" touch down
6. Push the bike away from yourself until the other centrestand "foot" touches down
7. Push down on the centrestand footpad with all your weight, and pull back and up (mostly back) with your right hand; it may help lean your right knee into the side of the bike
8. The bike should pop right up

I need help repairing my bike.

My bike won't run.

My battery is good, but when I turn on the ignition I get no power.

Jeb - Mon Feb 21 03:13:25 2000

This is probably because of a blown main fuse. This 30 amp fuse is found in the starter solenoid unit next to the fuse box.

When I try to start my bike I hear a chattering noise.

Greg - Tue Mar 28 12:47:43 2000

Most likely there is just enough juice left in the battery to actuate the starter relay but not enough to turn the motor itself. That is your clicking noise. This happens to cars too. Also check that the screws holding the cables on to the battery are snug. If the battery and its connections are okay then try this: Get someone more mechanically knowledgeable to carefully stick a screwdriver across the starter relay main leads; don't touch the metal part of the screwdriver though. If the motor turns

over fine then have them check the starter button itself. If the contacts in the starter button itself are blackened/corroded clean them off. I have seen this happen in other Ninjas. A pencil eraser works well for this. There are many other possibilities but these are three good ones.

My bike tries to start but won't, no matter how much choke I give it.

Duke - Tue Feb 29 14:32:49 2000

It's possibly flooded; mine has done this also. Floods on a warm day with too much choke, and then turns over but doesn't start. After cranking for a few seconds, it will sometimes sputter just a bit and a bluish-white smoke will come out of the pipe, but still won't start.

Try cranking a couple times in 5 second bursts with no throttle. Then, as you are cranking, hold the start button and simultaneously add choke slowly until it fires (when mine does this, it starts up with maybe 1/2 choke; any more/less and it wont start). Be careful you are not running your starter for more than about 15 seconds at a time or you may damage it.

On warm days I normally crank it for a second or two with no choke and no throttle to clear any raw fuel sitting in there before adding choke (it usually starts with no choke if it's over 70 degrees).

If you are still having problems, you may want to take a closer look at your choke plungers. Make sure they aren't sticking. Also check your float valves to make sure your float bowls aren't overflowing, which may also flood your engine.

My bike tries to start but won't, and I see white smoke coming from the exhaust.

Leon - Wed Apr 26 06:16:39 2000

The white smoke indicates that water is getting in the engine, which means water could be in your fuel tank. The reserve fuel comes from the same tank as the main, but the reserve comes from a lower level. The main setting takes fuel from about 2 inches above the bottom of the tank, reserve takes fuel from the very bottom. Water is heavier than gasoline. If you have 1/2 inch of water in the bottom of your fuel tank, it will never get into the carbs if you never use reserve. When you switch to the reserve setting, the water will immediately flow into the carbs.

I try not to add fuel to the tank until after it gets to reserve. This way the water is removed from the tank regularly. The down side to this method is that it ends up in the carbs.

Another method is to drain the fuel tank regularly. This would be a better method because it will remove all the water and sludge so that when reserve is used only gasoline gets to the carbs. This method requires more work. I do it once when I get the bike (all of them need this; I don't buy new bikes).

The water problem occurs more often in bikes that sit in the rain.

My bike starts initially, but the carbs flood very soon thereafter.

Leon - Thu Apr 27 10:12:45 2000

Gas pouring out the overflow could mean that you've got a particle of something under one of the float needles. It won't flood when not cranking because the vacuum valve in the petcock won't let fuel flow.

Remove the carbs, tip them upside down, remove the float bowl and then each of the floats and needles. Look for something between the needle and it's seat. Another possibility is damage to the needle tip.

My bike has been sitting for a while, and I can't get it started.

MylittleNinjette - Tue Dec 24 16:33:48 2002

This assumes the bike was running just fine before it sat, and that it sat for months. This also assumes that rodents haven't packed your exhaust pipes full of seeds or nesting. If the bike just sat for a few weeks, odds are that the carb bowls are just empty. In this case if you have a "prime" setting at the petcock, set it to prime and try again, otherwise keep trying to start with the choke at wherever it usually would be and throttle partway open until it fires. So that you don't overheat the starter motor, use the starter in short, controlled bursts of 5 seconds or so, with a 10 second "rest" in between.

1. Does the starter crank the engine? If yes, go to 2. If not, then check the battery (eg, signal lights or horn works), and charge if needed. Keep the charger handy in case the battery wears down, or hook your battery up to a car battery (car off). If the battery is OK but the motor won't turn over, then there is either a starter problem (like it isn't getting power), or the motor is seized (and this would take years of sitting). Put the bike in gear and see if you can turn the motor by turning the rear wheel (grunt). If the wheel turns, then the motor is free and the starter is the likely problem.

2. The battery and starter are OK, so if you have starter fluid, try using it; if not, go to 3. Starter fluid is a quick and easy check if everything but the fuel/carbs are OK. Spray the fluid into the carb openings (read the can), downstream of the air filter, and try starting again. If it fires up, then you just need to drain the carb bowls and try fresh gas, see 4.

3. Check for spark. Put the starter fluid can away. Reach under the gas tank and pull one of the spark plug wires, with cap, out of the head. This is kind of a pain, but quick enough and thus worth it to do, especially if your bike sat in the damp. Plug a spare spark plug into the cap, hold the plug threads against bare metal of the bike. If you don't have a spare plug, put a metal screwdriver shaft down in the cap, and put some part of the metal shaft up close to bare metal, like 1/8" (3 mm) away. Grab the screwdriver with a glove or rag if you don't want a little shock yourself. Hit the starter button. If you don't see a spark, then there is some problem with the ignition, likely a short somewhere. If you do see spark then the problem is definitely with the fuel or carbs. Put the spark plug wire and cap back on the plug in the head and go to 4.

4. Drain and re-fill the carb bowls. Condensed water and dried fuel varnish can plug up the works enough to keep the bike from starting, although it often will at least sputter. There is an allen head screw under the carb that will let fuel drain out that little nipple under the carb (put a cup or some-such under there to catch the gas). If the gas in the tank is older than a year, drain the tank and put fresh gas in. Now put the petcock to "prime" if you have that setting, and try starting again. It will take some cranking of the engine for the gas to re-fill the carb bowls, so give it 10 tries. If it doesn't start, go to 5.

5. Clean the spark plugs, or put new ones in if you have them. It's such a pain to get at the plugs that I would definitely leave this to late in the operation, and I'd even go out and buy starter fluid first, but still, it's easier than cleaning the carbs. If the bike still won't start, with good spark, starter fluid or fresh gas, and clean plugs, then pull the carbs and clean them.

My battery is dead; how do I push-start my bike?

Leon - Wed Jun 7 13:48:36 2000

The bike won't roll very well when it's in gear, the drag from the wet clutch and transmission is very noticeable.

1. Get the bike rolling with the transmission in neutral, the clutch pulled in, the ignition and engine cut-off switch on.
2. Stand up from the seat then simultaneously drop to the seat as you press down into first and release the clutch. Dropping to the seat will give the rear tire the extra traction it needs to get the engine rolling.

My battery is dead; how can I bring it back to life?

Jake - Tue Jan 2 13:39:43 2001

1. Charge the battery after disconnecting and removing it. You may have a current-leak on the bike somewhere.
2. Check that the leads are on correctly. (I know you didn't hook it up wrong... but you'd be surprised.)
3. If the charger has a voltage switch, set it to 12V.
4. Try a different charger if you have access to one.
5. If the battery has removable fill-caps, add distilled water to the fill-line.
6. If the battery has removable fill-caps and adding water does not improve it's ability to charge and hold a charge, buy an electrolyte checker. Follow the instructions. This device checks the acid content (and hence the ability to take a charge) of the water in the individual cells.
7. If the battery does not have removable fill-caps, you're done. Get a new one.

In general, check the voltage after you unplug and disconnect the charger. Shouldn't make a difference, but you want to eliminate all but one variables in testing.

My engine is running poorly.

My engine lacks power under throttle load.

Duke - Mon Jan 24 22:20:58 2000

Make sure there's nothing covering the openings to the airbox under the seat. One time I had some maps in a zip-lock bag under the seat. It was cutting out at full-throttle and I couldn't figure out why...well, guess what..that zip-lock bag was over the two holes in the airbox and every time I opened it up the vacuum was sucking the bag down on the airbox and whamo - no air!

Also check:

- Is your choke cable/mechanism working properly on your carbs? The choke may be stuck on.
- Are both spark plugs getting good fire?
- Are your valves adjusted properly?
- Are your carbs synced?
- Have your carbs been cleaned in the past several years?

My engine is backfiring.

Jeb - Thu May 31 19:51:42 2001

If the engine is just popping a little bit as you decelerate, then you're getting preignition. This is caused by a lean mixture condition. Check carbs for vacuum leaks, or richen (raise) the needles or idle mixture (turn out screws).

If the bike is seriously backfiring, then you might still have a lean condition, or maybe even a rich condition (check your choke). This is because a lean mixture can make the engine miss, then the unburnt gasses are ignited in the exhaust pipe on the next cycle; a rich mixture can have the same effect since unburned fuel will also be present...

Check pilot circuits in the carbs, change the spark plugs (make sure to gap them properly), check for exhaust leaks. If all else fails, try a higher octane fuel.

My bike will run for a while, but keeps losing power and dying when I ride it.

Leon - Fri Sep 29 10:48:31 2000

This is tight valves! It dies at low RPMs, but will continue to run if the throttle is opened.
Take the bike in and have the valves adjusted (or do it yourself) before you do real damage to the motor.

I think my tire is losing air.

Nosferatu_d - Thu Jan 13 07:47:45 2000

Some things to check first... Obvious is to look for a nail or screw that is still in the tire. Second when you fill the tire with air put a little spit over the valve and see if a bubble forms; it could just be a leaking valve. You can also take an empty squirt bottle, put a couple drops of dish washing detergent in with some water, then spray the area around were the bead of the tire is while the tire is full...it could just be a bad mounting job.

If it is the valve try tightening it; if that won't work the dealer should have no problem replacing it. If it is a leak around the rim again take it to the dealer and have them remount the existing tire or mount a new one. If it is a screw or nail then it is better to just replace it then try and patch it; the newer types of tires are very difficult to patch both properly and fully. Either way if you can figure out what the leak is before going to the dealer it will save you some aggravation...

My brakes are not operating normally.

There is a pulsing when I apply my brakes.

Terry - Mon Jan 22 16:01:07 2001

Jack up the front wheel. Spin the wheel and look for rubbing. Apply the front brake ever so slightly to see where it touches first. Mark that part of the wheel. There are 6 allen head bolts holding the front rotor to the wheel. Tighten the two or three bolts closest to the spot on the wheel where the rubbing occurred.

If that doesn't fix it, replace the pads. Still no luck have a machine shop resurface the rotor ever so slightly as to not make it too thin. If all else fails replace the rotor.

My brake pads are grinding.

RoadOfTheDevil - Sat Apr 28 22:19:05 2001

It is normal for the pads to drag slightly, especially just after replacing them. Excessive grinding can be caused by having the torque link nut too tight, or having the hex nuts that hold the caliper to the caliper mounting bracket too tight. Be sure to correct this before the rotor warps from being overheated.

My handlebars shudder when I ride.

What should I check for this problem?

Gabe846 - Fri May 26 19:34:44 2000

At low speeds, this is normal, but at high speeds, not so much. Here's some things to check:

- Steering head bearings (too tight or loose, or worn out)
- Tire wear or pressure
- Alignment of front and rear wheel

- Bent triple clamps or forks

What if steering head bearings are bad?

Leon - Mon Jul 31 15:01:07 2000

If the bearings are too loose, you get a wobble. If too tight, then when going around a long curve, the bike wants to turn, then straighten and repeat rather than taking a smooth arc. If there's no wobble, then tightening the bearings probably won't make much difference; I've ridden with marginal bearings for quite a while.

To adjust them and look for worn bearings, put the bike on the centerstand, and put something under the engine to get the front wheel off the ground. First, try to move the fork legs forward and back, if there is any movement at all, the steering head bearings are loose.

To tighten them, loosen the top nut that is between the fork legs behind/below the ignition. Under that and under the top clamp is another nut with a slotted head. Use the spanner wrench from the tool kit (or a hammer and punch) to tighten this lower nut one tooth at a time. Tighten the top nut before checking the forks again. I usually loosen the locknut, then tighten the bearings until I can feel a noticeable tightening, then I back off a bit, tighten things back up and go for a test ride.

Once the forward and back movement of the forks is fixed, then you should check for flat spots and over torqueing. Move the handlebars left and right, there should be no difference in the pressure it takes to move them as you go from left to right. Worn bearings will often have a spot right in the middle that the bars want to stay in. Overtightened bearings will not move smoothly.

If you can't find something in between the loose and tight adjustments that feels right, then you need new bearings. The bearings didn't go bad on my bike until about 30K, and that was with the heavy loads I put on it.

My clutch lever rattles when I rev the engine.

Duke - Thu Aug 17 00:40:47 2000

Mine did the same thing, a ringing above 8k. I used a 2-liter Coke bottle and cut a couple shims and slipped in like washers on the clutch lever and it fixed the problem. I'd imagine you could buy some very thin nylon washers at a hardware store that would do the same thing.

Can I ride my bike home if the clutch cable breaks?

Duke - Thu Jul 20 20:38:26 2000

Try pulling the clutch lever in to deactivate the starter cutoff switch. Then hit the starter and the bike will begin rolling as it hopefully fires up. Try this in second gear. Once you have it going you can ride it home. it is possible to shift gears without the clutch if you sharply let off the gas while upshifting, or blip the throttle while downshifting. When you get home hit the kill switch to stop.

Do this very carefully, and remember you can't stop without the kill switch.

I need to fix some accident damage.

I need to realign my forks and front wheel.

Leon - Mon Oct 9 11:38 2000

I've just realigned forks by eye-ball. If they're a little crooked, it doesn't seem to affect the handling much. I just put the bike on the centerstand and loosened the fork bolts slightly. Then from the front, I held the front tire with my legs and twisted the handlebars straight. Then I checked to see if it was straight by straddling the bike and looking at the front tire and bars. After a couple of tries, I got it to where it looked pretty good and just tightened the fork bolts up again. The handlebar caps should keep the forks in about the right place, so it shouldn't be very hard to do this.

I need to repair a cracked fairing.

Robert - Fri Jan 14 11:40:59 2000

I had really broken fairing on an '86. The right turn signal hit the ground and snapped the fairing. I got a tube of putty type marine epoxy at an auto parts place. It says it is good for plastic and will set in any conditions. I formed it to match the hole and sanded it smooth, but I knew I could never get the paint right so I got a Targa upper fairing bra to totally cover it. The repaired patch is probably stronger than the original plastic. I am by no means a professional at this but with the bra on, you can't tell it was ever damaged. I like that epoxy stuff better than body putty kits, you can just form it like you want like using "play doh."

I'm trying to find touch-up paint to cover some scratches.

Spoon - Sun Nov 28 16:42:18 1999

PJ1 colormatches are damn close. it'll take fewer coats with primer underneath. available at dennis kirk, and most cycle shops. I'm not sure how available Kawasaki white is, PJ1 makes OEM matches for most every cycle, maybe something will be close. minor scratches can be taken out with buffing compound, and then waxed with something like Nu Finish.

My bike was wrecked but it wasn't my fault...

Chris - Wed Nov 10 20:01:16 1999

The best thing you can do in this case is take the bike to your local dealer and have them do a damage estimate. They will use factory part numbers and prices. Take the estimate to the insurance company. Do not deal with the person who hit the bike; he is out of the loop now. The insurance company will cut you a check and you can decide what needs to be fixed and what can be overlooked; remember that things like aftermarket levers and signals cost much less than factory parts. Don't forget to make the insurance pay for the damage estimate also. E-mail if you have any questions.

I need recommendations for tools/parts.

What should a good set of tools include?

