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ON THE COVER: Jim Holley was told to kiss the CR300's front fender. He tried, but almost got his face slapped. Photo by The Lump. Design by DeWest. Grayson Goodman holeshots Daytona on this page. Separation by Valley Film.

Husaberg, Husqvarna & Suzuki fight over the middle ground

By the DIRT BIKE Staff

They were everywhere. Every time we stopped on the trail we could count to ten and suddenly a thumper guy would appear. They seem to have some sort of built-in guidance system that tells them whenever there are other four-strokes in the vicinity. According to the code of thumper honor, they have to seek out all other thumper guys and talk valves, cams and things whenever they have the chance.

Boy, did we offer them a chance; we were right in the middle of a 350 four-stroke shootout. What was strange, though, was that instead of asking questions, they would tell *us* about the bikes. They would always



go through the exact same steps. First, they would come up to the Suzuki DR350 and look at it approvingly. "That there is a great idea," they'd say. "It's like a 250cc four-stroke, only with a little more grunt." Then they'd turn around and look at the Husqvarna 350 or the Husaberg 350. "Now why

MIDDLE



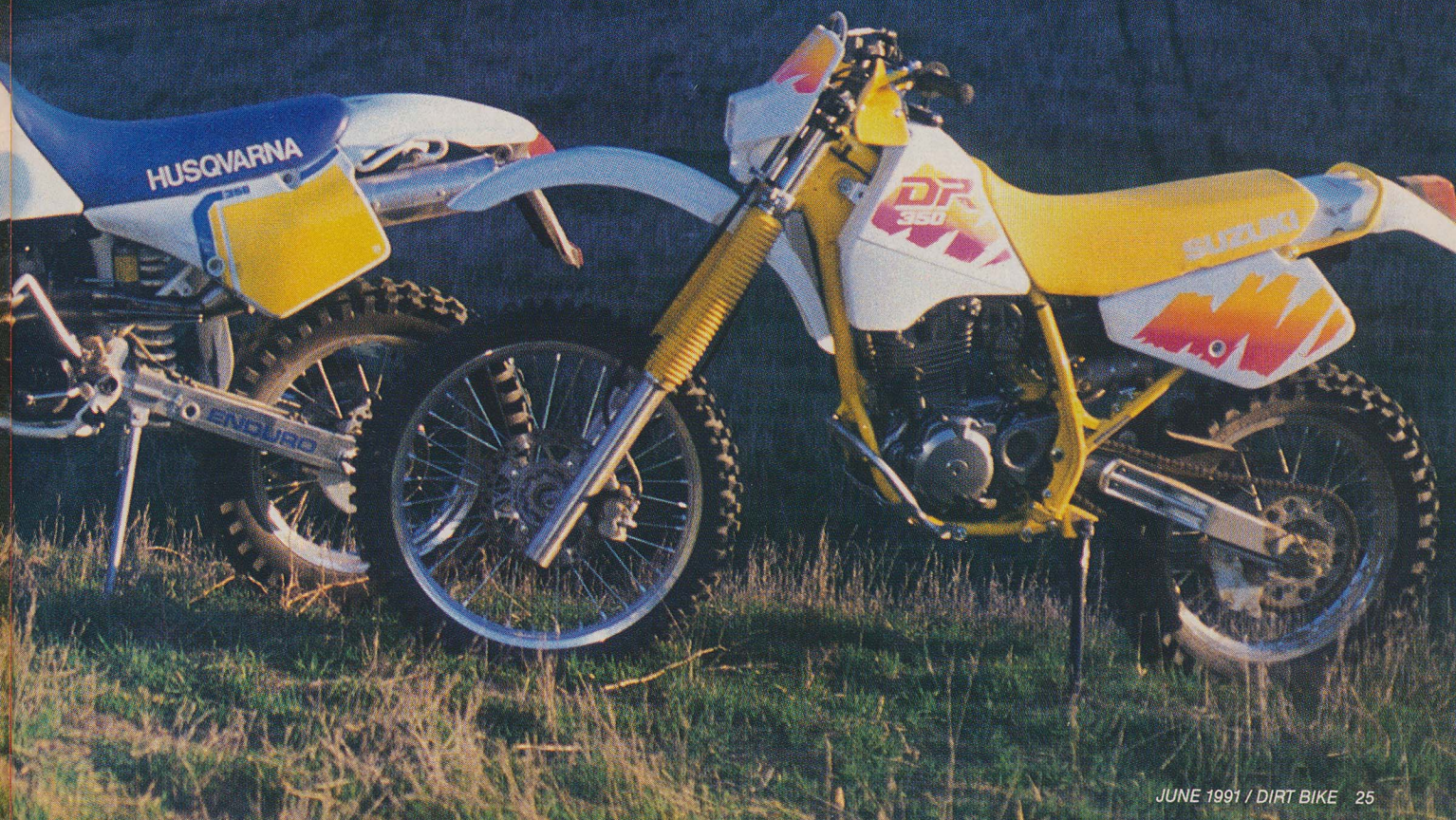


MANIA

does this thing exist? It's the same bike as a big Open-class thumper; it just has less power.' We would smile and agree with whatever those guys said. The Surgeon General has determined that talking with them too much can be dangerous.

Somewhere, these guys got the idea that

it's better to make a big bike out of a little bike than a little bike out of a big bike. Sure, there's a fundamental basis in logic there—more power with the same weight, that sort of thing—but in the case of the middle-weight 350 four-strokes the logic doesn't hold up. The Suzuki DR350 is a bike that



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shares the same basic engine and chassis with its 250cc little brother, so you would assume that it would be the lightest of the three—it's the heaviest. The Husaberg 350 is a little brother to the elite Husaberg 501, and it's the lightest of the three. The Husqvarna is a downscaled version of the Husqvarna 610, but it isn't very downscaled. It weighs more than the 610.

