



INTERCEPTOR REBORN!

Honda reclaims "its" platform with monster motored VFR

By Colin Fraser

Photos courtesy Honda Canada

To call Honda's all-new VFR1200F much anticipated is actually an understatement. Since the brief sample ride offered up late last fall, the Canadian press has been impatient to rack up some miles, as well as take to the track, with the new v-four. This finally happened in mid March in Savannah, GA.

In a broader sense, you could argue that the VFR1200F has offered a host of both positive and negative, mostly imaginary experiences during the past few years. Honda semi-secretly tested several super sport tourers and exotic GT sports type machines in Europe, as spy photos from the Alps have shown. Honda Germany has spearheaded development of a much rumoured next generation, Euro type, adult sports machine.

The new VFR, at least for the time being, silences the fans looking for the new Blackbird – this machine might be the new Blackbird. (However the VFR is speed restricted to 157 mph in both fifth and sixth gears – this is 2010, after all).

Honda has combined the potent Blackbird legacy with the high-tech all rounder design themes of the long running (since 1983) VFR line to yield the 1200F.

However the VFR1200F is not a Moto-GP derived, v-five powered, hard core sports bike to rival or outperform, in absolute terms, machinery such as the race replica CBR1000RR. That prototype does seem to exist in photos from a couple of years ago, but probably won't see the light of day on a dealer's floor.

The new VFR is a sports tourer: what was called, in the '70s, a 'Gentlemen's Express.' Such a bike is refined, comfortable, high performance in nature, with all-out handling to suit.

The new VFR is among the most high tech motorcycles available today with a host of cutting edge hardware as well as electronic features never before seen with a v-four. The icing on the cake doesn't arrive until June – the dual clutch version of this VFR. This could prove revolutionary, and will give us an excuse to track test the VFR again this summer.

When the Interceptor line launched way back in the early '80s it was the cutting edge, and an immediate winner on the track. The 2010 VFR might not be a racer, but Honda's go-for-broke design direction makes this one of the most exciting and unique performance machines seen in a long time.

Only time will tell if the newest VFR is truly definitive. But in today's motorcycle world, and the current global economy, this VFR is a true breath of fresh air when we can really use it.

The key to the VFR is an all new, completely reconsidered version of the v-four platform. This has long been Honda's signature engine configuration and with manufacturers like Aprilia (SBK) and Suzuki (MotoGP) producing their own v-four powerplants, it was put up or shut up time for Honda.

With no racing class structure considerations, Honda could go big, so this Interceptor is mega in terms of displacement: 1237cc's. Of course, the v-four design is famous for its strong mid-range, and bumping up the displacement guarantees very user friendly power characteristics.

Honda has taken a cue from its recent racers, both on and off road while designing its next generation v-four. From the latest motocross designs, the VFR gets the Unicam set-up, with only one cam per head, supported by three plain bearings.

Unicam positions the cam directly over the two intake valves, using traditional shim-under-bucket adjustment. Exhaust valves are depressed by rocker arms on either side of the central spark plugs. With the exhaust valves smaller than the intakes, this system makes sense in terms of simplicity, weight savings and centre of gravity – one whole cam system per head is not required, hence the SOHC designation. Remember that a v-four has four separate heads, not an all-in-one design like an in-line engine.

Honda aimed to give the VFR's powerplant the perfect primary balance of a 90-degree vee configuration (a la Ducati) but at a smaller, tighter 76-degree cylinder angle. So the crankshaft has a separate bearing journal for each pair of cylinders, displaced by 28 degrees, to get the much-desired ultra smooth engine behaviour. No balance shafts are required.

The cylinder spacing is also unique, with the rear two cylinders turning on the crank's inner two journals, while the front two cylinders are outboard, turning on either side. This allows the rear two cylinders, between the pilot's knees, to be closely spaced, giving the biggish VFR the feel of a much smaller bike.

The VFR uses a MotoGP-derived sealed crankcase system, with a one-way valve that permits the pressure build-up between the cylinders to vent but not return. This allows the engine to maintain negative pressure overall, controlling oil flow, and power sapping windage, inside the vee.



