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# Remaking Husqvarna

The all-new TR650 dual-sport, an upcoming street-legal two-stroke and more 900 Twins aim to get a Husky in your garage

BY STEVE ANDERSON

HUSQVARNA HISTORY REACHES BACK 300 YEARS TO A SWEDISH ARSENAL founded in 1689, and it's arguably the oldest motorcycle company—as long as you add the fillip, “in continuous manufacture,” as any executive would. After starting production of two-wheelers in 1903, Husky, located in neutral Sweden, didn't let mere World Wars get in the way of building bikes, and there were no terminal bankruptcies and later restarts as with a few other famous brands.

But a recent visit to the factory also confirmed how new in some ways the company is. The thriving Husqvarna of the Sixties through the early Eighties—of Steve McQueen, Malcolm Smith and *On Any Sunday* fame, of World MX championships and Baja victories, of the company that sold as many as 12,000 dirtbikes a year in the U.S.—largely disappeared when Cagiva bought the motorcycle business from the same-named Swedish conglomerate in 1987 and relocated it south to Varese, Italy. A disastrous transition of the spare-parts supply, among other problems, almost killed the brand in America. Claudio Castiglioni, the one-time owner of Cagiva, MV Agusta and Ducati, shaped the re-located company in the image of his others: Design and competition were emphasized, and some of the more “boring” disciplines such as manufacturing, quality and distribution lagged.

Loosely based on BMW's G650 Single, the TR650 sees a very significant power boost over the BMW version (from 48 to 58 horsepower), and also gets a Husky-specific frame and bodywork.



Husky's Nuda R is powered by a pumped-up, 898cc version of the BMW F800 parallel-Twin, but revisions and retuning are so thorough that the two engines seem completely unrelated.

When Castiglioni's empire was on its last leg in 2007, with Ducati long ago sold to investors and the rest overwhelmed by debt, BMW acquired Husqvarna. BMW's stated intent was to build the brand and have it complement BMW motorcycles in the same way that Mini does BMW's cars. This time, though, the company could stay put, with Varese remaining its home.

Significant progress has been made over the past five years. The latest 250cc and 310cc off-road four-stroke Singles share a modern, lightweight engine design that has been made significantly more powerful for the 2013 models. Two-stroke 125 motocrossers and 300cc off-road bikes play where much of the competition doesn't, and the slightly weird 449cc enduro inherited from

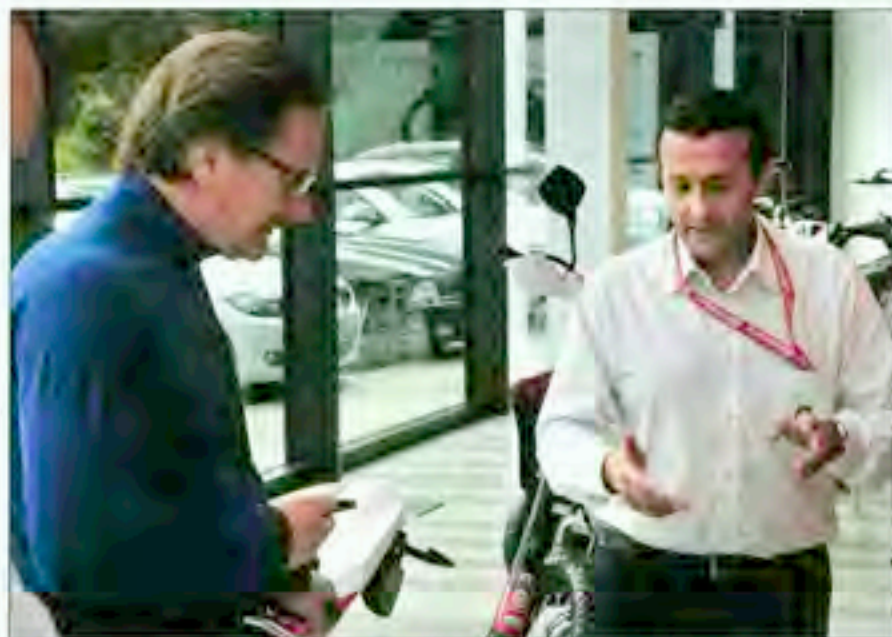
BMW has grown into a good Husky dual-sport bike. The Nuda is the brand's first really big streetbike in more than half a century (see sidebar, p. 52).