What's that? None of this makes sense? Nobody said it has to make sense.

We've assembled these three thumpers to look for the truth, if there is any such thing. Are there any advantages to the middle-weight thumpers? The answer lies in comparing the Husaberg 350 with the Husqvarna 350 WXE and the Suzuki DR350. ATK makes a non-EPA-approved 350—a downsized version of the 604—which we tested in the October '90 issue of *DB*. Unfortunately, we couldn't get ahold of one of the new fuel-injected models in time for this shootout.

WHAT THEY ARE

When the Suzuki DR350 came to this country last year, it was greeted with much enthusiasm—perhaps a little too much. There was a hardcore group of Honda XR350 fans who had been left bikeless for three long years, and they expected a lot from the DR. Initial press reaction was good, and the bike enjoyed instant acceptance.

The Suzuki is an odd combination of old and new technology. Parts of the engine came from the old DR250 of the early '80s. On the other hand, some technology was

borrowed from the GSX-R street bike line. Like the street bikes, the DR uses an essentially air-cooled engine but with oil jets within the engine designed to cool specific hot spots. The DR uses a six-speed gearbox and a dry-sump lubrication system.

In the chassis department, the DR is a little less high-tech. The fork is a dated non-cartridge, rightside-up type, despite some early misinformation that had many buyers thinking it had a cartridge design. The shock has a remote reservoir, also something we haven't seen in a while. For '91 the Suzuki is unchanged, aside from BNG (bold new graphics).

Husqvarna's new 350 is not very different from the 510, or even this year's 610. It has a smaller bore and a shorter stroke, and this year the water pump has been moved higher on the engine to keep it out of harm's way. Other than that, the 350 engine will look very familiar to riders who are used to the Husky 510. Like its big brother, the 350 uses an unconventional oiling system. Instead of having an oil pump supply lubrication to the top-end, the engine uses the pressurization of the crankcase to do the job. When the piston goes down, the pressure in the crankcase goes up and that makes for a pretty good pump. It's a simple, effective and lightweight way of getting the task done.