Wes - Sat Mar 22 11:53:49 2003

Here's what you need to work on the bike:

Metric Socket Set: [Sears Craftsman or equiv -- I got mine for $10 on sale at Sears]

- 10" Ratchet with 3/8" drive
- 3/8" -> 1/4" drive adaptor
- 1/4" drive sockets: 4mm, 6mm, 8mm, 10mm
- 3/8" drive sockets: 10mm, 12mm, 14mm, 17mm

Additional Socket-type Stuff:

- 1/2" -> 3/8" drive adaptor
- 1/2" drive 22mm socket [front axle]
- 1/2" drive 24mm socket [rear axle]
- Adaptor for 1/4" socket drive -> 1/4" hex-head screwdriver bits
- #2, #3 Phillips 1/4" hex-head screw driver bits
- 3mm, 4mm, 6mm, 8mm Allen 1/4" hex-head screw driver bits

Screw Drivers:

- Handle to fit 1/4" hex-head screw driver bits. If you only buy one handle, make sure it is the non-ratcheting type, and try to get one that is not hollow.
- Adaptor for above screw driver to fit 1/4" drive sockets (usually comes with it if you get an assortment of bits)
- $1 #3 Flat-tip screwdriver (use for steering head nut, you bang it with a mallet)

Misc:

- Spark plug tool (elbow piece) from stock toolkit
- Rubber mallet
- Torque wrench. Must have. Minimum: $10 deflection bar wrench from WalMart, 10-100 ft-lbs. Ideal: 2 ratcheting torque wrenches ($50 each), one in inch-lbs, one in ft-lbs. Bigger one must handle ~100 ft-lbs max.
- Service Manual and Supplement. Very bloody handy. If you don't have the service supplement, you can at least get the torque values from this page.

Gravy:

- Short ratchets for hard-to-reach places
- More screwdrivers
- Circlip tool
- Magnetic pick-up tool for stuff you drop
- Kawasaki valve adjustment tool (see Page 44)
- The usual supplies: WD-40, cable lube, chain lube, brake rotor cleaner
- A jack for lifting the bike by the motor

Bottom line: Buy tools when they're on sale, and buy the right tool for the job when you need it. Never buy cheap tools -- unless you're just buying a screwdriver to hit with a hammer -- they cause more problems than they're worth. Now you know what you need; you can walk through Sears and see what's on sale the next time you're in the mall.

What kind of battery charger can I use?

Jeb - Mon Nov 27 16:57:36 2000

The 'Battery Tender' brand 'Plus' model is a commonly-used charger. It's about $35, but well worth it. It comes with a harness that you can permanently mount to the bike, so you can plug the bike in when you get home, and be sure to have a fresh battery in the morning. It has a smart circuitry system that will not charge the battery any more once the battery is fully charged, to prevent damage.

I've brought several dead batteries back to life with mine, including the huge battery in my 325i, and the 7 year-old battery in Ede's '94 EX250.

Modifications

Performance

I want to upgrade my exhaust.

What models are available?

Muzzy

How much difference does the Muzzy exhaust system make?

Larry - Wed Oct 27 22:48:33 1999

I have just finished installing my second Muzzy system. The entire system weighs just 5 1/2 lbs on my bathroom scale. The stock mufflers alone weighed 13 1/2 lbs. I didn't weigh the headpipes and centerstand but it's a few pounds more off the bike as well. The stainless steel head pipe looks great and fits perfectly. I can give installation tips if you need them. Less weight + more power = faster, better-handling bike.

The Muzzy is loud but it has a deep tone; I don't think it is obnoxious. A good helmet keeps most of the noise out. I didn't want the noise either but after considering all the available exhaust options, Muzzy is the one. I will probably be getting a third one for my wife's bike when I can afford it. Oil filter and drain plug access is fine.

Do I have to remove the centerstand to install a Muzzy exhaust?

Jeb - Fri Nov 16 19:28:49 2001

I too wanted to keep my centerstand when I put on my Muzzy system. Centerstands are very useful, and I do miss mine indeed now.

There are a few problems with this, however. First, the spring that holds the stand in place when retracted rubs the Muzzy's larger head pipe.

Second, there is no "stop" for the stand anymore when retracted (since the left canister is gone); there is nothing to keep the spring from pulling the centerstand up into the swing arm and drivechain. I heard once of someone fabricating a bracket to hold it in place, but I imagine that's not all they had to do.

Lastly, the Muzzy is designed to increase performance a bit, sound good, and look good. One way it looks good is by really cleaning up the back of the bike; with the stock exhaust cans gone the swing arm is fully visible. If you leave the centerstand on, it will be quite an eyesore, in my opinion.

Sorry to discourage, but it's probably more trouble than it's worth to keep it. You can buy a nice swingarm stand for about $70 though, which will let you do most of the maintenance the centerstand allowed. The only time I still use the centerstand is when I'm doing rear suspension work; I loosely attach the stand temporarily with two 17mm bolts, and put it back in the parts bin when I'm done.

How do I repack the Muzzy?

Mark - Tue Jun 12 07:31:26 2001

I repacked my Muzzy last night using the manufacturer's kit. When I opened up the can, what little fibreglass was left in it had settled to the bottom half of the can so there was no sound absorbing material at all in the top half. It's no wonder it was so loud. I estimate that there was only about 1/3

as much fibreglass material in there as there was in the replacement kit. With the new packing the bike is quite a bit quieter than it was. For my taste, it's still louder than I'd like, but it's tolerable.

The repair kit consists of the perforated inner tube wrapped in fibreglass. I ordered this directly from Muzzy last fall. If you could get the right fibreglass material from a muffler shop or auto parts store, there is no reason you couldn't just replace this bit since the metal pieces were all in good shape. To install this, just drill out the rivets and remove the end cap (sounds simple, but there was the small matter of a broken drill bit and what seemed like a lot of blood at the time...). Only one end cap needs to come off and the engine side cap is easier to get off since the mounting hardware provides something to pull on. I removed both caps because I want to experiment with some additional baffling at the outlet end.

You can go to www.muzzys.com and order the kit. It's about $25. You'll need a pop rivet tool (about $10) and rivets (1/8" diameter, ~3/8" length) to put it all back together. The end caps are stainless steel and are reused.

I poked around the web and found packing for glass pack mufflers several places for about $6. If I were to do it over, I'd just get the packing. I suspect that auto stores or motorcycle shops probably stock this kind of stuff.

I've no idea where the old packing goes. I guess it just breaks into small pieces and blows out the tail pipe. I bought the bike with the Muzzy so I don't know how long it has been on there. The bike had about 10,000 miles when I got it and it's at a little over 16,500 now, so it looks like this is something that needs to be done pretty regularly.

Yoshimura

Daryl - Fri Sep 22 09:11:54 2000

I have a Yosh pipe; it's a complete 2-into-1 system. It sounds about the same as a Muzzy. With The Muzzy you have to eliminate the centerstand but you can get to the oil filter; on the Yosh you can keep the centerstand but you have to remove the pipe to change to oil filter.

Part# GP270SSC, for the 88-01 model year; I paid 319 dollars.

Cobra

Chris Hughes - Sat Jan 20 01:12:34 2001

There are 2 kinds or slip-ons available: Cobra F1's and Cobra F1R's.

I have owned both and I recommend the F1's since a) they look nicer, and b) they sound better.

The F1R's are way too loud and obnoxious (remember this is coming from an 18 year-old male here); I got a noise violation ticket for them. The F1's have a lot nicer tone, and of course they are still louder than stock :) .

I believe Dennis Kirk sells the F1's for around $160 and the F1R's for around $210.

Do I have to rejet when I put in a new exhaust system?

Duke - Mon Jul 3 13:27:42 2000

Just after I got my bike (which had a Muzzy installed, but no jet kit), I ran it at 10K+ for about 45 minutes one time, which did it in... (before I realized I was hurting it) I wound up with one of the exhaust valves about 15% melted away, and the bike would no longer run under about 4,000RPM (which made starting a little difficult).

Before that happened, I had to run it with the choke partially on all the time, which 'seemed' to make it run OK. Once into the upper part of the RPM range though, the choke makes no difference to

the mixture as everything is wide open and mixture is being determined by the main jets, which in stock form are way too lean to be running with a non-stock pipe.

If you have to run without jetting, go easy on the heat until you can get the right jets installed. The difference in performance (beyond possible damage) is well worth the cost and time involved in jetting.

What if I'm just installing slipon canisters; do I still need to rejet?

Duke - Thu Jul 20 20:44:55 2000

You do not have to rejet with slipons, as they don't significantly change the flow characteristics of your exhaust system.

Rejetting is however always a good idea, especially if you have the time to experiment and get your jetting just right. As we've seen here recently, the optimal jets can change significantly depending on the altitude at which you live. There's no magic formula involved with the stock jetting. They've merely jetted it for an 'average'. If you are particular, and want the most from your little engine, splurge for a jet kit and the adjustability it offers.

Can I get a better exhaust sound without replacing the stock pipes?

Brent - Thu Apr 26 04:05:08 2001

You can take the canisters off and bring them to a machinist to cut off the endcaps, cut out the baffles and place the endcaps back on. Doing a full debaffling yourself may be difficult.

Other options are to drill out the rivets in the endcaps (little bit louder tone), or to use a long rod, place it down the muffler pipe, and hit it with a big hammer to puncture the inner baffles to allow a more straight-through flow of the exhaust (bit louder than drilling rivets), or you can do both.

I want to upgrade my suspension.

Front end

How do I stiffen up the front suspension?

Paul 311 - Fri Jun 2 17:23:06 2000

You can do a few things:

- Buy aftermarket springs and drop them in.
- Buy some washers and use them as additional pre-load until you get the sag set correctly (this won't make the springs any more stiff, but will put you in the middle of suspension travel.
- Cut and grind your stock springs to a shorter length and add big preload spacers (this requires a blowtorch and a flat grinding wheel).
- Send your forks to Aftershocks (www.aftershocks-suspension.com) and they can do anything from changing the oil, to a complete re-valve.

On the rear shock you are limited to getting it replaced or rebuilt. Having it re-worked will make the valving better, but you will also need a stiffer spring. Aftershocks has a lot of options there too. You can call them from 10am to 6pm California time at 650-494-8849.

Where can I get some preload spacers?

Daryl - Sun May 14 17:52:24 2000

I use PVC piping from the hardware store. I don't remember the diameter of the tubing, but if you take the fork spring washer out of the top of the fork you can take it to the store and see what size diameter you need.

You need to see how much sag in the front end you have before you take the top off. Measure the front end topped out, and with help measure how much it sags with you and riding gear on the bike. You want about 1 1/4" of sag, no more than 1 1/2"; if it's 2 inches you need 1/2" PVC spacer or more. The PVC tubing can be cut to size.

A guess with stock springs is that you'll need a 1/2" to 3/4" spacer; with Progressive Springs you need about 1/4" to 1/2". The Progressive instructions don't call for it, but there's too much sag without adding some preload; it further improves the front end dive and control. You put the spacer on top of the fork springs.

Will a fork brace improve the front suspension?

Paul 311 - Wed Oct 3 13:15:01 2001

I use a fork brace, but I really can't tell a difference between having it on or off. The main thing a fork brace does for me is to keep the forks from twisting when I crash (4 times this season). Last crash, I didn't even have to straighten the triple clamps.

The fork brace does do something. There was enough flex in my front end that the edge of the tire (17" radials) was cutting a little groove in the fender. When I put the fork brace on, I added a little piece of white duct tape to that spot on the fender, and the tape remained untouched. So the fork brace does something, but I sure can't feel it.

I've been using it since about a year ago when I set a 250 Production track record at Buttonwillow (which, for the moment, still stands). After that, I really couldn't bring myself to change anything that didn't have to change.

Rear end

How do I change the rear shock?

DrBoom - Thu May 23 23:27:51 2002

What you need:

- 19mm wrench
- Suitable ratchet 3/8" drive or larger
- 10mm socket
- 17mm socket
- 10" or longer extension bar for ratchet
- #2 or #3 Phillps screwdriver
- Straightish, long prybar or suitable facsimile
- 6"+ zip ties
- Coolant (optional)
- Your new shock

1. Put bike on center stand.
2. Remove seat.
3. Remove left side cover with Phillips screwdriver.
4. Move coolant reservoir out of the way by removing (2) 10mm bolts. Turn reservoir 180 degrees to your left and loosely secure it to whatever's handy with a zip tie. Put

the 10mm bolts back into the holes they came from to avoid kicking them to oblivion when you get up to grab your beer.

5. Working from the left side of the bike, break the lower shock shackle bolt loose with the ratchet + extension + 17mm socket. Once it's loosened up, use the 19mm wrench to keep the nut on the other side from turning -- you won't be able to hold it with your fingers. Once the nut is off, wedge the prybar under the back tire and gently wiggle it up and down while pulling on the bolt head; it should come out easily without trashing the threads. Let the back tire rest on the ground.
6. Still working from the left side, locate the 17mm bolt at the top of the shock and remove it. There is no loose nut on the other side to worry about, so just take the bolt out and watch the shock fall to the ground.
7. If you are installing a new shock with an external reservoir, this is a good time to find a place for it. If you have a Works shock and followed Jeb's advice when you ordered it ("reservoir hose at 8.5", and the fitting at 8:30 o'clock"), it attaches to the rear frame tube and tucks neatly behind the coolant tank.
8. Slide the new shock into the top bracket and install the 17mm bolt. (torque spec?)
9. Line up the shock's bottom shackle with its matching hole by using your prybar to lift the rear tire + some judicious tapping. The bolt should slide right in. This is not a job for a hammer, folks. Put the nut on and tighten it up. (Righty tighty, lefty loosey, eh?)
10. If you have an external reservoir, secure it. Use a zip tie to secure the reservoir hose to the frame. You're done with your shock.
11. Remount coolant tank. This is a good time to fill it, if needed.
12. Replace side cover and seat.

Shouldn't take more than 30 minutes.

How do I adjust the rear preload?

Wolcott - Sat Mar 18 13:58:52 2000

The stock shock is not adjustable for preload. Assuming you have an EX500, SV650 or some other better shock, put the shock on the bike, then measure "sag".

To do this, with the bike up on the centerstand - first measure distance from rear axle to some fixed location on rear, such as bottom of cowl at joint in plastic. Then get it off the stand and sit on it in full riding gear and make the same measurement again. Subtract the second from the first to get "sag." Adjust the shock to get 1 1/4 to 1 3/4 inches sag (1/4 to 1/3 of full shock travel).

You see it all depends on your weight. Also, helps to have someone else measure for you so you can get your feet up to get true riding position. Also, jiggle bike with you on it to get accurate reading after suspension is "unstuck."

You can adjust the preload by loosening the preload locknut or ring, then turn the adjusting nut/ring with a suitable spanner, or tapping it with a screwdriver using a mallet to rotate the piece.

What kind of shocks are available for the 250R?

Paul 311 - Mon Jan 3 12:44:37 2000

Fox makes some of the best racing shocks. They are adjustable for rebound compression, preload and sometimes even ride height. Fox won't make them anymore, so there are a limited number of them on the used market. They seem to go for $300-$500 on the used market.

I'm working with "Aftershocks" of Palo Alto to develop an Ohlins shock which will have all of the features of the Fox, and have custom valving by Aftershocks. I should get to try one in the next month or so. I'll report back on the results.

The only high-end shock you can buy for the Ninja right now is the Penske shock. It starts at $700 to $1,200.

I would guess that every EX500 racer in the world has a stock shock gathering dust in his garage. The main difference between an EX500 shock and a stock shock is probably the ride height of the rear end of the bike. When you jack up the back a little, you make the head angle steeper and it makes the bike steer more quickly and also puts more weight on the front end. Another way to get the same effect is to loosen the triple clamps, let the forks slide upwards until they stop against the bar risers, then re-tighten the triple clamps. (be sure to use a torque wrench for this, as the top clamp is aluminum)

For real rear end performance you can send your stock shock off to Aftershocks in Palo Alto CA, 650-494-8849 or buy a Works Performance shock. I use an Aftershocks-valved WP shock on my Race bike (the WP shock will also make the rear end taller). You can get a Works Performance shock for the Ninja for about $300 new. They aren't adjustable except for preload. I use one now on my race bike and it's a decent shock for the money. Aftershocks can re-valve these to make them work better too though.