Work of art? There is some debate regarding the VFR's looks.

Honda uses a fly-by-wire throttle for the VFR, allowing the removal of one of the butterfly induction valves usually required in modern FI sport bike systems. It is impossible to notice any non-linear behaviour from the VFR, even at low speed. Throttle response is very direct and crisp in all settings, and a joy of precise behaviour when pushed at the track.

The six-speed transmission uses the recent race track development of stacking the gearbox, making for a very short overall engine length.

The VFR has a slipper clutch, a must-have for a performance v-four with this type of power. The transmissions we sampled, unlike those questioned by some U.S. press, were as slick and accurate as any we've tried, and a big step from Hondas of just a few years ago.

Final drive is a big issue with sports tourers: performance oriented designs use chain drive (to avoid any handling effects or power loss) while the more long distance oriented designs go with low maintenance shaft final drive. You would expect the VFR to get a chain, but instead an all new type of shaft has been produced.

With the stacked gearbox and longish (for a sportster) 1545mm wheelbase, the VFR has space for a long drive shaft. BMW has shown how a long swingarm/shaft helps reduce jacking, the on/off throttle up and down behaviour that affects shaft machines at the track. But this is just the start for Honda.

The shaft runs in the single sided swingarm, hinged to the chassis above and behind the transmission's output shaft. This mounting method also helps reduce jacking. To deal with the changes in geometry throughout the suspension's travel, the shaft includes a trick, sliding CV joint. There are also four dampers utilized in the powertrain to control any abrupt shocks within the system.

The net-net of all this is simply amazing. While seemingly bulky and complicated, in action the VFR's shaft system works in concert with the great transmission to allow you to forget that the VFR even has shaft

drive. We have ridden dozens of shaft drive bikes on the track over the years, and when pushed they all yield at least some chassis/handling compromises – until this Honda.

You don't even notice the shaft, and in fact there are some control benefits compared to a chain drive bike. The FI and throttle design combine with the unique final drive to give the kind of throttle connection that top racers are always looking for.

Chassis wise there isn't much that's ground breaking with the VFR, and the suspension is not as adjustable as we expected. Having said that the base setting, typically for Honda, was very good right out of the box. Only the switch to a sticky rear Pirelli DOT track tire during the track day made us look to the tool box.

With modern sports 1000cc entries weighing in at around 450 pounds, the Honda's near 600 pounds of mass is intimidating – on paper. However the compact v-four powerplant and innovative design make the weight disappear once you are under way.

The distinctive v-four growl is present, more apparent than with recent VFRs, and much appreciated for sonic enjoyment. The obvious exhaust valves, seen inside the wacky tail pipe, probably are more about improved audio than any required mid-range boost. Power is solid from just off idle, and serious performance is available around 4000rpm, well below the 10,000 revs redline (although we didn't feel the rev limiter until almost 11,000!).

At just over 5,000rpm the engine gets serious, reminding you of the focus required when unleashing this type of power, certainly when exiting a fast turn on the track. While a Dynojet Dyno output of around 150 horsepower might not be that impressive when Suzuki's Hayabusa pumps out 170, in reality this straight line battle of the muscle bikes is too close to call. Crazy torque all the way across the rev range certainly helps, and also pins that grin on your face.

The Honda might not have the best static numbers, but in real use at the strip or especially on the track, it is a serious contender for muscle bike honours. Testing puts the VFR1200F right in the ball park with class kings such as the BMW K1300S, Kawasaki's ZX-14 and the famed Suzuki bird of prey. With the quicker shifting Dual-Clutch ver-



THUMBS UP

- ENGINE REALLY IS ALL THAT
- HANDLING SUPERB DESPITE SHAFT



THUMBS DOWN

- INSTRUMENTS GOOD BUT LACKING
- COMPRESSION DAMPING ADJUSTMENT FOR SUSPENSION MISSED



Serious, experienced riders will enjoy the Honda VFR1200F, which showed its race track pedigree in Savannah.

sion in the pipeline, Honda expects the VFR to move to the head of the all-out measurement chart.