The frame on the Husky was designed for a European dual-purpose bike. The underside of the rear fender is braced with tubing in order to support a full taillight/license

Is bigger better, or do the best things come in small packages? For people who don't have a clue, there's the middle-weight thumper class.

plate assembly, even though the U.S. version has only a small unit in place. Suspension is by White Power at both ends, although all spring rates and valving are to Husqvarna's specs.

If you're familiar with the Husqvarna you'll be familiar with the Husaberg, too, even though the Husaberg is a new motorcycle. For those of you who have been sleeping in an ice cave for the last year, Husaberg is a Swedish company that came into being shortly after Husqvarna left Sweden for Italy. Some of the suddenly unemployed Husqvarna R&D people (like ISDE perennial Thomas Gustavsson) simply started up their own company. The first bike was the Husaberg 510, which not surprisingly bore a strong resemblance to the Husqvarna 510. It was, after all, designed by the same people to do the same thing. Now the 350 comes on the scene. The bike was made originally to compete in the International Six-Day Enduro, which has had a small-displacement (below 350cc) four-stroke class since 1987. With the success of the DR350, the people at Husaberg decided that there might be a market for the small thumper. So here it is.

Like the Husky, the Husaberg's engine is a four-valve thumper that uses one of the ultra-small 10mm spark plugs to make room for more intake and exhaust valve area in



the combustion chamber. Like the Husky, the Husaberg uses the piston to pump the oil to the top-end. Like the Husky, the Husaberg's water pump is driven off the cam rather than off the crankshaft, so that the hoses are less likely to be punctured by brush. In fact, so much of the Husaberg is similar to the Husky, if you painted it black it would be hard to tell the difference.

Unlike the Husky, though, the Husaberg uses a fairly conventional frame design. Where the Husky uses a weird design with a massive backbone that runs from the steering head all the way to the center of the swing-arm, the Husaberg uses the same type of wishbone frame that the Japanese use on most of their bikes.

One unusual aspect of the Husaberg is its air filter, which is up where the gas tank should be. Air passes from the filter through the hollow frame and back to the carburetor. It's kind of like an ATK's setup. To make up for the lost gas tank capacity, the fuel tank goes way down on the right side of the bike—almost all the way down to the footpeg. Of course, that creates a problem because the fuel petcock is below the carb and gas rarely flows uphill. A fuel pump is employed which—you guessed it—runs off the pressure changes in the cases to get its job done. Darn clever, those Swedes.

THUMPING WICKED THIS WAY COMES

Even with all their mechanical oddities, all three bikes were made to do the same thing—or were they? Once you get them out on the trail, you begin to wonder.

The king of the low-end grunt is the Suzuki. It has a gentle hit right off the bottom that makes the machine fun to ride and easy

to play on. After that initial burst, though, it doesn't seem willing to do that much—it just makes more noise as the revs climb. You quickly learn to upshift earlier and earlier. It is, of course, easy to get carried away. The bike is only a 350cc four-stroke, and it will run out of beans if you let the revs drop too low.

At the other end of the universe (at least as far as 350cc four-strokes go) is the Husaberg. It's a screamer. The Swedish motor does virtually all of its work at high rpm. Forget that you're on a four-stroke and just torture the Husaberg engine to get the most out of it. It loves it. The 'Berg revs a lot higher than the Suzuki, and because rpm is a sure recipe for horsepower it will outrun the Suzuki quite easily. If you let the revs drop, though, the Suzuki will come out on top. Which is better? We don't know. It depends on where you're going and what you do when you get there. It's obvious that the Husaberg is more of a racer, and the Suzuki is more of a trail bike. The Husaberg is faster, but not necessarily any more fun.