Aftershocks may be able to re-valve your stock shocks. I have seen people racing on a re-valved stock shocks and they seemed to work ok too.

Why should I upgrade my suspension?

Wolcott - Fri Nov 19 20:10:55 1999

Suspension makes your cornering possible. With a lousy suspension you never feel comfortable enough to really lean it over and get on the gas. With good suspension you can lean way over, get on the gas, do mid-turn swerves to avoid obstacles, and stay stable through bumps. How much faster? - light years.

How? Spend money ($$$$$) on shocks and forks. The stock 250 Ninja is comfortable but sloppy, so it's easy to improve.

How does modifying the steering geometry help?

Paul 311 - Wed Feb 9 23:11:53 2000

On my race bike I have found a set up that works really well. Whenever I make a change which has a side effect, changes the ride height, I always try to make a change to counteract it and get things back where they were.

There are two things that change when you change the height of one end of the bike or the other:

a. fork angle
b. weight distribution

Making the fork angle steeper (closer to vertical) makes the bike steer more quickly. This can make the bike feel twitchy and unstable if you take it too far.

Getting more weight on the front end is a good thing. The Ninja 250 is pretty light on the front end and will tend to push the front end with the stock ride height. Raising the rear a little or dropping the front a little helps cure this.

Unfortunately ride height is a relative thing, so set up is difficult to translate from bike to bike, and will be affected by things such as:

a. sag (which can be adjusted by changing preload)
b. position of the forks in the triple clamps
c. tire profile
d. longer or shorter rear shock

Preload is what you change to set the sag. Checking sag is one way to determine if you are using the middle of the available travel on your shock/ forks. The middle range in the travel tends to give the most even damping from what I hear, and it will also help keep you from topping out or bottoming out if you have the sag set correctly.

What good does reducing unsprung weight do?

Wes - Thu Jan 11 14:22:01 2001

- Unsprung weight is anything on a bike not being supported by the suspension; e.g. wheels, tires, brake rotors, chain, sprocket, swing arm.
- Unsprung weight is undesirable because the more weight an unsprung component has, the more inertia it has (p=mv).
- The more unsprung inertia there is, the harder it is for the suspension to absorb changes in inertia by exerting a compensating force, as it has to do more work. (f=ma, p=mv, a=[change in v], conservation of momentum/energy)
- So, less unsprung weight means the suspension has a faster reaction time to bumps in the road, causing less jostling for the rider.
- Forces not absorbed by the suspension are passed on to the components on top of the suspension, including the rider.
- So, the higher the ratio of sprung to unsprung weight, the smoother a ride you get.
- The smoother the "intrinsic ride", the stiffer you can make the suspension without rattling the rider's teeth out.
- The stiffer the suspension, the better the handling and feedback.

I want to improve my carburettor jetting.

Why would I want to change my jetting?

Duke - Thu Jan 13 06:10:55 2000

You will need to rejet if you make any changes to your exhaust or intake. If you add a new pipe and/or filters, your carbs will run lean so you'll need to richen things up. A carb kit will do this by giving you larger main jets and adjustable jet needles. The jet needles also have a slightly different taper than stock which will smooth out throttle response through the whole RPM range, and add quite a bit of power in the 3,000-6,000 RPM range.

If you don't rejet and run your bike lean, it will a) not run without the choke being partially on, and b) may burn (melt) your exhaust valves if you run it hard lean.

If you are going to spend the $400+ to add the pipe and intakes, go ahead and spend the other $90 for the jets and do it right.

How do I improve my jetting?

Duke - Tue Jan 11 15:39:41 2000

Carburettor jetting is the fine art of adjusting the jets inside your carburettors to provide optimal fuel flow into your engine. A couple different companies sell jet kits that include 2 adjustable jet needles and [4 sets of 2] different sized main jets to allow you to accomplish this goal.

If you modify your exhaust or intake you will need to also adjust your mixtures in your carbs due to the increased airflow, which will cause a lean mixture. Depending on what mods you make, you'll use 'Stage 1' or 'Stage 3' (Both are included in the kit; the 'Stage' business is just marketing hype). The carb kit may also improve your stock performance by smoothing the low and mid-range response. With a Muzzy exhaust system, the Dynojet kit in my bike makes a very noticeable difference. Instructions for installation and adjustment are included in the jet kit, plus they have a 1-800 number for help. If you have a little mechanical aptitude, you can install it in a Saturday afternoon. However, plan on taking the time to make a few adjustments to get it just right.

For $90, it's worth a try, and you'll have everything you need (carb-wise) to add a hi-flow pipe or intakes in the future.

How do I install a jet kit?

Jeb - Fri Mar 31 17:05:50 2000

The instructions that come with the package are concise and assume you have some technical ability; if you have a Kawi service manual, it will clarify a few things.

There is a bit of an art to this; you'll see that after putting the carbs back in after the first rejet-session. You may have to pull the carbs out several more times before getting the results you really like.

There are four main steps to this process:

- Drill the vacuum hole of each needle-holder diaphragm with included drill.
- Replace the stock needles with new clip-retained needles.
- Replace the stock jets with the recommended replacement (this may not be the jet you end up keeping).
- Drill out the idle screw covers with included drill, and close each screw, then open 2.5 turns.

It is important to be careful with these parts; they are manufactured to very specific tolerances, and are easily damaged. Also, recognize that most of the retaining screws are made of brass, and again are easily damaged. Use no more pressure than necessary when adjusting them, and do not use the screwdriver included with the bike or a cheap Wal-Mart screwdriver; use a hardened screwdriver with well-cut blades ($8 at a hardware store should get you something acceptable).

Where can I purchase a jet kit for my bike?

Dynojet Research, Inc.

Factory Pro Tuning

Can I improve carb performance without buying a whole jet kit?

Paul 311 - Sun Jan 23 22:44:30 2000

You can get about 90% of the performance of installing a jet kit by installing new main jets. Main jets are available from better motorcycle shops. You just bring in your old ones and tell them what size you want, or even tell them you want one size larger (richer) or one size smaller (more lean). Believe it or not my CB-1 jet kit came with jets that were a size smaller than stock, and the bike makes more power. A lot of Japanese bikes come jetted a rich on top and will make more power if jetted more lean (the needles will then need to be raised a bit to richen them, as they are usually on the lean side to start with). My race Ninja when I bought it had been jetted with size 98 main jets (stock is 105), and it had lots of power. The reason I suggest buying main jets without the jet kit is that a set of main jets for a Ninja is about $8. A jet kit for a Ninja is about $70.

The nice thing about jet kits is they come with instructions and they are based on a lot of actual dyno research, so they get you in the ball park right away. That's what you're really paying for.

I did some ass-dyno jetting on my Ninja last year. I later duplicated the dyno testing (same jets) on a real dyno. The old ass-dyno picked the same jets the real dyno picked.

One thing to watch out for if you buy jets on your own: DynoJet brand jets have their own sizing system that doesn't correspond to Keihin jet sizes.

What components are needed to rejet without a jet kit?

Leon - Mon Jun 23 19:54:45 2003

- I wouldn't advise spending the money on a jet kit. If you change the main jet size, you can buy the jets from Kawasaki for about $5 each.

- If you adjust the needle settings, you can do it with #4 flat washers (4mm washers for the metric world) for a dime per washer.

- You can drill the slide holes with the biggest bit that will fit down from the top (I think that's how Dynojet decided what size bit to include in their kit).

- And you can remove the plugs from the idle mixture screws with another small drill bit and a wood screw.

- Just put two or three washers under the needles for pods and another one or two for an exhaust pipe and you're 90% of the way there. It's that last 10% that can be difficult.

How do I adjust the idle mixture?

Jeb - Thu Apr 18 23:43:33 2002

Pull the carbs, drill a small hole in each of the mixture screw caps (carefully). Screw a machine screw into each cap, and use pliers to pull the screw and cap out together. Once the screws are exposed, turn them in (gently; not too tight!), then back out 2 turns each.

Put the carbs back on the bike; go for a ride. Come home on with a warm engine, park and leave it idling. Put on a jersey glove or something to protect your hand from the heat. Use a small screwdriver to turn in each screw until the cylinder for the screw being adjusted starts to miss, then turn it back out 1/4 to 1/2 turn.

Same deal for a K&N'd bike, only the screws will be opened a little more. 1.5 to 2 turns out should be plenty for a stock machine; mine are set at 2 turns out now, and I have the full Muzzy/K&N package). The factory setting is a little over 2 turns out, I think.

How does weather affect jetting?

Duke - Sun Jul 14 18:52:15 2002

Here's the skinny on weather:

- Cold air is more dense (less activity w/ the molecules, thus they're closer together)
- Hot air is less dense (More activity between molecules)
- Moist air is lese dense (more H2O molecules between the O2 molecules)
- Dry air is more dense (more O2 per volume of air)

So... dry cool air is more dense, moist warm air is less dense.

Your carburettors mix a certain amount of fuel with a certain volume of air. There is an ideal ratio of fuel to air called the stoichiometric ratio, which is about 14.7:1. At this ratio, theoretically, all of the fuel will be burned using all of the oxygen in the air. In reality (your bike/my bike), the fuel to air ratio varies from 14.7:1 quite a bit. More air = less gas (lean); more gas = less air (rich).

Your job when jetting your bike is to get as close to this ideal 14.7:1 ratio as possible, (which also produces the most power). The problem is denser air (Cold/Dry) produces a leaner condition and thinner air (hot/wet) produces a richer condition. The other problem is that the weather is constantly changing. So in the end, yes you can constantly chase the perfect mixture (thus the advantage of fuel injection which is constantly adjusting for weather) or you compromise and set up the jetting to work well at about 70 degrees... a happy medium.

A lean condition can hurt your engine over time, but you would certainly know it's lean (spitting, sputtering, etc.). I ran 92 mains in my carbs for a long time and had no problems until I pulled my airbox top (allowing more air to flow - thus creating a leaner condition) and I could immediately tell it was too lean. 105's (stock) are in it now and it runs very well. Why did I pull my airbox lid? Why do people use K&N pods? More air in = more O2 in = more gas in = more power.

I want to upgrade my intake.

Do K&N pods provide a significant improvement in horsepower?

Jeb - Sun May 14 13:41:32 2000

K&N filter pods (part #RC-1822) pull in more air than the stock airbox does. Combined with the proper jetting, this can help to increase peak horsepower by up to 10%. However, you also lose a bit of low-end drivability in the process, because the pressured air of the box is gone, and the added resonance it provides as well.

Still, I would recommend this upgrade if you do a lot of work on your bike (makes removing/replacing the carbs much easier), and can afford to spend the $$. With newer, more advanced bikes, taking out the airbox would not be a good idea, but with the relatively low-tech engine of the Kawi 250, you can tune it to achieve an improvement over the stock setup.

Also, note that the stock intake is more restrictive than the stock exhaust. This means, if you have to choose one or the other, the intake mod is more effective, not to mention less expensive (about $50, instead of $300 for a full-system exhaust).

Taking out the old airbox will be a pain in the ass; putting in the pods will take 3 minutes. The K&N's do amplify intake noises (or, I should say, do not muffle them like the airbox does). You'll also get a little more underseat storage and a slight drop in weight as a bonus.

How do I get the airbox out to install these?

Jeb - Wed Oct 25 05:13:33 2000

If you're going to take the airbox out altogether, it should be for good. You need to remove the 10 or so screws that hold the two halves of the box together. Remove the battery, and the two bolts that hold the back of the box to the frame under the battery, then start to work on those screws. When you've got them all out, you should be able to break the two halves apart (if you have trouble doing this, then you missed a screw; trust me, they're hidden all over the perimeter of the box). Remove the plastics and filter element at this time from inside the box, then work the left half of the box out of the frame, then the right.

It is possible to do this carefully, and not damage the box. The problem is the box is bigger than the frame space it occupies, and is tricky to work out. This is a frustrating job, and can require a lot of grunt work. You can make the job a little easier by removing the two bolts at the inside front of the rear fender, and pulling the fender back a bit.

But with no airbox in the way, and the modular filter pods in their place, removing the carbs is as easy as loosening a few intake screws, and popping them out.

I've got the filters in, now what do I do with the battery?

Jeb - Thu Jul 20 21:10:19 2000

Drill two holes through the bottom of the rubber 'sheath' that the battery sits in, then use the two bolts that held the rear part of the airbox to the bike to bolt it down; it may not seem like a very sturdy method, but I've had mine like this for months with no trouble. Some thin washers can be used to improve stability.

If you have a '94 or earlier model, then you don't have the sealed-type battery and rubber sheath, you have the larger, maintenance-type battery that sits directly in the box. In this case, you can cut the rear part of the airbox off with a dremel; works just as well, just not quite as clean a job. Or, you might be able to more easily build a small cage for it out of aluminum brackets or something.

What do I do with the crankcase vent hose?

Jeb - Sun Sep 9 22:18:20 2001

The crankcase breather tube is an s-shaped tube that sticks up from the crankcase below the carbs. It is normally routed to the airbox, so case gasses can be taken back in through the engine intake, and blowby oil reabsorbed to the sump when the mist accumulates and drips back down into the case.

With the airbox gone, this vent is unchecked, and the crankcase has no protection from the elements, except for the s-shaped hose. Also, if the hose is not otherwise dealt with, then the oil mist from the engine will cover the top of the case and the bottom of the carbs. The hose could be plugged, but then the case would be pressurized; not a good idea.

There are two practical filter options: buy a permanent, cleanable filter (looks like a small K&N pod), or get one with a replicable element. I chose to do the latter, since cleaning the crankcase filter needs to be done much more often than cleaning the carb intake filters.

I selected a compact filter with a good-sized surface area, part number B23124 (Purolator), or BF305 (Deutsch). This filter has a terminal connector of 1/2" O.D., just like the breather tube; I used a 1" length of 1/2" I.D. hose to couple the parts. The filter has a low profile and fits beneath the carbs. The part is $2.50 USD, and the element can be replaced as well for a little less; I replace mine with every oil change.

Alternatively, you can install a 14" or so hose, and point it at the drivechain; then your blowby will lube your chain!

How do I make use of the extra space under the seat?

Jeb - Sat Sep 29 15:52:18 2001

I've spent the last few weeks looking for a storage box of the right size that could be put under the seat between the battery and K&N's, to use the space made available from removing the airbox.

I finally found the right item at a K-Mart, after checking a few hardware stores (looking at mailboxes, plastic box planters, small parts bins, etc); it's an ordinary $2 file box for 4" x 6" index cards. The box is just the right size (well, it could be an inch deeper, but it works well enough). I simply removed the flip-top lid, drilled a hole in each top corner, and used some zip ties to suspend it from inside the frame of the bike, just below the bracket at the rear of the gas tank.

A 4" x 4"x 6" box isn't huge, but every bit helps. There's not a lot you can do with the space otherwise, since the drive chain and rear suspension are directly beneath that spot.

I'm thinking about getting new tires.

What tire makes are available that fit the 250?

Avon Super Venom (Gammagirl - Sat Aug 26 14:30:11 2000**)**: The Avon Super Venom is still available in 130/90 and 100/90 for the 16" tire. These tires stick to the road and are also relatively inexpensive (and in my opinion outperform and outlast Metzlers and K591's); they are very popular with European racers! My ex-husband races them at Mosport in Ontario on his TZ250. I had them on my RG500 Gamma and the bike held the road like a fly on flypaper, while lasting over 20,000 KM with lots of rubber left when I sold the bike! And ask anyone at the flying saucer in Niagara Falls -- I rode my gamma hard.

Cheng Shin (Jeb - Wed Aug 16 06:02:30 2000**)**: Cheng Shin tires are what you might call a 'value' line of tires. The thing is, they're not that much cheaper than a good set of Dunlops (not cheap enough to justify their lack of grip, anyway).

I bought a new (used) set of wheels, and one of them came with a Cheng Shin tire still on it. I thought, 'Heck, it still has a few miles left on it,' and so decided to save the $15 cost of a tire swap and wear it down. I soon after decided that the tire is only worth about a K630 in the performance department, if that. Don't skimp and get one of these; spend another $10, and get a good tire.

