

Will the Spirit move you? Colorado-based Ecosse Moto Works hopes to build a limited number of the proposed 200-horsepower, 265-pound machines with the help of England's top Formula One designers.

SMALLER, LIGHTER, FASTER

JUST AS MBAs WITH a business plan may knock on venture capital's door, today engineers can design a virtual motorcycle on SolidWorks, structure by Finite Element Analysis and internal and external aerodynamics by Computational Fluid Dynamics.

Engineers—all with Formula One car experience—working alongside an American husband-and-wife team with business and management backgrounds have designed a virtual motorcycle of revolutionary claimed capabilities. This is the Ecosse Spirit ES1, to be produced in an initial

build of 10 as a 1000cc track-day sportbike.

How do 265 pounds and 200 horsepower sound? Peppy performance for the sport-minded enthusiast? Knowing what we know, the 200 hp sounds like the easy part. But 265 pounds?

Richard Glover, one of the engineers, told me weight savings begins with “deleting the frame.” A dual-wishbone (auto

Ultra-narrow mid-section means the rider can tuck in fully behind the fairing, improving aerodynamics—and therefore top speed—considerably.

term for swingarm) front suspension attaches directly to the engine, while a carbon rear swingarm attaches to the gearbox. More is saved by shortening the path stresses must take. Conventional bikes carry front wheel forces up a slender fork (where stiffness equals weight) to a high steering head, then back down by chassis members to the major masses. The ES1's connection is direct, therefore shorter and lighter. Structural parts are carbon rather than metals. Suspension is by torsion bars, front and rear.

Further claims are a 28 percent reduction in frontal area and aero drag 50 percent less than that of a current Superbike. This is achieved by lowering and “narrowing” the rider. On conventional bikes, the footpegs are pushed to a wide stance by swingarm

and driveline, and cornering clearance then pushes them up high. The rider goes up with them unless he/she can survive severe folding.

On the ES1, footpegs are placed close together by narrowing the carbon swingarm at the front, then sending power by chain, up the machine's vertical central

Carbon-fiber swingarm carries unusual chain drive system that features five sprockets, with a centrally mounted countershaft that allows the rider's feet to tuck in much tighter to the bike.



Where's the chassis? You're looking at it. The inline-Four engine's cases are structural and carry mounts for the swingarm and “double-wishbone” alternative front suspension.

plane instead of offset from it. A jackshaft atop the swingarm transmits that power to a drive sprocket offset to turn a conventional rear wheel sprocket. With the first chain in the center, the rider's feet can come closer together, narrowing the lower part of the machine. Narrowed footpeg stance allows the pegs—and the rider with them—to drop down, reducing frontal area from the top as well.

Who is paying? Don and Wendy Atchison, he a mechanical engineer and MBA, she who directs Ecosse marketing, told me

“Friends.” For now.”

How would weight distribution be changed, if necessary? Every year in MotoGP at least one team gets this wrong and has to move its engine posi-

tion—not easy when there is no chassis.

“If we go racing—and I hope we do—our light weight would have to be ballasted to the class minimum,” replied Don. “We would simply move that ballast as necessary.”

What engine? It would be a transverse, inline-Four, made for the job in England, presumably by one of many capable organizations there. There are no engine details yet because, as Glover says, “It is a chassis project.”

Simulation is the lifeblood of F-1, and here it is, applied to a virtual motorcycle. Let it become real.—Kevin Cameron



2008 STREET TRIP

Take one part Speed Triple, one part Daytona 675, sprinkle in a little spirit of a vintage 650cc Bonneville and you get Hinckley's latest creation: the Street Triple. Like the original Bonnie did way back in '59, this lightweight, upright middleweight should have all the right ingredients for sporting nirvana, just expressed in fully modern terms.

Essentially a stripped 675, the compact Triple will make slightly less peak power than the 108-hp Daytona due to a different exhaust system. To help reduce cost—at \$7999, the Street Triple is Triumph's least-expensive sportbike—suspension adjustment is limited to rear spring preload. Also, standard-mount four-piston front brake calipers replace the 675's radial units. Dry weight is expected to increase slightly over the 394 pounds of its fully faired brethren.

A priority reservation program for customers to place pre-orders began on July 1 (visit www.triumphstreettriple.com), with bikes expected to arrive in October.

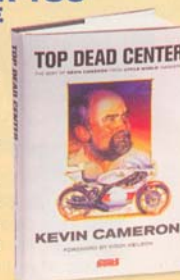
—Blake Conner



etc.

TDC FOR YOU AND ME

Clear your schedule, tune up your brain and get ready for a major trip through motorcycle racing and technical history, *Top Dead Center: The Best of Kevin Cameron*, is here. With writings selected from his 35-year career with both *Cycle* and *Cycle World*, the 320-page hardcover is a compendium of his best work and includes photos from his personal collection. Available signed for \$37 or unsigned for \$27. Purchase a copy by visiting shop.cycleworld.com.



SHOWTIME!

With the 2008 model year coming up fast, there is no better place to see all the exciting new models from the major manufacturers than at one of the *Cycle World* International Motorcycle Shows. Now in its 27th year, the shows series kicks off its 13-city tour on October 26 in Phoenix, at the University of Phoenix Stadium, and will conclude February 10, 2008, in Chicago at the Donald E. Stephens Convention Center. For more information, visit www.cycleworld.com.

LEASE YOUR APRILIA

In an effort to broaden the appeal of its products, Aprilia USA has added leasing options on new 2007 machines. The 24-, 36- and 48-month lease terms can even be secured without a down payment and in many cases for a lower monthly outlay than with a traditional installment loan. Customers can also include accessories in the lease. “We believe that leasing has major appeal to riders who are interested in high-end Italian motorcycles like Aprilia,” says VP of Marketing Mike Kull. “Leasing provides the customer with a lot of flexibility and options. They can upgrade to the newest models when the lease is up without the challenges of selling a used bike or haggling over a trade-in.”