Husqvarna didn't know which powerband was better either, so the Husky is a combination of the two. It doesn't have as much low-end as the Suzuki and it doesn't rev out like the 'Berg; it just kind of finds the middle road. The Husky delivers its power so smoothly that it feels slower. Well, come to think of it, it *is* slower. Keep in mind, though, that these are 350 thumpers—none of them is Open-MX holeshoot material. If you're looking for that, look elsewhere.

What all three do offer in the engine department is tractability. In those slippery, off-camber situations where massive horse-

With ties to Japan, Italy and Sweden, the 350 class is an odd group.

power is only a liability, the midsize thumpers all are excellent. None has a tendency to stall, none is difficult to control and all three could find traction if they had to climb a giant water slide on bald tires.

THE AGE OF SPECIALIZATION

What's really strange here is that we are looking at a class that didn't even exist two years ago. You would assume that all three bikes came into being at the same time for the same purpose—not so. The three bikes are designed for very different applications.

The fact that the Husaberg is a racer goes beyond its high-revving engine. When you ride it, you *want* to race. The handlebar is low and the seat is high—you sit on top of the bike, not in it. On tight trails the bike seems to develop an easy rhythm, slicing through the trees and working better and better as it goes faster and faster. Both the other bikes have a speed limit in the woods. The Suzuki is limited by a strange-handling front end. At full-race speeds, the DR doesn't want to go where it's pointed. The front end feels light and doesn't bite. It handles better and better as it goes slower and slower.

As for the Husky, it just wants to go straight. Made in Italy or not, the machine handles like a true yellow and blue Hoosier. That means it's stable but not big on direction changes. Like the Suzuki, it handles fairly well at trail-riding speed, but once you get above that, the bike seems massive and clumsy. The Husqvarna feels like it's the heaviest bike of the three—in fact, it isn't; the Suzuki is. The DR strained the DB scales

the most with a dry weight of 273. The Husky was two pounds lighter at 271, and the Husaberg made both the other machines seem like tankers. The Swedish machine weighed in at 246 pounds—that's the exact same as an RMX250. Frankly, that explains a lot about how the three bikes differ. No matter how good the Suzuki and Husqvarna handle, they can't give up 20-odd pounds and still hope to be competitive.

Still, it's interesting how horsepower affects handling. Even though the DR and the Husky weigh as much as (or more than) full-on 600cc thumpers, they still feel lighter. That's because a lot of the handling problems that we attribute to weight actually are products of horsepower. Want to make your bike handle better? Just make it slower (there are a lot of ways to do that)!



350 4-STROKE SHOOTOUT



SPRINGS & THINGS

None of these bikes have what you'd call brilliant suspension. Once again, the Husaberg ranks on top of the heap if going fast is important to you. Both the fork and the shock are stiffer than those of the other two machines. They still aren't stiff, mind you, but you would think they are if you get used to a Husky or a DR. The Husaberg is a race bike and it feels like one in every way, including suspension.

The other two are trail bikes and they feel like it in every way, especially suspension. The Husqvarna is a soft, cushy motorcycle that sucks up every pine needle and twig lying on the trail. Of course, anything larger than a twig or a pine needle might be a problem. When it comes to hitting whoops and rocks at race speed, forget it—the Husky was not made for that. The Suzuki is soft, too, but not to the same degree as the Husky. It doesn't bottom, but it does kind of gush all over the trail in the gnarly stuff. Both the Husky and the Suzuki were designed for casual riding at a casual pace. If you intend to race them, then intend to modify them.