Bridgestone BT45 (Jeff - Sat Feb 19 00:59:16 2000**)**: The BT45s were new last year and they fit the Ninja (100/90 front, 130/90 rear). Bridgestone markets the tires as geared towards mileage rather than performance. I put a set on and the feedback is greatly improved as compared to the stock tires. I felt much more comfortable leaning the bike over (as far as I dared to) the on BT45s. I took the bike to a track day and I didn't have any problems but the dual compound rear showed more wear than I would have thought but I'm no expert.
The mechanic who put on my tires (no, I bought them from another shop) thought they were a good choice for aggressive riding. He said that he would have sold them to me over the Dunlop K591s.

Dunlop K630 (Duke - Thu Sep 21 17:16:27 2000**):** Many folks have described how terrible the stock K630s are, and admonish everyone else to throw them away and buy 'better' tires. I for one haven't found the reason the 630s are so bad, with exception of wet weather where they do slide around a bit. But for dry riding they are just fine - fully capable of peg-scraping, full-lean turns. Unless of course you are pushing at racing levels, which very few of us are capable of doing (at least I'm not) you will not feel them slide.
As far as the predictability of a slide/drift, I've never really experienced much of a slide short of having low tire pressure at the Gap last weekend. And even that front-end 'push' was not severe, just enough to make me think 'was I really sliding?'. Point is, the 630s are fine for all but the best of us. They are also about 35% less expensive than other Dunlop tires.

Dunlop K591 (Paul 311 - Tue Feb 8 23:03:13 2000**):** On the race track there is no other choice in 16" tires but Dunlop K591's

Front 100/90-16
Rear 120/80-16 (front tire) or 130/90-16

There is no other combination of tires presently manufactured for 16" wheels which will work as well as these two tires. They're cheap too.
I don't have any sort of tire sponsorship, so I'm not trying to sell anyone Dunlops.
Every single Ninja 250 that races with the AFM runs Dunlop K591's (except for a couple people I've seen running stock tires on their very first race weekend)

Dunlop GT501 (Paul 311 - Thu Sep 28 20:31:09 2000**):** The K591's are now out of major production, though will still be available for a while... the GT501's are their replacement. Here's a quick second hand review:

> *Fast guy Robert Kennedy tested out the new Dunlop GT501's at the track last weekend. He thought they felt as good or better than 591's, and they also seemed to wear pretty well. The smallest front is a 110/90-16 which required fender modification (moved it up) to keep it from dragging. The choices for the rear are the same as before 130/90-16 or 120/80-16.*

He did comment that the larger front tire made the bike steer more slowly. I think the increased tire size and the pinched profile probably offset each other so the contact patch is about the same (Robert did his best ever lap times on these tires Sunday). He had to lower the front end a little to make the bike turn in more quickly, in order to compensate for the fatter tire.
Robert used these tires to just barely beat me, my trick wheels and my trick Dunlop D207GP and GP* tires. Skill wins over technology again.

Kenda (Jeb - Wed Sept 5 10:23:22 2003**):** The Kenda K657 Challenger and K671 Cruiser tires are both decent quality tires with solid grip, good water dispersion and neutral profile. They are inexpensive (a little over $100 a pair), and come in 100/90 and 130/90 sizes for front and rear, respectively.
These tires are heavy, 6-ply units that are best used for touring, in my opinion. They don't match the quality of Metzeler touring tires, but are cost effective with good tread wear, and can handle heavy loads.

Pirelli MT75 (Jeb - Fri Sept 5 10:49:59 2003**):** If you're looking for an inexpensive, sporty replacement for the stock tires, this is it, IMHO. The Pirelli MT75's are cheap (about $100/pair), offer good treadwear (about the same as stock), excellent grip (not quite as good as GT501's, but still very good), and light weight (less unsprung weight means better suspension response).

These tires fit the EX250 rims absolutely spot on (100/80 and 120/80 are what the wheels were designed for), and steering response is awesome with them. High speed straight-line stability will not be quite as good as with a larger 100/90 & 130/90 setup, but turn-in rate and agility will be better.

Pirelli Strada MT68/69 (Ian - Wed May 14 09:39:20 2003**):** Last summer, I had surpassed 12k miles on the stock Dunlop K630's, and had completely killed the rear treadwise, but the front could have kept going, if I could have stomached it. Unfortunately, working in McD's for 4 years as a manager back in the mid 90's didn't stiffen up my stomach that much.
So I did some searching for decent tires at a decent price. The price needed to be the more important factor, with quality being close behind. I wanted decent tires that would offer good wear, stick, and especially feedback after dealing with the stock rim protectors for so long. I did some searching around, and liked the sound of the Pirelli Strada MT-68/69 series tire, and ordered a set. Unfortunately the place I ordered from couldn't get the front tire anymore, so I just went with the rear, and had them slap on a Bridgestone BT45 front, for $1 more than the Pirelli would have cost. Front tire size is a 100/90-16, and the rear is a 120/90-16.
After a little difficulty mounting the tires and getting the beads to seat on the rear tire, I was off on new rubber. First thing I noticed right away after scrubbing the tires in is that the front end of the bike no longer feels like its just there. You can actually get a feeling for what's going on between the front suspension and the ground. Turns at speed became enjoyable, instead of feeling like work. I didn't have to wonder if I'm going to fast for the curve anymore because the tires are actually telling me what's going on down there.
I put lots of miles on them in various different conditions. Rain, slow speed commuting, fast speed commuting, twisty mountain roads, and everything in between. They seem to be pretty decent in all conditions, save snow. I decided to "retire" the Strada after 10k miles of daily use after a mishap with a nail and a plug that failed. It still sits mounted on a rim, fully inflated in the event of an emergency, tons of tread still on it. The BT45 is still going strong at 12k miles, but I'll probably replace before the winter sets in.

Pirelli Sport Demon (Brent - Wed Apr 16 16:28:04 2003**):** Pirelli has a new tire option for the 250 in a 100/90-16 front and 130/90-16 rear. It's the Sport Demon tire and seems to be marketed as a sporty touring tire. It seems wedged between the MT66 (which they list as a cruiser) and the MT75 (which they list as sport). The MT75 treated me well so I see no reason to why the Sport Demon would not perform well.
Three of the online tire dealers I checked list this tire: www.mawonline.com, www.discountmotorcycletire.com, and www.denniskirk.com; they average around $160/pair.

Metzeler (Daryl - Mon Jan 3 15:55:24 2000**):** I've gone through two rear and one front Metzeler tires and I like them very well. I'm ordering a set here in a few weeks. Front is a Lazer 100/90-16, Rear ME-55 130/90-16. I get 20,000 miles from the front and 10,000 miles from the rear. Best rain tires I've ever used, with good ride and very good feedback and grip. It raises the bike a little with no tire clearance problems.

Michelin (Jeb - Sun Mar 6 01:35:27 2000**):** Michelin no longer makes tires that will fit the EX250 rims.

How do I determine tire size?

Duke - Sat Apr 22 09:48:54 2000

130/80-16 means that the tire is 130mm wide and is 80% as tall as it is wide (aspect ratio) and fits a 16" rim.

A 130/90-16 is the same width, but is slightly taller, and has a slightly larger diameter. Many folks have switched to the 130/90-16 rear and 100/90-16 front due to better tire selection in those sizes. No one has reported problems using the larger tires. It's unadvisable to change only one of your tires, as it's always recommended they be changed in pairs (however I've seen a couple folks who have mixed tires w/ little problem).

The largest rear tire I've seen is Leon's 140/90-16. However, it rubbed against his swingarm at speed (the tire 'grows' slightly when spinning) and wore a section off the tire; I believe he had to do a little bending of the webbing on his swingarm to make it work. To be honest, when riding around with him, it doesn't really look any different than the stock tire (if looks are what you're after). The racers (like Paul 311) are actually using a 120/80-16 rear tire, as it said to perform better than the 130 size.

To be honest the K630 tires (stock/OEM) are fine for all but the most aggressive riders and the racers. I've ridden mine fairly hard with no problems at all. The only place they've wandered was riding Deal's Gap in the rain, but that's to be expected.

Do taller/wider tires work better than the stock sizes?

Jeb - Wed May 2 23:03:47 2001

The stock tire sizes are pretty good. It's getting harder to find 100/80 and 130/80 tires, though, so it's good to know what the other options are.

Taller tires alter your steering geometry; this can be good or bad depending on which tire you change. A taller rear tire will steepen (decrease) the geometry, making the bike turn faster; a taller front will increase the steering angle. Increasing both front and rear tire heights can be good, because you get an even steering angle (close to stock), and get added road clearance and trail length (provides stability). A taller rear tire will also increase the final drive gearing a bit (lowering cruising revs), while a taller front will increase speedometer accuracy.

Wider tires generally slow the steering of the bike down. They also alter the contact patch, as the tire is 'pinched' in the rim. Wider tires can provide better straight (non-leaning) traction. Wider tires are necessary when carrying heavy loads or if the bike makes a lot of power; the EX250 typically does neither of these things, so wider tires are usually of no benefit.

Taller and wider tires both weigh more, so you have additional unsprung weight to deal with (slows down suspension action). Considering all of these points, I use a 90 profile front tire on my bike, with a 120/80 tire on the back, and suspension setup that offsets these changes (lower front suspension, higher rear). This provides the best performance and handling, in my opinion.

Do 120-width tires really work better on the rear?

Jeb - Sat Nov 3 11:39:09 2001

The Ninja 250's rear rim was designed for a 120 width tire; the EX250-E model came stock with a (now discontinued) Dunlop K530 120/80 rear tire. The EX250-F (1988+) model, however, has the same size rim, but comes stock with a Dunlop K630 130/80 tire mounted. Kawasaki actually put a wider tire on their own rim than is ideal for the wheel width; the 130 is slightly pinched in the rim, while the 120 is right at home.

The 120/80 tire is better than a 130/90 (usual rear stock replacement) in many ways. First off, the 120/80 tire typically weighs four pounds less than a 130/90 of the same model. This means less dead weight on the chassis, less rotating mass for the engine to turn, less unsprung weight for the suspension to carry. The lower profile is also more rigid. The tire width is the ideal size for the 2.5 inch-wide rear rim, so the contact patch may be better depending on the model, while a quicker steering response is effected. The bead-to-tread height of a 120/80 tire and a 100/90 (usual front stock replacement) is almost identical, which makes it a great rear/front size combo.

The 120/80 tire also just looks better on the rim than a huge 130/90, in my opinion. Why some people think a bigger rear tire makes the bike look bigger I don't understand; a bigger tire should technically make the bike itself appear smaller by comparison.

Downsides to using the 120/80 include a loss in final gearing (3% less than a 130/80, 6% less than a 130/90), 30% lower tread depth (assuming a front tire mounted on the rear; there are only a few manufacturers of 120-width tires made specifically for the rear wheel anymore), and a loss in ride height (about 1/2"). A 120-width tire is a good choice for around-town riding, where the quicker performance can make a difference. For sport-touring, a 130-width tire will improve high-speed, straight-line stability.

How do I raise the front fender to fit a 110-width tire?

Jim Race - Mon Feb 25 17:58:22 2002

1. Remove the front wheel and fender.
2. Using a drill bit slightly larger than the hole in the four pop rivets, drill them out from the outside of the fender.
3. Remove (and discard) the internal steel bracket.
4. Get a drill bit the same size as the bolts used to mount the fender to the fork legs.
5. Carefully measure and drill new holes approximately 13/16" of an inch down from the original holes. The measurement should be taken from the center of the old hole to the center of the proposed new hole. [note: The fender does not mount parallel to the ground. The center of the new hole should be equidistant from the vertical mould mark of the fork recess. Mine measures appx 1 1/8"]
6. The front holes are difficult to drill without a right angle chuck. I remounted mine with only the two rear bolts, but I do not recommend this for street riders. I check my fender for tightness a lot.
7. I would suggest you either invest in a right angle drill chuck or use a dremel tool. Do it right, or don't do it at all.
8. When remounting the fender, place a suitable flat washer between the outside of the fender and the mounting point. This will help prevent gouging the plastic.
9. Remount the fender and tire and verify clearance. Do not re-use the steel bracket. Make sure you check often that the mounting bolts are tight.

Here is a picture of the completed project:



I'd like to know more about clipons.

What are clipons?

Thundercat - Mon Nov 29 16:28:34 1999

Clip-ons are kind of like two-piece handlebars that "clip" onto the upper portions of each fork leg. Though the 250R has two-piece bars, they are not true clip-ons since they attach to the top triple clamp and are fairly high. To see the difference, look at a stock bike then check out Damo's pictures- 2nd and 6th from the top. They usually result in a more forward and lower riding position, great for moving weight forward and getting good front end "feel" while racing. Usually the more radical sportbikes will have them mounted to the fork tubes directly below the top triple clamp. The drawback to using them is that they can be uncomfortable over longer periods of time.

How do these improve handling?

Jeb - Wed Jul 19 11:43:18 2000

Steering was positively affected in two ways:

First, the riding position is more conducive to countersteering, and gives a sense of added control. The grips and controls are lower and more forward, putting more weight over the front wheel.

Second, lowering the chassis to enable installation lowers the center of gravity slightly, and also reduces the rake, trail, and wheelbase a bit. The stock ex250 has a higher rake angle than many sportbikes, and so it is easier to ride, though not as quick in turning as it could be; it is quick to steer because it is so light. So by reducing the rake and trail by raising the fork tubes a few centimeters, you can find a spot in the steering geometry which is both quicker steering and still quite stable.

What models will fit the EX250?

Dweedlebug - Sat Sep 1 01:04:32 2001

As far as I know, there are five choices:

1/2) the Woodcraft lowered risers or clip-ons
www.woodcraft-cfm.com

3) the Vortex clip-ons
www.vortexracing.com

4) the Pro-Flo clip-ons
www.pro-flo.com

5) the Pro-Tek clip-ons
www.protekk.com

Or get a machinist to custom build a pair; basically just a 36mm clamp, with a 7/8" bar bolted/welded to it.

How do I put them on the bike?

Wolcott - Sun Feb 27 06:22:37 2000

Step one (Most critical!!)- cover the tank and front fender with thick soft cloth so they won't get damaged or scratched.

Slip a thin tool or screwdriver between the bar and the grip and loosen the glue, then work them off the bar. If they get damaged coming off, buy a set of aftermarket grips. Some are really comfortable and not expensive. Your local shop will have the glue to re-do them.

The lever mounts, etc are held in place by fasters(I don't remember if they're phillips or allens, but will be metric.). Use the appropriate correct tool to loosen them or you'll strip the fasteners. Reinstall them on your clip-ons in reverse order.

Be sure the clip-on position is such that they don't hit the tank or faring.

The main thing to worry about is routing of the cables and brake lines. Be sure they don't bind or rub on anything. After it's back together run the engine and make sure the throttle doesn't change when you turn the bars to full lock in both directions. If it does adjust the throttle cable route until it doesn't.

Not difficult, but use the right tools.

I want to change my gearing.

How do I change my gearing?

Gazoo - Sun Mar 5 19:26:22 2000

For about $50 you can get some new sprockets for the Ninja 250 that will lower the RPM's at highway speeds (better mileage). On a stock Ninja the front sprocket has 14-teeth and the rear sprocket has 45-teeth.

> Replace the front with a 15-tooth sprocket:
> JT Sprocket, Part# 24-8637 or PBI Sprocket, Part# 456-15 (Special order from a dealer)
>
> and/or
>
> Replace the rear with a 42-tooth sprocket:
> Sunstar, (Denniskirk.com Part# 80-017-42S)

Does installing a new front sprocket make a significant difference?

Jeb - Thu Mar 9 14:24:16 2000

Changing the countershaft gear from a 14- to 15-tooth sprocket is the most common gearing mod, and it does make quite a difference. At first I thought the bike seemed sluggish after changing mine; the torqueyness I was used to wasn't really there. As I rode around town for awhile, it seemed the bike just wasn't revving as quickly as it used to- this of course was to be expected since the countershaft was working harder. But I soon realized that the change in acceleration was marginal; though the bike was taking longer to rev through the gears, each gear was putting out 7% more travel per revolution.