More significant are the things that you can't see. The production line at the factory is laid out to Toyota's innovative Just In Time standards, using statistical quality-control techniques to reduce manufacturing defects. Every safety-related bolt on every motorcycle is tightened with a torque-and-angle-recording electronic torque wrench, with the information sent wirelessly to a server that tags that information to a file based on each bike's VIN. The engineering group is stronger than ever, with cross-fertilization from the parent company. As an example, the new head of engine engineering is Ralf Kleid, whose former job was working in BMW's Formula-1 engine program. Spare parts not in stock in the U.S. are delivered via airfreight through BMW's automotive parts distribution center with no rush-delivery charges.

Husqvarna President Klaus Allisat and other company officials laid out a road map to the company's future during our visit. Biggest point? “We will not be an off-road-only company,” said Allisat. While off-road motorcycles will be the core

Coming to America this fall: all-new Husky TR650 single-cylinder dual-sport. Terra model (pictured) features 21/18-inch wheels. A more street-oriented Strada will come equipped with 19/17-inchers. A full line of adventure-type accessories will be available for both models.





The author chats with Raffaele Zaccagnini, Husqvarna's head of design. Zaccagnini's team is responsible for penning the Nuda and new TR650 models, as well as the Moab and Baja concepts from which production Singles were derived.

offering, the limited opportunities for pure off-road motorcycle market growth means that a broader range must be embraced, and some models will be related to BMW products.

The Nuda is the first of these, with both its engine and chassis derived from the BMW F800, but significantly changed and sportier. The Nuda is not coming to the U.S. for now, but the next street product will be: the TR650 Single in Strada and Terra versions. Loosely based on BMW's G650 Single, the TR650 sees a very significant power boost over the BMW version (from 48 to 58 horsepower) and also gets a Husky-specific frame and bodywork. The more dual-purpose-oriented version, the Terra, will come with longer suspension travel and—at the insistence of the American Husqvarna distributor—21-inch front and 18-inch rear wire-spoke-wheels to allow the broadest selection of tires for street or off-road use. In contrast, the Strada will be a little lower, with 19-inch and 17-inch cast wheels.

Both models will be aimed more at

But perhaps the most exciting future product hinted at by both Allisat and Husky marketing director Max Kalbfell was an **emissions-legal two-stroke Single**.

pavement than dirt: The current low value of the Euro, as well as BMW's Asian sourcing strategy for some components, will allow these machines to be priced very attractively relative to such competition as Kawasaki's KLR650, and they should cost far less than any KTM of like displacement.

Similarly, the 900cc Twin family will be extended in the future, with the next model more broadly purposed than the streetfighter-style Nuda, likely with mild dual-sport/adventure-bike positioning. The greater volume potential it brings may justify the expense of U.S. certification for the 900cc platform, thus allowing both the adventure version and the Nuda to come stateside.

But perhaps the most exciting future product hinted at by both Allisat and Husky marketing director Max

Kalbfell was an emissions-legal two-stroke Single, Rotax, which makes the 800cc and 900cc Twins for BMW and Husqvarna, has also been developing low-emissions two-strokes for its parent company's Ski-Doo snowmobiles, and its 600cc E-Tec direct-injection two-stroke Twin is currently in production. A single-cylinder slice from that two-stroke would make a very interesting 300cc engine for an off-road or dual-sport motorcycle. If the strong hints dropped by Husky executives prove true, it may not be too long before something like that enters production—whoever makes the engine.