FALSE STARTS

You've heard all about four-stroke starting drills—forget them. We've found that there is no drill that is 100 percent foolproof. Sometimes one way will work, sometimes

	HUSABERG 350	SUZUKI DR350	HUSQVARNA 350WXE
Engine type	Four-valve, liquid-cooled 4-stroke	Four-valve, air-cooled 4-stroke	Four-valve, liquid-cooled 4-stroke
Displacement	349cc	349cc	349cc
Bore and stroke	86.0mm×60.2mm	79.0mm×71.2mm	84.0mm×64.0mm
Carburetion	38mm Dellorto	33mm Mikuni	34mm Dellorto
Fuel tank capacity	2.2 gal. (8.5L)	2.5 gal. (9.2L)	2.4 gal. (9.0L)
Gearing	14/48	14/47	13/50
Lighting coil	Yes	Yes	Yes
Spark arrester	Yes	Yes	Yes
EPA-legal	No	Yes	Yes
Running weight			
w/no fuel	246 lb.	273 lb.	271 lb.
Wheelbase	58.1 in. (1490mm)	56.5 in. (1435mm)	59.0 in. (1499mm)
Rake trail	N/A	N/A	27°/4.72 in.
Ground clearance	15.2 in. (390mm)	12.0 in. (762mm)	13.5 in. (343mm)
Seat height	37 in. (950mm)	36.2 in. (820mm)	37.0 in. (940mm)
Tire size and type:			
Front	3.00×21 Dunlop 990	3.00×21 Bridgestone ED11	90/90×21 Metzeler MXR
Rear	4.50×18 Dunlop 990	110/90×18 Bridgestone ED12	450×18 Metzeler Multi-Cross
Suspension:			
Front	White Power inverted cartridge fork, adj. comp. & reb., 11.5 in. (295mm) travel	Kayaba, adj. preload, comp. damping, 11.0 in. (279mm) travel	White Power inverted cartridge, adj. reb./comp., 11.3 in. (287mm) travel
Rear	Ohlins piggyback shock, adj. comp./reb./prel., 12.8 in. (328mm) travel	Kayaba piggyback, adj. comp./reb., 11.0 in. (279mm) travel	White Power piggyback, adj. reb./comp., 12.5 in. (318mm) travel
Country of origin	Sweden	Japan	Italy
Suggested retail price	\$5495	\$3399	\$4550
Distrib./mfr.	Husaberg America, Inc. 1305 Hwy. 61 Festus, MO 63028 (800) 748-8454	American Suzuki PO. Box 1100 Brea, CA 92621 (714) 996-7040	Cagiva North America 5 Washington Ave. Fairfield, NJ 07006 (201) 882-9141
Parts replacement cost:			
Piston	\$479.55*	\$42.81	\$202.47*
Ring(s)	17.49	40.11	41.88
Clutch plate (drive)	11.52	12.54	9.10 (8)
Clutch plate (driven)	5.76	5.02	8.88 (9)
Front sprocket	22.19	10.59	15.12
Rear sprocket	52.05	36.30	39.40
Front brake pads	35.84	37.70	31.08
Rear brake pads	30.29	24.29	31.08

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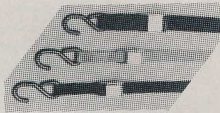
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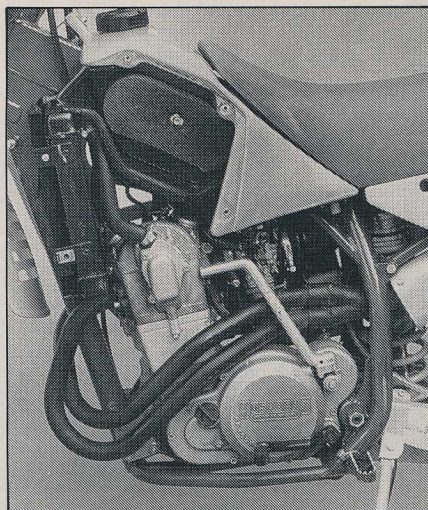