So the twist on throttle has to be a little greater now to get a satisfying 0-60 run, but the high-speed cruising has been improved noticeably. Twice today I thought I was already in 6th, when I was still in 5th.

It wasn't too difficult a task: loosen the rear wheel, remove the countershaft housing, remove the 14-tooth sprocket, put the new sprocket in, torque the retainer bolts, replace housing, set correct tension to chain and torque rear wheel, and clean/wax the chain. The sprocket switch took about an hour overall; just followed the process as outlined in the service manual. Popping the old sprocket off was a snap; putting the new one on took a bit because the countershaft teeth are cut to very close tolerances. Cost= $15.

Is there any advantage to installing a smaller front sprocket?

Paul 311 - Tue Dec 11 20:49:30 2001

I tried a 13-tooth front on the track for a little while. It makes it harder to keep lube on the chain because the chain is turning a tighter corner. Also, the chain eats into the keeper, even if you file it waaaay back.

The only advantage is a) lower first gear b) puts ratios closer together. Aside from that, it's all the same because you end up in 3rd when you would normally be in 2nd... etc.

What drive ratios are attainable?

Paul 311 - Wed Dec 15 07:20:34 1999

I have a few sets of gearing for my race Ninja. Using 14/47 works well at the three tracks I race. This weekend I'm heading to Willow Springs raceway to do some off-season racing/testing. I'll probably use the 15 tooth front sprocket, since I hear you spend a lot of time WFO at Willow. Changing the front sprockets is easy and doesn't take a whole lot of chain adjustment. The rear sprocket, on the other hand may require links to be added or removed from your chain.

Here are some gear configurations and their respective final drive ratios:

```
15/42 = .35714          14/42 = .33333          13/42 = .30952
15/45 = .33333          14/45 = .31111          13/45 = .28889
15/46 = .32608          14/46 = .30435          13/46 = .28261
15/47 = .31915          14/47 = .29787****      13/47 = .27660
```

I just want more power.

Leon - Thu Apr 27 13:31:01 2000

How much HP do you want?

- 1-5 : Exhaust pipe, intake and jet kit
- 3-8 : Porting, compression, cams
- 20+ : trade the Ninja 250 for a bigger bike.

The most economical of these is the trade. You can get a good used 600 or a superbike in fair condition for the price of a new 250.

However, if what you really want is to be able to go faster, then learn to ride better.

Functional

Ergonomics

I want to adjust the ride height of my bike.

How do I change the ride height?

Adjustment Tech Racing Kit

Ninja Grrrl - Mon Nov 1 11:14:32 1999

Thundercat installed adjustable links to my bike's swingarm. The suspension links are from Adjustment Tech Racing and cost about $229.00 US funds. First, we made sure the lengths of the links are set equally. With the bike on the centerstand, and tension off the rear wheel, we removed the stock "dogbones," and installed the new links, torqued everything to spec. I then sat on the bike while he adjusted the links incrementally until I found the right height - about 1 1/8" lower. We found that the kickstand had to be shortened to get the bike to rest at a safe lean. A "spirited" shakedown ride (215 miles, Thundercat piloting) revealed the bike to be stable and well mannered.

> Adjustment Tech Racing
> RR#3
> Omemee, Ontario
> K0L 2W0 Canada
> (705) 799-5139
>
> http://www3.sympatico.ca/a.jones/RHA.HTM

Changing fork position

Skip - Sat Jul 21 13:24:11 2001

The front can be lowered by sliding up the fork tubes in the triple clamp. You can leave the handlebars on, and loosen the four (two upper, two lower) fork clamp bolts to drop the front end several millimeters; the forks will top out at the bottom of the handlebars, and then the clamps can be retightened (upper clamp bolts are torqued to 14.5 ft/lbs, lower bolts to 22 ft/lbs).

If you want the front even lower, you can take off the bars and then loosen the 4 clamp bolts, and slide the front end down (put a car jack under the front of the engine so the bike doesn't slide all the way down to the fender); don't go over 1". Then make some spacers to be placed between the triple clamp and the handlebars.

I went to a machine shop and bought a small 1/2" thick piece of aluminum, and then cut and shaped it to fit under the bars (about 2 x 3"), also cutting a hole in the center the same size as the tubes, and holes for the bar bolts. Go slow, measure and mark everything. I ground all of the edges smooth and painted it black; it looks factory original. Another benefit is it raises the bars up a bit so there is less back, arm, and wrist strain. It's a lot of work, but it really made a comfort difference for me.

Are there any disadvantages to lowering the bike?

Wolcott - Mon Nov 1 11:14:32 1999

- You have to shorten the side stand so the bike won't fall over to the right side.
- Also it's more difficult to use the center stand. I roll the rear wheel up on a 2 x 4 and then put it on the center stand. I may find that I should remove the centerstand if it turns out to hit when leaned over.

- It does slow your steering down slightly if you lower only the rear, which effectively pushes out the front forks. The bike is so light, however, that you're not likely to notice it unless you're very aggressive.
- The major concern is that you lose cornering clearance!! When I dropped the rear only 1 1/4 inch I could still lean over quite far without touching anything down. When I went down 1 7/8 inches, however, the side stand hit on the left and the pipe hit on the right. The center stand does not hit first. You lose a lot of the aggressive cornering ability that this little Ninja is noted for. However, for starting and conservative riders, it should have little effect.
- Regarding the cornering clearance. My experience was with an EX500 shock, so stock shock cornering clearance will be much worse. Strongly recommend installing a (used?) ex500 shock with this modification!!! Note that Ninjagrrl is doing fine with stock suspension, but she only lowered it 1 1/8 inches.

Why is important to raise/lower each end of the bike together?

Paul 311 - Wed Feb 9 23:11:53 2000

On my race bike I have found a set up that works really well. Whenever I make a change which has a side effect, changes the ride height, I always try to make a change to counteract it and get things back where they were.

There are two things that change when you change the height of one end of the bike or the other:
a) fork angle
b) weight distribution

Making the fork angle steeper (closer to vertical) makes the bike steer more quickly. This can make the bike feel twitchy and unstable if you take it too far.

Getting more weight on the front end is a good thing. The Ninja 250 is pretty light on the front end and will tend to push the front end with the stock ride height. Raising the rear a little or dropping the front a little helps cure this.

Unfortunately ride height is a relative thing, so set up is difficult to translate from bike to bike, and will be affected by things such as:
a) sag (which can be adjusted by changing preload)
b) position of the forks in the triple clamps
c) tire profile
d) longer or shorter rear shock

Preload is what you change to set the sag. Checking sag is one way to determine if you are using the middle of the available travel on your shock/ forks. The middle range in the travel tends to give the most even damping from what I hear, and it will also help keep you from topping out or bottoming out if you have the sag set correctly.

I'd like to improve my bike for touring.

Leon - Mon Jan 22 07:58:52 2001

My longest days on the 250 exceed 1500 miles. I've exceeded 1000 miles in 24 hours about a dozen times (www.saddlesore.com/ssbbfin.htm search for 'Ninja 250'). My Ninja 250 is at 97K miles; it will be within 10 miles of 100K at the Kawasaki Tent in Daytona on Saturday of Bike Week.

I've modified my ninja especially for long distance touring:
Windscreen: I had good luck this weekend using Lexan and using the mirror mounts and bottom row of the stock windscreen bolts.
Handlebars: For a touring bike, you should sit on the seat and without leaning forward, reach your arms out to where the handlebars should be. Handlebars from an EX500 can be trimmed and fit on the 250, that will make them a bit taller, there are also some kits to adapt standard handlebars. Storz Performance Products makes one, the bolts spacing for the Concours is the same as the Ninja 250, but I don't know if the kit will work on the 250.
Rear shock: The EX500 shock is a good economical choice.

On longer rides, make sure you stretch regularly. Don't grip the bars any tighter than needed to maintain control. If you're too far forward, and have some of your weight on the bars, that also causes fatigue. A larger windscreen removes the fatigue caused by the wind beating you around, but it also removes the lifting forces that takes some of the weight off your hands.

Email if you have additional questions. I'm currently building a ZX6 touring bike for a trip to Alaska this summer.

I'd like to get some new grips.

Jeb - Thu Aug 31 15:24:41 2000

Go to any bike shop and you can find a good pair of replacement grips for $6-12. I use a set of Pro Grip brand 'waffle' grips; these have a good texture and nice rubber/gel composite material which is much more comfy than the stock items. Duke has some Oury brand grips that he likes a lot.

The hardest part of installation is getting those damn bars ends and their phillips-head screws out; you may need an impact driver, heat them up, or drill them out. Once they're out, replace the screws with allen-head bolts, which are much easier to remove. With the bar end weights off, take a razor and cut off the old grips from the bar up (that is, do not cut down into the grip; work the edge of the razor between the bar under the grip, and cut in an upward motion, to avoid scratching the bars).

Then take your new grips, and apply a little soapy water to the inside of the grip and to the bar itself (you can also use hairspray, according to Leon). The soapy water or hair spray will make it easy to slide the new grips on, then after a few hours will dry to leave a good seal that will keep those grips stuck on there.

> Note- the left and right grips do not have the same inner diameter, so don't frustrate yourself trying to get the left-hand grip onto the throttle; it won't fit.

I'd like to get some new pegs.

Gabe846 - Tue Sep 5 01:15:29 2000

I've got Lockhart-Phillips Aluminum 'Racing' Footpegs on my '87; they didn't fit right until I bent the hell out of my footpeg brackets, but they fit perfectly on the '88-2000.

They gave me a noticeable amount of extra ground clearance, although I don't grip them as well as the stock ones.

I want to mount up bigger wheels.

Paul #311 - Thu Sep 28 20:26:46 2000

I mounted up a set of EX500 wheels on my race bike. I did it so I could use a 110 front tire up front and another 120 front tire in the back. EX500 wheels are 3" wide in the front and 3.5" wide in the rear. These are exactly the right widths for a 110 and a 120. Worked great. It took nearly 100 hours of measurements and calculations to figure out what to tell the machinist to do to the wheels and spacers to make it all fit (wheels centered etc.) Cost was about $800 before buying the tires

EX500 wheels won't bolt right up. You can use your stock axles, but that's about it. The spacers are wrong, the sprocket is in the wrong location. Both rotors are in the wrong location. The rotors are a different size, so the callipers are in the wrong location. I have drawings which show what needs to be machined, but the end cost is still exactly what I paid. Yes it's easier to do a second set, but the only part you'd get to skip are the measurements and calculations and I didn't pay anything for that part since I did it myself. I paid $250 for a set of wheels including rotors (which I didn't need) and hardware: spacers, and cush drive (which I had machined down).

Anyone interested in going to 17" wheels is probably better off getting a set of 16" wheels welded up by Kosman (they are the ones that did the machining work on the EX500 wheels too).

Unless you're going to race it's not worth it. Even if you are going to race, it's still probably not worth it. :-)

Security

Disc lock

VFR Pilot - Fri Tue Feb 22 01:03:46 2000

Disc locks are good while temporarily parked in plain sight during the day, but they can't prevent a determined pair of thugs from picking the bike up and tossing it in the back of a truck. A really serious chain run through the bike's frame and then locked around an immovable object is your best bet for overnight security if you can't park out of sight in a locked garage. Alarms can help too (Gorilla makes a good one) if the bike's parked where somebody can hear it go off.

Bear in mind that nothing can prevent a professional thief from swiping your bike if he really wants to go to the trouble; so think in terms of making it as hard on him as you can, and keep your fingers crossed. The good news is that bike thieves prefer Hardly Ablesons if they can get 'em. Ninja 250s are way down on the list of most stolen bikes.

Gorilla alarm

Jeb - Tue Feb 22 09:25:56 2000

I have one of these and it works pretty well. It takes less than 15 minutes to install and requires no mounting equipment (just hook it up to the battery and nestle it behind the coolant reservoir). It has shock, tilt and current sensing, and costs about $80. It doesn't have a microwave sensor, but this is usually only found on $200+ models.

No, it won't keep people from loading your bike into the back of a truck, but it would deter most common people from messing with your bike- for example, one night I came out of a bar to find two guys taking pictures of their drunk girlfriends sitting on my bike. I was cool about it and joked that it was $5 a seating, but I was really pissed off. Anyway, if I'd had the alarm then I doubt they would have done so.

Luggage

Tank bag

Esoteric - Fri Jun 23 21:00:35 2000

I have a Roadmaster tank bag. It has a magnet in the middle, and four 'arms' with magnets on them; it also has a strap that clips around the front. It stays very solid on the bike, and also has a clear vinyl front to place maps and such behind (convenient for DVD rentals, I've found). But you'll want to keep your interac and credit cards away because those strong magnets would kill them almost instantly.

Tail bag

Bill K - Wed Jun 27 16:03:02 2001

The cheapest option is to just use a duffel bag and a bungee net, but...

...since I had money burning a hole in my pocket, I got an Eclipse Rumble Pack tail bag. It's 12x11x7" high (expandable to 12") and fits nicely on the rear portion of the 250 seat. It has an adjustable bungee cord attach system and the four hooks fit perfectly on the 250 bike hooks. Costs about $65.

Eclipse makes another nice one called The Fast Pack, and Tour Master, Ocelot and Lockhart make some good ones too.

Saddle bags

Motorbike Mary - Wed Jun 27 17:37:27 2001

I am currently using Chase Harper Stealth Bags on my 250 and have been relatively happy with them. Here's the scoop:

Pros:

- larger capacity than I expected. I can easily carry a liter bottle and a bag of chips in each side. Or a six-pack, minus the cardboard holder (micro-brew for after the ride)
- easy to open from back or front
- made of stiff neoprene material that even held up my parked bike when got knocked over by a backing-up. No damage except a scuff on the handlebar ends and a dirt mark on the bag
- nice, sturdy clips and straps to hitch to the bike
- sleek shape and zoom-y looking position on bike

Cons:

- pricey - mine were $110 from the Aerostich RiderWearhouse.
- if you are too exuberant with the zippers, all your stuff might fall out. The bags can open really wide (which is a pro, really).
- you shouldn't carry really heavy stuff in them, according to the manual.
- it is hard to figure out where to hook the straps. this could be a pro, since it gives you some different options depending on your bike set-up
- if you don't hook them onto your bike evenly, they will look a little goofy and lop-sided
- depending on how you hook them on, it can be a challenge to get them off quickly; I just leave mine on

Lighting

I want to know more about headlight modulators.

VFR Pilot - Fri Aug 3 01:01:24 2001

I got a Kisan "Pathblazer" headlight modulator installed on my bike just over two weeks ago, and now have circa 600 miles worth of road time to evaluate. (*For those you are feeling confused: A headlight modulator causes your high beams to "modulate" from full bright to about 20% of power at a rate of four times a second. Yes, it's legal.)*

Firstly, Kisan (and the Feds) are right; the modulator will get you noticed! But the point with this thing is to use it when you need to, not just leave it on all the time to annoy oncoming drivers.

There are two situations where a modulator comes in really handy:

a) Passing on two lane roads, and
b) alerting oncoming traffic when you need to.

a) I've found that slower traffic does move over and let me past more frequently than they did pre-Kisan, and I note four separate reactions to the Pathblazer:

1. Little old ladies seem to think that I'm a cop and pull over instantly, anywhere.
2. Drivers who normally don't look in their mirrors are alerted by the flashing, and now see me. Some move, a few don't, but it's a net gain.
3. The same spaced-out whackos who didn't know there was anybody else on the planet still don't notice or care that you're behind them.
4. Guys in "hot" cars seem to take it as a challenge, and try to outrun me (Which gets them out of my way, so that's fine...).

b) Better than the improvement in the passing situation is the new ability to grab the attention of the oncoming doofus who's about to make a left turn, or pull out in front of you from a

side road. While riding in the mountains today I had this happen to me no less than three times: Once a truck started pulling onto the road from the right without really looking, and twice drivers started to turn left into me. In all three cases they saw me and slammed to a halt as soon as I hit the modulator.

This is impressive.