The VFR is just as comfortable as you would expect from a flagship model, although the riding position is slightly sportier than with the most recent VFR800. The seat is low and the pegs high, although not full race, with the bars reasonably high and widely set. The seat is a big help, comfortable and spacious, with room to move fore and aft.

Huge attention has been focused on the dual faired body shape, managing air well both in terms of penetration and heat management. The instruments are well placed and easy to use, although a bike of this type often gets some kind of trip computer function.

Hondas are typically good for fit and finish, but the new VFR is a high water mark in terms of Japanese production quality. The mirrors are among the best ever offered on a sporty machine.

There is much debate concerning the VFR's appearance, focusing on the GP-inspired blunt nose and minimal tail section. We think the VFR is pretty from some angles, less so from the side on or from a rear angled view – you need to see it in the flesh to decide.

While the VFR is a big bike it handles

surprisingly well, aided by that great throttle response and the useful linked brake system. Some testers complained that the full race mode ABS launched last year with the RR machines should have been included, but we believe all-out threshold braking is not a great plan with a bike this heavy and powerful! We were happy enough with the previous generation version of anti-lock.

Steering was predictable, ground clearance reasonable, although hanging off proved more useful that extreme lean angles. While it was fun to spin the stock rear Dunlop at will, the street oriented RoadSmarts were not up to the rigours of the track, and even after a hard lap or two prudence was required. This wouldn't be an issue on the street.

The afternoon change to a race-oriented rear Pirelli woke the VFR up with a start, and made riding to the limit a much more serious, and pleasurable, challenge. It seems unlikely that many track rookies will use the new VFR for their initial sessions, and that's a good thing!

The new VFR is an awe inspiring bike, with impressive new technology that is user friendly and practical. More than that, it's a kick-ass sports machine, a bike for a serious, experienced rider to enjoy. Bring on the paddle-shifter version! *IM*

2010 HONDA VFR1200F

SUGGESTED RETAIL PRICE | \$18,299

COLOURS | Candy Red

ENGINE TYPE | four-stroke, liquid-cooled, four-valves-per-cylinder, SOHC, asymmetrical layout
76-degree vee four-cylinder

DISPLACEMENT | 1,237cc

BORE x STROKE | 81.0 x 60.0mm

COMPRESSION RATIO | 12 : 1

HORSEPOWER | 149.2hp @ 10,000rpm, tested on Dynojet Dyno

TORQUE | 84.6 ft./lbs., @ 8,450rpm, tested on Dynojet Dyno

FUEL DELIVERY | 44mm throttle bodies, 12-hole injectors, PGM-FI, throttle by wire

EXHAUST | stainless steel, 4 into 2 into 1 into 2

TRANSMISSION | Six-speed, shaft final drive

CLUTCH | slipper type

FRAME | aluminum alloy perimeter

SWINGARM | Pro-Arm single-sided, incorporating shaft final drive

WEIGHT | 268 kg/591 lbs. (Claimed, wet, full tank)

RAKE/TRAIL | 25.5/4.0 inches

WHEELBASE | 1545 mm/60.8 inches

SEAT HEIGHT | 815 mm/32.1 inches

FRONT SUSPENSION | Showa inverted 43mm cartridge fork, adjustable for rebound and preload, 120 mm/4.7 inches of travel (claimed)

REAR SUSPENSION | Showa single rear Pro-Link gas-charged monoshock, remote preload and rebound adjustability 130 mm/5.1 inches of travel (claimed)

FRONT BRAKE | double semi-floating 320mm steel rotors, radial mount, six-piston, four-pad Nissin callipers, Nissin remote mount radial master cylinder. Front and rear brakes together incorporate Combined Braking System (CBS) with Anti Lock Braking System (ABS)

REAR BRAKE | single direct mount 276 mm steel rotor, two piston calliper, Nissin master cylinder

FRONT TIRE | Dunlop Sportmax RoadSmart 120/70 ZR 17 M/C 53W

REAR TIRE | Dunlop Sportmax RoadSmart 190/55 ZR 17 M/C 75W

FUEL CAPACITY | 18.5 L