A lightweight and powerful street-legal two-stroke enduro? We can only hope, and perhaps such a machine may even have polished-aluminum knee-grips on its fuel tank. Even if it doesn't, we're sure Steve McQueen would approve. □

# NUDA

Husky's big Twin is so much fun it's illegal in the U.S. (at least for now)

Somehow, in the process of giving the Husqvarna version of the Rotax/BMW F800 engine an extra 100cc, the engineers responsible did more: They gave it a character transplant. Ride Husky's Nuda and you'd swear it wasn't powered by anything derived from the somewhat staid parallel-Twin of the BMW F800. No, this engine has a syncopated growl as it lunges for redline and feels much more like a particularly smooth-running Ducati V-Twin than any typical parallel-Twin. It accelerates hard and long, and the exhaust note booms as though the engine were wearing a set of Termignoni racing pipes (thank friendly Italian TÜV inspectors and a "smart" ECU-controlled exhaust valve that recognizes sound tests).

But the Nuda is so much more than just a barky exhaust note. Its engine was given the classic hot-rod treatment: more bore (plus 2mm to 84), more stroke (plus 5.4mm to 81), more compression (up a full point to 13.0:1), bigger valves (plus 1mm). Then there's the alchemist's trick: The crankshaft has been given a 45-degree twist, offsetting the crankpins and banishing the symmetrical firing order of the BMW 360-degree engine. Instead,

the firing order becomes exactly that of a Harley-Davidson, and the engine offers an all-new feel. Output jumps by more than 20 horsepower to a claimed 105.

Similarly, what looks like a GS frame isn't, at least not quite. While most of the structure is the same, a bigger steering-head is re-angled to a steeper 24.5 degrees and moved rearward, shortening the wheelbase from 62.1 inches to 58.9. Further, the BMW swingarm casting is ma-



*"R" is for red: Nuda R gets brighter color and higher-spec suspension. Think of it as a mega-supermoto with dirtbike-like handling adapted to the street. It's quick, light-feeling and corners beautifully. There are no current plans to offer the Nuda in the States, but an adventure model based on the same platform is likely.*



chined differently to offer a more rigid coupling with the frame. The overall result is a 30 percent increase in torsional stiffness. The rest of the bike is designed to look much like one of Husky's supermoto machines, and the in-command riding position is almost pure dirtbike. The seat is tall and skinny (hint: not designed for touring). Suspension travel is long at more than eight inches in front and seven inches in the back. The result is a claimed-429-

pound machine fully fueled that flies on a backroad. The R version features a length-adjustable Ohlins shock, and longer fork tubes let you raise the bike another half-inch.

But don't get too excited; Husky doesn't believe there's a large enough market in the U.S. to justify redesigning the Nuda's exhaust system and paying for emissions certification, at least not until there are other members in this twin-cylinder family. Perhaps in 2014, alongside an adventure Twin? —Steve Anderson

## Erzberg Nuda

When is a Nuda not a Nuda? When the supermoto-style, Europe-only, 898cc Husqvarna parallel-Twin gets a full street-to-dirt facelift to do battle at Austria's Erzberg Rodeo, far and away the toughest off-road challenge on planet Earth, that's when. And who better to manage the makeover than Germany's Black Forest-based adventure-touring powerhouse, Touratech? The "extremely modified" end result seen here is officially known as the Nuda-X-Cross.

Touratech's Lars Würdemann headed up the conversion, fitting the usual engine, hand and radiator guards, serrated off-road footpegs and Pirelli-shod 21/18-inch wire-spoke wheels. The suspension was modified, as well. Originally developed for the BMW F800GS, the long-travel fork and shock were built by Tractive in Europe. AC Schnitzer fabricated the lightly muffled exhaust.

Both Würdemann and former European and German national enduro champion Marco Straubel competed in Erzberg's General Iron Road Prologue, an 8.3-mile dirt-road sprint, this past June, finishing second and fourth in the Twins class.

"It was an incredible feeling to fly up the mountain with such a machine," said Straubel.

—Matthew Miles