I have heard various opinions on modulators, ranging from "Great" to "Spawn of the Devil", but I now suspect that the >anti< crowd is largely composed of riders who've either never used a modulator or are afraid that using them will just annoy other drivers instead of alerting them, and lead to a more anti-biker attitude on the part of the general public. And I suppose that if we all left our modulators blinking all of the time, that might well be the case. But when used sparingly, as they're intended to be used, I think that a modulator can significantly improve your safety on a bike. When car drivers who've been involved in car/bike accidents are interviewed, they nearly always say that they just didn't see the bike. A modulator can make that happen a lot less frequently.

I want to wire extra brake lights into those empty rear sockets.

ITM - Sat Feb 12 15:46:22 2000

It's very easy to do. It's also a good idea to add extra brake lights as well in the case that your one and only brake light goes out. Makes you more noticeable when stopped with your brakes on.

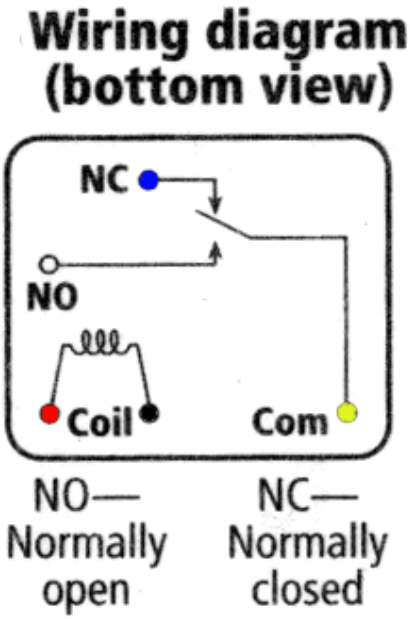
- Go to autozone and pick up a couple of double-contact sockets part #85803 made by conduct tite.
- Run a ground wire to each socket (solder or tape in place).
- Run a power wire from each socket to the brake light circuit and accessory or tail light circuit wires (blue and red).

It's very simple to do. It's cheap, probably under $6, and it makes the back of the bike look bigger, gets rid of that old small moped look.

I want to make the stock front flasher pods into DRL's.

Jeb - Sat Jul 1 12:13:31 2000

Daytime Running Lamps increase the frontal visibility of the bike during the day. At night, they also help by placing an amber light on each side of the headlight, making it obvious that a motorcycle is approaching, and not a car with all but one headlight out.



To make a set of your own, go to Radio Shack and get a few 275-248A 12V relays (blue base); pick up a few feet of light gauge wire while you're there. If you don't have a soldering iron, you can pick up a soldering kit for $5-10 as well.

You'll want to solder four wires of about 3" to each of four of the pins above; these will then be attached to wires on the bike to complete the circuit. Soldering them directly to the bike is more solid, but more difficult; use the short wire method if you haven't soldered before so you can easily access your workspace. Use different color wires to make it easier.

- The stock flasher hot wire coming from the battery side goes to the red pin.
- A constant wire that you'll have to run yourself will be connected to the blue pin (I used the tail light harness, but I'm sure there's an easier one to get to in the front; you need to pick one that is on when the ignition is in 'on' or 'park' positions).

- Connect the yellow terminal to the hot wire coming from the bulb unit.
- Remove a bit of insulation from the stock ground wire and connect it to the black pin; this will ground the relay without having to cut the ground wire for the bulb.
- The white pin is not used.

It works like this: normally current will flow through the blue and yellow terminals to the light from the constant wire, keeping it lit. When you activate the signal switch, the voltage coming from the battery with induce an electromagnetic current in the coil between the red and black pins, causing the relay to remove voltage from the constant wire and apply to the white pin, to which nothing is attached. This will make the bulb up front flash off/on while the bulb in the rear flashes on/off.

Note- the relays will not draw nearly as much current as the stock lamps, which will upset the thermal flasher that makes them blink. You'll to remove the thermal flasher and replace it with an electric flasher from any auto parts store, which is load independent.

I want tail lights with more brightness/contrast.

Jeb - Sun Nov 18 08:34:19 2001

These DOT-approved bulbs are interchangeable:

Trade No	Filament	Volts	Watts	Amps	CP	Life
2057	Low	14.0	6.86	0.49	2	5000
	High	12.8	26.88	2.10	32	1200
1034	Low	14.0	7.14	0.51	2	5000
	High	12.8	23.04	1.80	26	1200
1157	Low	14.0	8.26	0.59	3	5000
	High	12.8	26.88	2.10	32	1200
2397	Low	14.0	6.72	0.48	2	5000
	High	12.8	28.54	2.23	40	400
2357	Low	14.0	8.26	0.59	3	5000
	High	12.8	28.54	2.23	40	400

CP= Candle Power

For example, I use a 2357 in the center light, and 2397's on the outer lights. The 2357 has a standard low filament like the 1157, and a brighter brake lamp; good for a normal running lamp with a bright brake light.

The 2397 has a dimmer running lamp and a brighter brake lamp than the 1157; good for a bright brake light (or in my case, turn signals), but with more contrast due to the dimmer running filament (which also uses less power and produces less heat).

Aesthetic Modifications

I want to remove the decals from my bike.

Larry - Tue Nov 2 07:27:16 1999

The older the bike the harder it is to remove the decals. On new bikes they will peel right off. On older bikes a hair dryer or heat gun will help soften the sticker. Most likely it will leave some glue residue. WD-40 or turpentine will help remove the residue. Follow with a good coat of cleaner/wax.

I want to repaint my bike.

I want to repaint the bodywork.

Scrum - Fri Sep 29 17:33:13 2000

I was in the market for a used bike, but came into some money and was able to buy a new 2000. I hated the black color of the older bikes so I was practicing stripping and repainting on hard plastic buckets. I know, it's not quite the same material as what's found on a bike, but it's close.

From my experiences, stripping the paint is the most difficult part. Using a chemical stripper will eat the plastic, and most "special" products don't do much. The best way to do it is with wet-dry sand paper. You can find this in any automotive store, like Pep-Boys. I don't remember the grades, but using a fairly coarse grade wet sand the part. A crude but effective way to do this is to put the part in a 55 gallon trash can filled with water. If this is impractical just be sure to keep the part wet. A hose set to a slow dribble works well.

You don't need to worry about being mirror smooth, just don't press to hard or you will make lines that will be difficult to hide later. Once the old paint (and the clear coat that is on top of the paint) are removed you prime it. I've heard that hanging the piece with an unbent hanger is a good way to go. Be sure to prime the whole piece at once. After letting it dry for as long as the can says, you apply a second coat. Now, after 15-20 minutes you're going to have to wet sand it again. Unlike before, now you're striving for a mirror smooth surface. When you take off too much primer in a spot, and you will, reprime the whole piece, don't do spot priming. In my best piece, it took about 7 or 8 coats to get it perfect. Also, applying the primer needs to be done one coat after another, so make sure you have plenty of time.

After 24 hours of drying, the easy stuff is all that's left. Use paint from the same manufacture of the primer. I don't remember the brand I used, but I got the primer, paint, and clear coat from the same company. Spray the paint 10-12 inches from the piece using long strokes, moving the whole arm and not just your wrist. I'm sure you've seen commercials for body shops that shop the guy with the spray gun moving the entire length of the car without stopping; that's what your going for. Be sure to overlap the passes, but don't spray too long or too slow in any one spot or else drips and runs will form. If they do, let the paint dry a bit beyond being tacky and wet sand the run off. Apply 4-6 coats of paint.

After you got the paint exactly how you want it, you need to seal it using clear coat. If there are any problems with the paint, now is the time to fix it. Apply the clear coat in the same manner as the paint. Apply 5-7 coats. Plastic parts don't need to be buffed the way metal parts do (like gas tanks) so I never had to do anything like that. Any automotive site should have articles on how to paint metal and get an excellent mirror finish.

A few final things: the wet-dry paper. Use your judgment on what grade to use. You could use 3000 grade to take off the clear coat and paint but it'll take three years. And likewise, don't use 500 grade when your almost done with the primer coats. The better the final level of primer is, the better the paint job will look.

As with any painting, use in a well ventilated space free of airborne particles, ie. dirt, saw dust, mosquitoes, and passerby's wandering fingers. Your best bet is to find something lying around that's made of hard plastic and is painted to practice on. I had a bunch of Starship Trooper popcorn tubs from AMC that I ruined before I finally got it right. If you're worried about horribly screwing up the plastic that you just bought, relax. There is almost nothing you can do the plastic that a body shop can't undo and then repaint. As for colors, when you go to the automotive store, they'll have more colors then you thought possible. I personally like the candy blue that is close to what some of the EX500 have. Oh, so nice. If you're trying to match a factory color, check out www.color-rite.com.

After a little searching, I found the site that helped me a lot:
http://www.thegsresources.com/garage/gs_repaint.htm. It's the best article I've found on how to do-it-yourself.

I want to remove the paint from my wheels for a polished look.



Lentz - Wed Jun 6 14:00:24 2001

To polish the rims I used paint stripper in a spray can, and about 2 boxes of Brillo pads. I put the bike on the centerstand, sprayed some stripper on the rims (being careful not the get it on the tires!), let it sit for 10 seconds then scrubbed vigorously with a brillo pad. It took about 30 mins per wheel. The paint on the spokes and the other rough surfaces on the wheel isn't coming off without a fight! The finish is shiny, and looks great.

I want to repaint my exhaust pipes.

Brent - Tue Jul 17 12:37:27 2001

I used high heat engine paint from Autozone (Dupli-Cote) in Aluminum color. I sanded the pipe with fine sandpaper and used a dremel tool with a wire brush to clean around the welds and then painted it.

If you just strip the pipe, it will rust. Someone said you can clean the pipe periodically with steel wool, but that would be too much maintenance for me.

I've painted my pipes twice so far. The first time I used 500º paint but a black plastic bag melted to it and made it look like crap. The second time I used 1200º paint. It seems to hold up better. Make sure you take your time when painting it. Paint over the course of a couple of days and apply thin coats and the paint will stick better.

I want to remove the rear fender.

Jeb - Fri Jul 28 21:38:36 2000

If you want to save some money, you can cut the stock fender down to size to make it look cleaner. Unbolt the fender mounts and remove the fender, outline the new shape in chalk. then take a dremel cutting tool to it and reshape as you like. If you want to keep the stock signal flashers (instead of integrating them into the tail), you'll have to leave tabs for these on the side; don't forget to leave a license plate tab.

If you want to keep it simple, and make it look a little better, you can order a fender eliminator kit from Competition Werkes. The kit they sell looks good; it is made of brushed stainless steel, and has removable tabs for the license plate and signal pods.

I want a new windscreen.

What models/colors are available?

Jeb - Tue Aug 22 10:45:13 2000

When it comes to aftermarket windscreens, there are two major brands to pick from; Lockhart-Phillips and Zero Gravity (Targa also makes a windscreen that is 2" taller than stock; it is available only in smoke, however). I have owned one of each, and so have had a unique opportunity to line them up together and compare how they look.

OEM-matching precision goes to the LP model, which is shaped almost identically to the stock model. The bolt holts are in just the right places, and bolts in with no fuss. The LP models are also a bit cheaper, but available in only a few colors (smoke, purple and red).

The shape of the ZG windscreen is a little smoother, more refined than the stock or LP windscreen. It is less 'flat' (has a nice curvature to it), and the corners are less square; it looks a little nicer along side the LP model. However, the ZG model's bolt holes did not line up quite right with the fairing

holes. It is due in part to the increased curvature that the holes were placed differently, but they are definitely more difficult to align than they should be.

Due to mounting simplicity and cost savings, I might recommend getting the LP windscreen if you want a purple, smoke or red one, and getting the ZG model if you want a different color.

How do I properly attach the windscreen to avoid breakage?

Jeb - Mon Jul 2 16:37:53 2001

It is important to put bolts in the center two holes first (loosely), then the two holes beside those, etc, until you've worked your way around the screen. Do not use any type of wrench; hand tighten only. Gradually tighten the centermost bolts a bit, then the next outer pair, and the next, until each pair of bolts is snug but not tight; the screen needs some slack to flex. If you tighten the bolts too quickly, in the wrong order, or too tightly, you risk cracking the screen.

I want to improve the appearance of my lights.

I want to wire extra brake lights into those empty rear sockets

ITM - Sat Feb 12 15:46:22 2000

It's very easy to do. It's also a good idea to add extra brake lights as well in the case that your one and only brake light goes out. Makes you more noticeable when stopped with your brakes on.

- Go to autozone and pick up a couple of double-contact sockets part #85803 made by conduct tite.
- Run a ground wire to each socket (solder or tape in place).
- Run a power wire from each socket to the brake light circuit and accessory or tail light circuit wires (blue and red).

It's very simple to do. It's cheap, probably under $6, and it makes the back of the bike look bigger, gets rid of that old small moped look.

I want to replace the front flasher pods with flush-mounted units.

Jeb - Sat Mar 18 11:20:49 2000

I have the Lockhart-Phillips signals model 122-9900; these fit the fairing recess better than the other units they offer. You can order them from the LP website, or probably find them at a local bike shop. I got them for $20. Duke has some units he got from Autozone for about $10 that are actually Ford truck marker lamps; they don't look bad, either.

Here are two pics I took of the assembly:





The first shows how the unit looks when installed, the other has the unit pulled so you can see the mounting holes. There's only a bit of space at the back that is left when installing them, so I didn't worry about it. You could bondo over the recess and repaint, if you wanted.

You'll notice there are two posts on the back of the unit. One of these fits right into the stock front mounting hole (second hole from the front; I don't know what the very front hole is for, I may have drilled that one for some reason but don't remember). The second hole I had to drill to fit the rear mounting post; it's the small hole in front of the large hole near the back of the indention. There is also a 'v' shaped piece I cut out of the very large hole (that would normally accommodate the stock pod post); this is to allow the wires to be slipped in and not get crimped by the unit when it is attached. on the back side of the fairing, each post is held in place with a washer and a 9mm nut (included, I think, with the unit).

To attach mine, I had to remove the rubber base of the new lamp assy to get it to fit into the stock recess. Be careful when drilling the fairing! It doesn't take much force to go through that plastic. There are only two wires to worry about: the red one goes to the green/gray hot wire, and the black one goes to the black/yellow ground wire. Installation takes about 15 minutes for the pair. These look really good when combined with the DRL mod.

Personal Accounts

Choosing the Ninja 250

Wanted a bike for years

Craig - Thu Jan 20 18:09:34 2000

Pull up a seat. It all started about 20 years ago, as a young adult, I had a burning desire to buy a motorcycle. Back then Honda's were pretty cool. But alas, my dreams were squished by my inability to afford both a car and a bike. Then I got myself married some 13 years ago. Went once with the wife after getting married and drooled all over all the local iron. Still couldn't justify the cost, seeing I'd only be able to ride a few months out of the year, living in RI. Having gone through the spring ritual, bothering dealers and recalculating the finances for several uneventful years, flash to 1999. I was bitten by the bug and infected. Was positive it would be a cruiser, sport bikes are only for wannabe angels, I kept telling myself. Justified the cost with the wife, "but honey I'm going to be saving so much by not buying another car," yada, yada, yada. Gained her approval finally in September.

Had my heart set on a Marauder until I seen a V-Star Custom; was lust at first sight. Figured I'd check out the Shadow's, at least a check see anyway; no go. What's that over in the corner, a smaller sportbike. Hey this thing fits like a glove, no weight and balance problems here. Dual exhaust - I like the symmetrical look of dual exhaust - a tach, temp gauge, hey, did I mention it fit like a glove? It was like putting on your favorite pair of raggedy old jeans, not only did it fit, it felt natural and comfortable astride my newly found mount. Did I mention it fit like a glove? The wife tried to talk me out of it, but I convinced her I'd be saving even more than if I bought the cruiser. It's liquid cooled, it'll last longer honey, it'll be less expensive to maintain. The rest as they say is history, picked it up November 19th and have over 1,500 miles on it. No I don't live in RI anymore, home is now GA so I get to ride much more often. Now it looks like the Ninja 600 is in the plans for a fall purchase, the wife wants the 250; it's a perfect fit for her at 5'1". That's my story and I'm sticking to it.