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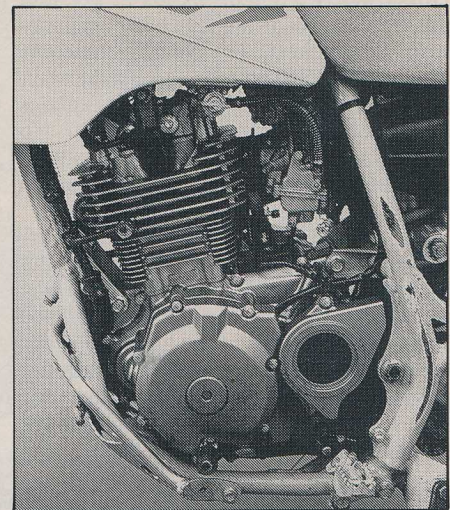
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350 4-STROKE SHOOTOUT



If it works, use it. The Husaberg is a direct descendant of the Husky engine. It also employs a high-mounted airbox, something borrowed from ATK.



It might not be liquid-cooled, but it gets the job done. The Suzuki's simplicity is its biggest sales feature.

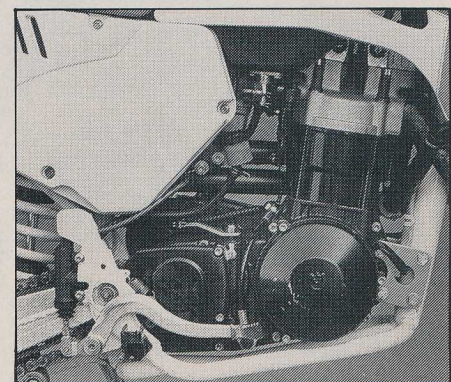
something else will work. You've just got to know what mood your bike is in. The Husky was the most consistent starter of this bunch. It has an accelerator pump in the carb, so you've got to be careful not to twist the grip when you're sitting around the garage with nothing better to do. Gas will spew into the manifold and make problems at a later date.

Even when that happened, though, the Husky generally would clean out with a few kicks and then come to life. The bike uses an automatic compression release that partially opens one exhaust valve when the kickstarter is depressed, much like a Honda XR. Unlike a Honda, the Husky's kickstarter is in a truly dumb place. We can forgive the fact that it's on the left—some people actually like that—but why it's mounted so high that it forces even tall people to stand on their tiptoes we can't understand. There's a test rider in Sweden with a 50-inch inseam who just can't figure out what we're complaining about.

The DR requires a practice kick for every real kick. You have to position the piston with the manual compression release before you give it a for-real kick. Finding the right piston position at least is easy, because the release lever automatically pops out when it's at the right point. Generally it will fire up right away but, if not, you have to follow the routine again. Sometimes it works, sometimes it doesn't. The Husaberg has the same problem with kickstarter location as the Husky. That same test rider gets around. Unlike the Husky, the 'Berg doesn't have an automatic compression release, so each kick costs a little more in terms of muscle power. Still, the Husaberg never crossed its arms and just refused to fire.

EQUALIZING FACTORS

If you're paying attention, then you've probably figured out that we like the Husaberg better than the other two. It's a racer that can be used for play riding. The other



As a 510, the Husky motor gained fans all over this country. Can you take away displacement and still have as much motorcycle?

two are play bikes that can be used for racing—but only if you have to.

Of course, the Husaberg had some advantages coming into the shootout. The DR and the Husky both are EPA-approved. That means they meet the government's 82 dB drive-by test. The Husaberg is *not* EPA-approved. It's still a very quiet motorcycle, but the other two are outright stealth models. Would the Husaberg pass the standard if the company applied? Maybe—it depends on the mood that the EPA and their equipment are in.

Another major factor is price. The Suzuki wins the money war hands down. The Euro bikes are drastically more expensive. How much is that a factor in this shootout? Not much. We can tell you how good the bikes are, but only you know how important your bank account is to you.

We do know that the Husaberg is the best motorcycle of this group. That's easy. Second place is a closer contest, but most testers preferred the Suzuki over the Husky. You can make the Suzuki or the Husky into better machines—that's been proven in the ISDE—but that's too much like work, and the Husaberg is ready to roll, no work required. □