As a second motorcycle

Gazoo - Thu Jan 20 19:40:04 2000

Over the summer I bought my first motorcycle, a Harley Davidson XL883C Sportster. I love that bike. I left the stock exhaust on it (don't want to tick off the neighbors) and have been riding it every weekend since. The only problem with it is that I don't have a garage so I keep it in the basement overnight. Getting it out in the morning to go to work meant riding it on the lawn, fishtailing a muddy swath through grass wet with the morning dew. This wasn't working out. I started looking at small displacement bikes - something I could push to the driveway and ride to work. My friends tried to talk me out of it; "a 250 would be a deathtrap." Eventually I settled on the Ninja 250, mostly because of what I read on the board. Cheaper than other 250's and a whole lot more.

I went to the local dealer and looked at one and when I sat on it and pulled it off the side stand I almost threw it across the room. I was used to the Sportster's 525lbs, what a difference. That dealer had a bad rep so I looked elsewhere. Another dealer who was expecting some Ninja 250's in November practically refused to sell me one "you'll outgrow it" he said. I wound up buying one used (cheaper). The Ninja out-runs, out-accelerates, and easily out-turns the Harley and gets better gas mileage. Whipping it around corners is about the most fun I've ever had. Other people can't believe its (only) a 250. If I eventually move somewhere else that has a garage, I'll move up to a bigger sportbike. Till then I'll be building up my experience and skills, sportbike skills on the weekdays and cruiser skills on the weekend.

Best bike for your dollar

Leon - Thu Jan 20 14:46:24 2000

My first bike was a Honda CB200 that I bought for $175 in 1981. It didn't run, it had been rusting in the back yard for a couple of years. I cleaned it up and got it running, most of the early practice was to see if the bike would stay running. After a month or so I hauled it up to the DMV to get my license, this was back in the days when the riding test consisted of "Take it out there on the street, go to the end of the block, make a U-turn, use the turn signal when you come back into the lot here." So I did. "Ok, you passed."

About a dozen bikes later, my Honda SilverWing stopped being reliable. I wanted to get a bike that was reliable enough to ride to work, narrow enough to split lanes in Washington DC traffic, common enough to find parts bikes, and cheap enough to replace when it wore out. The Ninja 250 was the best answer.

Somewhere along the line I took the MSF advanced course and eventually became an instructor. I just like to ride. The 250 gives the best bang for the buck so far, my next 250 will be running this summer unless the current 250, ZX6 or moped need more work.

No need for excessive speed, expense

Sportbiker - Mon Aug 28 07:22:31 2000

I bought a 250 because I like to ride, and I like to live. I am happily married and have 2 young kids. I rode a Kawasaki for 7 years as a kid, but that's been 18 years ago. My Kawasaki experience then was pure joy; I never had a single problem with that machine after totally abusing it for 7 great years. When I sold it, I got back half of what I'd paid for it. To me, that's a great deal, both from a money perspective and from a fun perspective.

Let me mention something to the macho 600cc+ crowd. In economics, there is something called "diminishing marginal return". It basically means that, after a certain point, you start getting less and less results (i.e. riding satisfaction in this case) for your money. I paid full sticker ($3,299) for my 250, and was glad to do it (the dealer only makes about $200 on this machine anyways, at full sticker). I pay $105 per year for comprehensive insurance with a low deductible. This, along with a little bit of depreciation and lost interest on my cash, is my only expense to own this bike. I figure it all adds up to about $500/year, or $40 per month (about my cable TV bill). This is, by far, the most riding satisfaction I can get at anywhere near these prices. Period. I've got the cash on hand to go by a huge sportbike, but I don't like to waste money. I like to have fun. I can do that on a 250 Ninja as well as I can on anything else.

If I rode 8,000 miles/year or more, I might make the investment in a 600cc, but as a pleasure rider with 2 kids college to still plan for, I'll take the 250 any day. On a pretty day on a windy country road, my $3,299 buys me all the riding fun I'll ever want or need. If you want to go 0-60 in 3 seconds and top out at 160 mph, good luck to you. I just want to ride, have fun, and come back in one piece to my family. By the way, I know a lot of these macho guys are the same ones who go out with t-shirts and shorts and no helmets. If you crash, you're going to be so messed up you'll never want to see a 750, 600, or even a 250 ever again. Not many guys (or girls) who have gone through 3 months of skin grafts ever want to sit back on a bike. I wear Draggin' Jeans, gloves, leather jacket, and a Snell-rated helmet. All of that cost me $350. My body's worth thousands of times more than that. Good luck daredevils! Pay your $7,000+ and try to cheat injury with every ride. I'll be taking in the pretty scenery on all of the country roads near my house and joyfully be obeying the speed limit.

Size matters

Jenner - Mon September 17 00:52:16 2001

It was unusually calm and quiet at Windy Ridge as I shut down the Bandit. I had just arrived and was glad for the break. It had been a while since I had ridden the twisties, I mean really ridden them. I have been spending a lot of time riding the commute, or doing short sport-tours, places where the

Bandit 1200 really shines. You really can't knock that big motor and, when you really need to pass that big rig on I-5, two up with all the bags full, the 100+ horsepower does come in handy. But I hadn't ridden the twisties in a while and frankly, I was rusty, stiff and needed the practice.

As I pulled into Windy Ridge, located at the end of Forest Road 99, off of Forest Road 25, in the Gifford Pinocot National Forest, I realized I wanted a smaller bike.

There, I said it. I wanted a smaller bike.

As I sat there looking over the devastation from Mt. St. Helens my riding partner remarked, "Man, the horsepower it took to level that..." Those words sank in as I thought of my ride up to the Ridge. I had needed to fine tune my twisty road skills and I'd brought the wrong bike. I should have been on another bike in my garage, a Ninja 250.

Oh, it's not that I can't handle the horsepower of the Bandit, and it's not that I didn't enjoy keeping up with the other riders; one on another Bandit 1200 and the other on a ZRX1100. The little Ninjette would have been hard pressed to reel them in on some of the straight stretches of Highway 12. But in the twisties, where the road is tight, cambered well, even though slightly bumpy, the Ninjette would have shined.

Dollars to donuts too, I wouldn't have been as tired when we hit Windy Ridge. So, why in the heck would this Bandit 1200 rider want to give up that performance for a little, 29hp on a good day, Ninja 250?

Simple -- I didn't need the Bandit's horsepower, or it's weight, for those roads. As a matter of fact, the 100+ horsepower of the Bandit was a hindrance on those roads, even to my usually conservative throttle hand. Just look at the (estimated) numbers:

Suzuki 1200 Bandit
Weight (including me): 800 lbs
Horsepower (estimate): 110 hp
Horsepower to weight ratio: 7.2 lbs/hp
Gas Mileage: 31mpg

Kawasaki Ninja 250
Weight (including me): 550 lbs
Horsepower (estimate): 29 hp
Horsepower to weight ratio: 19 lbs/hp
Gas Mileage: 70mpg

On the cold numbers, the Bandit 1200 looks like a better deal. It pushes half the weight with each horsepower. It also weighs over 200 lbs more. Oh, and then I have to fill up the tank every 115 miles. On a nice level road, or even in the long sweepers, the Bandit is in it's stride. When the road is so tight it literally goes turn...turn...turn, the Ninja really shines. The 110 hp and the extra 200 pounds aren't missed in the corners. There, where you are full lean left, then upright, a little front brake, then full lean right, then upright, then... well, you get the idea.

On those corners, I knew the Bandit was there. I had to press the bars right, then left, leaning it onto corners. I could feel the suspension working to keep a 600lb bike and 200lb rider in check over the somewhat frequent mid corner bumps and ripples. On those corners, I know the Ninjette would have been almost unnoticeable under me. I would have been concentrating more on the road and less on what the bike was doing.

I rode the Ninjette at a SIR track day last year and that bike just disappeared beneath me. All that was left was me and the track, turning this way and that. I felt more like a runner, more like a bicyclist, connected to the asphalt. On that bike, I would have ridden a better ride to Windy Ridge and a better ride back down. I think I would have been cornering better, late apexing as I should. I would have been smoother on the throttle, keeping the bike more stable and arching though the turns better. I would have kept my cornering speeds higher and the lines would have been cleaner. Less horsepower does that, at least for me. On the twisty stuff, I become a better rider. I have no doubt if there were another me that day, riding the Ninjette, the Bandit would be the second bike to the top.

So, why the size thing, then? Why do I own a Bandit 1200 and a Ninjette 250? If I love the Ninjette so

much, why deal with the expense of the Bandit, the lower gas mileage, the wearing out of tires, chains, my driving record...

I can hear myself saying, "Well, a smaller bike makes me a better rider. I don't need more horsepower. On a twisty road, that bike is all I need. Even for commuting, that bike is faster than almost every car on the road?"

Then I hear the *other* voice sneering, "Well, you guys with smaller bikes always say that."

Waitaminnit? Who said that? I know where the first statement came from. It came from my head. I thought it. It was rational. It made sense. So, if the Ninjette came from the head, the thinking one, where did the other... oh, I know. I know exactly where it came from. Sometimes you think with your head and sometimes you think with your...

Horsepower does that to you. So does liquor.

The thing is, I know my talk of the Ninjette sounds a lot like a smallish endowed man making excuses for the lack of personal equipment by touting his skills. However, he makes some sense, even to the pulse of my heart. There is a ring of truth to the allure of a small bike. Notice the last number in the comparison? The Ninjette gets 70 miles a gallon, no matter how hard you flog it. I put 15,000 miles on that bike and it never returned less than seventy miles per gallon. A set of tires lasted me 14,000 miles. I paid $3,000.00 for that bike, brand new.

It is often said that motorcycles are cheaper than cars. Most of the time, especially today, this is a myth, a fallacy, a rationalization.

Anyone ever add up the costs of a new bike, counting purchase price, tires every 3,000 miles, valve adjustments, chains, gas mileage, insurance, helmets, and riding gear? Ever compare it to a car? Do the math some time. You may be surprised.

A $3,000.00 bike that needs only two services in 15,000 miles, uses only one set of tires, one chain, and returns 70 miles a gallon does compete with the car. You can have your cake and eat it too, or you can think small.

Does your cake have to be bland? Does your bike have to be slow?

What is slow? How do you define slow?

This Bandit rider knows what slow is. It's almost any bike or car that isn't my Bandit. However, that speed and that horsepower comes with many prices. Those being either eternal vigilance, or a quick trip into the back of a slower car, or the side of a hill. My right hand is connected to my destiny in a much more immediate fashion on the 1200 than on the 250.

So, is the 250 slow? Someone will call it that, I'm sure. Can it go on longer rides? Some will say it cannot. They should have followed me around the Cascades Loop a few years ago, as I led most of the way. Is the Ninjette busy at speed? Sure it is. Does it matter? Not when you get used to it. What really matters is that it is fun.

In my ride up to Windy Ridge, some of the corners weren't fun -- they were work on the Bandit. They wouldn't have been on the Ninjette. So maybe, next time, I take the little guy. I realize that the bigger road thugs will pull away from me. On the longer sections of Highway 12, on the way eastward from 123, towards the turnoff to Forest Road 25, and Windy Ridge, I will be in the back. But then the road turns tight and it is corner after corner. Then all you see is drop off, then rock wall, then drop off. Then the turns come so fast you can't count them. Then I don't have to roll off the throttle on the Ninjette, I don't have to brake between apexes, then... Size Matters.

Along with the size of the grin on my face.

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Journeys

Indian Summer on the Crest

VFR Pilot - Mon Nov 15 00:22:46 1999

Got up expecting to do chores all day and found that it was a perfect seventy-degree fall day. Checked oil, gas, tire pressures, threw on the leathers, grabbed the tank bag, fired up the Ninja, and headed out for the Crest.

For those of you who don't know, the Angeles Crest Highway is a two lane strip of blacktop with 57 miles of uninterrupted curves. The road ranges in altitude from one to eight thousand feet, rising and falling over several alpine passes as it follows the spine of the San Gabriel mountains north and east of L.A. To the south is the L.A. basin, the Pacific ocean, and Catalina island on the horizon. To the north is the Mojave desert, replete with pastel washes of reds, yellows, and browns, the whole thing being framed by the peaks of the High Sierras beyond. The Crest is closed all winter due to avalanches that frequently remove and/or bury portions of the road, so if you want to ride it you must do so either before the first snow falls or after it's melted off in the late spring.

The Ninja did pretty well, although it got a little short of breath at altitudes above six thousand feet. The 'flickability' of the bike proved just the thing for threading between the frequent remains of rockslides without upsetting the bike's balance. Just put your eyes where you want to be, and the bike will go there for you. Also discovered that the Ninja is pretty forgiving of braking into corners (rockslides again), and tends to stand up less than most sport bikes when you hit the binders. The bad news is that the too-soft stock suspension lets the bike really nose-dive when under full braking. This sudden weight transfer pretty much means that you must do 99% of your serious braking with the front wheel only, because the rear locks up very easily as it unloads. (The stock tires that the bike came with are pretty hard, which makes the problem worse.) Other than the soft suspension, the bike seems to have no bad habits even when pushed pretty hard. Getting the most out of the engine seems to mean keeping it up between 6000 RPM and redline, but it does have a wide enough power band to accelerate all the way through most corners without shifting, provided that you choose the correct gear before entering. (And the bike does like to accelerate all the way through a corner rather than try to trail brake up to the apex and then accelerate. That soft suspension again.)

Altogether, the little Ninja did a pretty good job on a very challenging road that will show up the weaknesses in any bike. The day was beautiful, the road was full of sportbikes (and Harley riders), the leaves were in full color, and I even hooked up with a friendly (!) Ducati rider and stayed with him for most of the downhill homeward run. Until we finally got to a straightaway...

1500 Miles in 24 Hours

Leon - Wed Jan 12 14:55:31 2000

I went to Florida and bought some oranges Saturday, the bike ran good. A low tire at about the 400 mile mark, added a few minutes to the trip, (and hurt the fuel mileage, too) I didn't check it before I left (d'oh). A wire to one of my electric gloves broke, but it wasn't cold enough to really need them. The idle isn't correct now, so I'll have to adjust the valves this weekend. The Ninja 250 is a decent bike for taking trips.

Statistics					
Location	**Time**	**Odometer**	**Fuel**	**MPG**	**MPH**
Dale City, VA	2:23	76432	N/A	N/A	N/A
Wilson, NC	5:31	76659	4.964	45.7	72.4
Florence, SC	8:06	76812	3.34	45.8	59.2
Pooler, GA	10:39	76997	3.718	49.8	72.5
Live Oak, FL	13:53	77211	4.128	51.8	66.2
Hardeeville, SC	17:18	77444	4.775	48.8	68.2
St. Pauls, NC	20:52	77670	4.65	48.6	63.4
Emporia, VA	23:15	77832	3.317	48.8	68.0
Dale City, VA	1:51	77984	2.381	63.8	58.5
Total	23.47 hrs	1552 mi	31.27	49.6	66.1

On The Track

First day at Sears Point

Jim Race - Tue Nov 16 16:52:08 1999

The day started off incredibly early for me; 7 a.m. I'm really not a morning person, and combined with the seemingly bitter cold and fog and my personal haze I was sort of in a funk. I got a largish boost however when I discovered Keith Code himself was going to teach our group all day. I'm not sure if this is how it's normally run, but it was something to look forward to.

After the first classroom test, we went out on a "fourth gear, no brakes" drill. This was at about 8:25, and it was still pretty cold and I was unsure of the stock suspension and tires but was willing to give it my best shot. The plan was to take two sighting laps, and I pre-gridded first, in front of the rest of my group who all had at least 500+cc's on me. However, I think my best break was seeing the instructor pull out in front of me with 'Rabasa' on the back of his leathers. Those here (and elsewhere) will know John as a great 250 production rider, and I now know him as an excellent instructor.

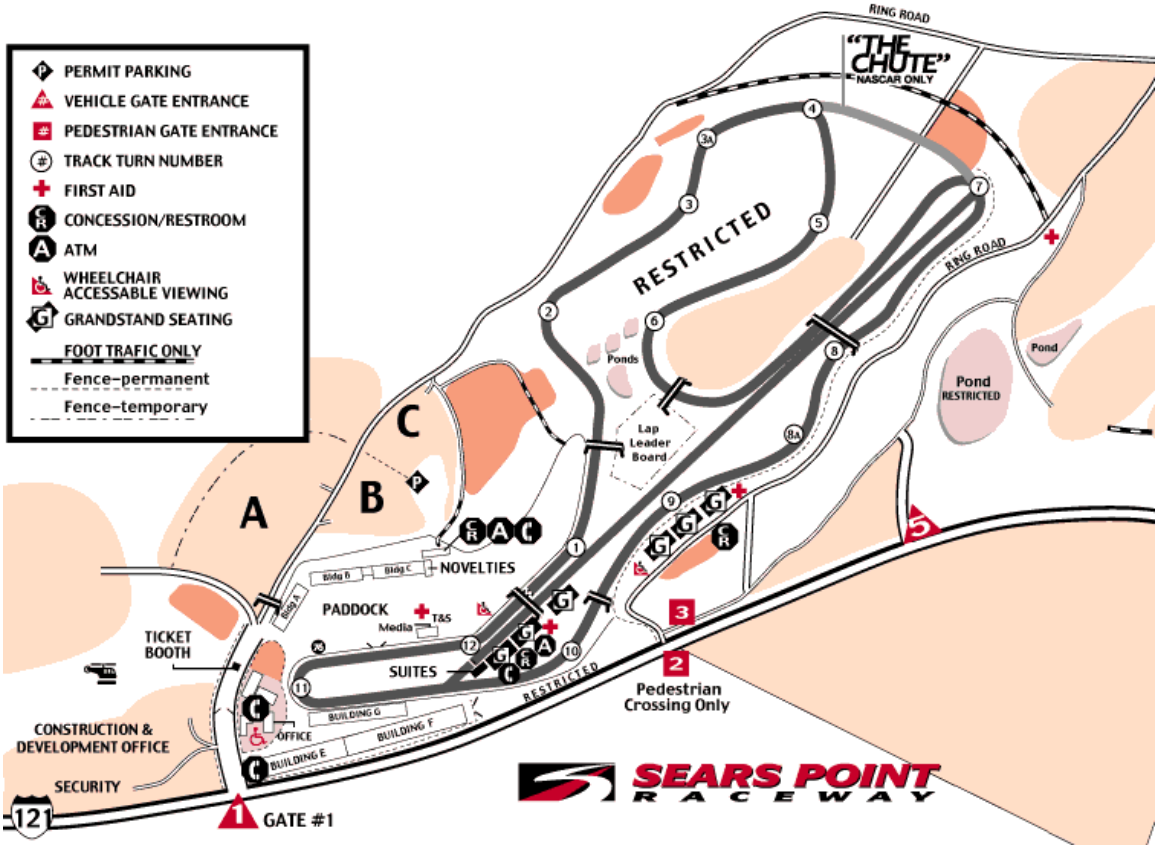
After the sighting laps, they sent us on our way. It was very odd not having anyone in front of me on my first track lap at speed, on a track I'd only ever seen from the sidelines but I was determined to make the most of it. I did fine for most of the lap, even feeling comfortably fast in the carousel but I nearly completely blew turn 7, missing my turn in point and nearly running off. Only by majorly

increasing my lean ("oh shit, my tires are freezing") did I manage to make it through and continue on. I was really, really determined NOT to have a get off my first track day. My next 'thrill' was eleven, and not because I found it such a tough corner, regardless of how many times I failed to properly late apex it but because the damn pavement looks so totally screwed up and greasy as hell. Especially in an early morning light.

I'm rambling... Anyway. The rest of the first session went well, and I had seriously shed any mental fog I had at this point and was becoming much more comfortable with the bike, revving it up into the early teens with gusto. The session ended without incident, and we headed back to the classroom.

The second session was very cool, and I became much more comfortable with the bike's handling. It is a good thing that despite being tall I'm also a skinny bastard so I'm not upsetting the stock suspension bits as much as a heavier rider might. The stock tires, although slightly "broken in" (heh) by the end of the second session seemed to be relatively confidence inspiring as well. A crash in 11 foreshortened the second session (two actually, one student bike followed another's oil slick at slow speed into the bales) and I pulled into the pits. We took a third, quick classroom If I remember correctly then broke for lunch and my Mom (!) showed up. Cool!!

Third session was extremely fun. At this point I was using some of the gears (not a lot at Sears on a 250, apparently) and was feeling quite comfortable. I felt like I was doing really well on turns except for 6 and 11...



... when I had my first hard bit touchdown in 7. I majorly scraped my right peg and after having a short yet loud conversation with myself inside my helmet managed to get my head back together and rip through 10 nearly WFO in sixth gear, just to prove to myself that it was a fluke. This lead me to the conclusion that one doesn't really need to make time up on the track in a personal proof as riding so near to the grass and dirt at ~100 mph or more is a very humbling and non-gratifying experience.

I think we ran 9 laps or so in this session, and my buddy had my watch and was timing me, just for my curiosity. I ran a 2:26 at some point in this session, which made me feel pretty damn good. Near the end of this session, I also had experienced a foot cramp which I'm blaming on a combination of being out of shape and cramming a 6'2" rider onto a bike that doesn't really fit. This got worse later.

More classroom, more tracktime. The fourth session rocked.

I was seriously nailing turn two, and regularly passing all the bigger bikes safely both on the inside and outside. I also had turn seven wired, and could pick nearly any rider off at will, except for the pesky guy on the RS125, who was passing everyone and simply hauling ass.

I should sincerely mention, before I get carried away in my self examination that during this whole thing I was being both trailed and following the instructors, mostly John Rabasa but also the other guys and they were giving me killer feedback, primarily through hand signals. There is nothing that I know of on a bike like following a great rider on a much bigger bike through a series of turns , keeping him well in your sights and having them look back and give you a big thumbs up for a job well done. I really appreciated the encouragement.

Geez. OK. So, last classroom, last track session. I'm sorta beat by now. The fourth session ended with me running out of gas in 11 (under waving yellow, class bike crash) and luckily not bogging the bike under lean and able to switch to reserve on the fly. No yellows after the checkers, and the rest of the classes (two running at this point) are still running hard, so I did too. Aced seven again. I LOVE that corner. Finished the day with a right leg cramp for a full half lap. That really hurt bad. Must. Get. In. Shape.

Overall:

Pros

- Great crew
- Killer, technical track
- Quick comfort level
- Quick reduction of lap times
- Total confidence that I can be competitive

Cons

- CSS mechs removed my mirrors the wrong way, leaving metal bits just waiting to fall out. Found error, removed metal bits to pit wall, only found one of two (important) bits later.
- Cold in morning.
- Bad coffee.

If I can ride this well on a box stock EX250, I have a pretty good shot at being competitive next year. I remember a few things John told me at the end of the day, which struck me:

- My stock motor is pulling faster than his 250 racebike. He said that coming out of six his ZX6 was not catching up nearly as quick as he would have thought.
- I need to learn to:
    - Pass - I'm a wimp
    - Tuck - Piece 'o cake

250's can scare too

Gabe846 - Mon Jun 19 19:16:22 2000

If you think the 250 is incapable of scaring you, you need to take it to the racetrack.

How do you scare yourself on a 250 Ninja? Chase another racer into a corner too hot, countersteer with all your weight, and feel the footpeg bracket dig into the pavement of the off-cambered turn, making the rear tire slide and bounce around. Ease off the countersteering, and then feel the bike snap back onto it's line as you give the throttle the last 1/4 inch and the motor bounces off the rev limiter as you inch past the slower rider in front of you with 6 inches between the two bikes. You pull in front of him, upshift without rolling off gas, slam your helmet down onto the tank as you catch your breath and look through your cracked windscreen for the next racer to pass.

You get a good drive out of the corner and shift up through the gears on the straight as you slowly reel in the next racer in front of you. You inch up alongside, and he glances over. The turn at the end of the

straight is a 90 MPH left hand sweeper. Both bikes are revving at 14,000 RPM in 6th gear, the speedometer would read 115 if it wasn't taped up and he isn't going to let you outbrake him, and you sure as hell won't let him outbrake you. At the same instant, you both downshift and heel the bikes over. He takes the outside line, and you are two feet behind him. Will he apex wide enough to let you by? You hope so, with the throttle on all the way, your kneepuck making a long, audible "skriiiiiiitch" as it drags through the corner, and you dive into the apex right under his bike. He backs off at the last minute and lets you by, but he's right on your ass and that was only the second lap of six.

Scared? Yes. Exhilarated, scared, and so high on adrenaline that the only thought in your mind is how you are going to pass that next rider, and you see the line on the race track with a clarity reserved for crystal-meth trips.

How scared do you need to be? If riding like that doesn't scare you, you are probably too foolish to be riding something capable of more speed.

Of course, there are more suitable and practical streetbikes. Bikes with more comfort, range, capacity and power all have their uses. But the 250 is just as capable of scaring a rider as an R1.

On The Street

Real World Performance

AR - Fri Feb 23 13:25:06 2001

I thought you might appreciate two of the recent experiences I've had gently tooling about San Diego county on my itty bitty 250:

The first was an extensive full day ride on highway 1 (the coast route, smack on the beach) in the company of a 2001 Harley Sportster 1200S. This is Harley's (not Buell's) fastest, meanest light (550 lbs) sportbike. If he got the drop on me catching me with my revs down he could torque past me but couldn't pull ahead any farther than my front wheel abreast his rear wheel. If we took off from a dead stop, I would jump a half length out and then we stayed at the same point. This was on twisty coastal highway and our speeds were restricted; we never got above 85 indicated. My buddy was miffed!

The second was a brief three stoplight affair on Frairs Rd. with a Honda ST1100. When we stopped at the third light the Honda rider flipped back his face shield and inquired if I was riding a new 500. When I told him it was a 250 he was stunned. His exact words, "A 250?? That bike is awesome!"

Riding in Traffic

Leon - Tue May 1 10:01:49 2001

Some insight on what it's like to ride a 250 in traffic... it's a heck of a lot of fun.

Very light, very flickable, quick, economical. With apologies to the late Roger Miller - you can rollerskate in a buffalo herd. The Ninja 250 is wonderful in either heavy city traffic or very tight twisty roads like Deal's Gap. At the 'gap it might not be the fastest, but it's great fun without the pressure. In heavy traffic, I love passing ZX9's and CBRs. Can't keep up with the mopeds though; those guys are crazy.

Misadventures

Dealing with risks

Leon - Fri Apr 28 04:43:16 2000

Motorcycle accidents happen for a variety of reasons; all can be prevented simply by not riding. If you ride, you face the probability of having an accident. You can change that probability, but can not make it go away unless you quit riding.

I have fallen on my Ninja 250 twice. Both were my fault. Most recently the chain jumped the sprocket and got caught between the swingarm and sprocket. I was riding at roughly 10 mph while going around a corner when it happened. I was two blocks from home and hoped to make it the rest of the way. Yes it was my fault, yes I was pushing it too far, and given the same situation I would do it again.

The other time I was backing out of the driveway with two inches of snow on the ground. The rear tire made contact with the sloped edge and slid sideways, I slipped when trying to catch it and fell down. I was straddle walking it backwards at the time, how much slower should I have been going? It was my fault, I was pushing it too far, and I have done that again several times without incident.

In Washington DC, a few years ago, I made the mistake of stopping as the light turned from yellow to red. I was rear-ended hard enough to get knocked in to the middle of the intersection. I should have known better than to brake that hard in the city; I screwed up bad. Since it was a rear-end collision and a witness saw that the light was changing, the other driver's insurance paid for the damage to my bike. From the insurance company's point of view, the accident was clearly the fault of the other driver, but I haven't allowed that to happen again.

Riding a motorcycle is dangerous. There are a lot of things you can do to be safer (go to school, keep your equipment in good repair), and there are a lot of things you can do that improve your riding ability which paradoxically put you in danger of crashing (riding in the snow, following better riders in curves), but to make blanket statements that you should never crash due to your own mistakes or that all riders will crash simply doesn't work.

Necessity of proper gear

Brent - Fri Jun 29 19:06:09 2001

Well, yesterday another one of my friends went down. He was headed over to a friend's house a few block away and decided not to wear his helmet or a jacket. Well, he took a fall at about 35mph on his Ducati 996 (DOH!) and did some backsliding down the asphalt. Then he tumbled up a curve, slid in some grass, and got cut up be the sprinkler heads in the median. He didn't have any broken bones, but lost a lot of skin off his back and had several abrasions to his head. The moral: wear your gear no matter how short or hot the trip is.

Last April my good friend went down at 40mph on his CBR 600, slid into a guard rail and flipped up into a concrete bridge pylon. He suffered a broken pelvis, several broken ribs and major bruising. He was wearing jeans, a leather jacket and a helmet. If he wouldn't have been wearing his gear, he would have been dead (close to it as it was). He has recovered somewhat and can now walk with a cane but has a hard time sitting up for over an hour. The moral here: You can still get hurt even with gear in a slow speed accident - be careful - but, the gear saved his life and kept him from losing any skin.

Riding again after an accident

Ian - Mon Sep 3 18:47:53 2001

I've been cruising around on motorcycles for the better part of the last ten years, and let me tell you this...

You have to take the good with the bad. Its going to rain sometimes. A deer might decide that the berries on the other side of your street taste better. God knows, car drivers are going to do stupid things around you on a regular basis. And to top it off, you are going to make mistakes.

Some mistakes aren't too much to sweat over. You missed your exit, so take the next one.

Some mistakes might just scare the daylights out of you. You caught the exit, but you were going way too fast, and wound up on the grass at 60 miles an hour (I did that one the very day I got my magna 4 years ago).

And sometimes mistakes might mean you get hurt, but that one you already know. Learn from it.

But the worst possible mistake is to give up all the pleasure that riding brings, just because of a careless mistake, and a group of nay-sayers.

Three years ago, I had a pretty bad accident. Broke my left hip. The accident wasn't my fault (lady decided not to stop for the stop sign, and I hit her), and there was absolutely nothing I could have done to prevent it.

But here's what I learned: nothing beats motorcycling for sheer enjoyment. Even if you're careful, things can still get pretty bad, but the rest of the time, things are just perfect.

What's the Deals Gap trip all about?

Duke - Sat Aug 19 02:40:35 2000

The "250 Nationals" has become a semi-annual trip we've been doing since the Spring of '99. This is a safe, fun, relaxing, enjoyable trip for riders of all skill levels, through some incredibly beautiful mountain areas. We are all very careful riders, much more interested in learning to ride our little bikes well in the twisties, than performing speed demon-esque feats of bravado. The Deal's Gap area and surrounding mountains are some of the best riding/touring areas in the Eastern US.

The Gap isn't really as scary as everyone wants to make it out to be. You can go as fast or slow as you want. Speed is really relative. The slowest you could possibly go on a Ninja 250 is still faster than the 1960-something Ford pickup with the bed full of plastic milk jugs that you're very likely to run across on any given day on the Deal's Gap road.

The Gap is really only 15-minutes of the whole formula. Spending a couple days with other riders of a similar thread is much more about learning things from the others, and learning things about yourself. Leon and Andrew are the kings of long-distance riding. Jeb is the technically-minded computer guy who stops at nothing trying to better his bike and his riding. Brian is the former 250 guy on the F3 who is the perfect example of respect for a bike that deserves it. I'm not sure what I am - maybe just the guy who sits around thinking up countless ways to re-tune his carburettors.

None of us are about racing or worrying how long it takes the slower folks to go through the Gap (or any other road we ride for that matter. As fast as I think I am, I'm still only 25% to 30% as fast as the 'actual' fast guys). Last time we were there, we literally crawled through the Gap because it was raining. It was still a blast. The next day we made the run again, and I was turning the wick up a bit, yet Jeb, who had only seen the road once (I've been through maybe 10-15 times) lagged behind just a bit. No one cared, and we all met up at the other end.

No one will care what your skill level is. If you want to go, go. The only requirement is that you be careful, as that's what we'll also be doing.

For more info about the Gap itself, check out www.dealsgap.com and www.tailofthedragon.com