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Big-Bang Motocrosser: Husky 500 CR







HUSQVARNA 500 CR

Those of you waiting for a big-bore Husky can jump up now. The Husky is here, it's fast and, best of all, it has the kind of horsepower you can use.

□ Year after year, Husqvarna's open-class motocrossers have been first-rate motorcycles for their time. No matter that the Swedish manufacturer hasn't conformed to the latest "trendology" from other parts of the world; riders of all skill levels have blazed around motocross tracks in winning form while going mighty fast and using little effort.

If Husqvarnas have been lacking in any measurable aspect of performance in the last few years, it has to be in peak horsepower. During that time, most manufacturers of open-class motocrossers have been embroiled in a maximum-horsepower war. During the 1982 model year, for example, Yamaha's YZ490 became the new power king after Maico inadvertently detuned the 490 Mega. That 48-horsepower YZ outclassed the '82 Husky 430' by nearly eight horsepower.

But, mind you, peak power shouldn't be confused with useful, tractable power. Those who have been around awhile know that the words "tractable" and "Husqvarna" go well together, and smooth power delivery is invaluable in slippery conditions requiring delicate control. High-horsepower bikes aren't necessarily peaky monsters, but too often manufacturers sacrifice a wide spread to get the magic peak number.

This discussion of quality horsepower invariably leads back to Husqvarna. The '82 430 CR made more power from 3000 to 5500 rpm than any other standard big-bore motocrosser dyno-tested by *Cycle*. If anything, the "small" 430 Husky held a power edge under most riding conditions. Alas, any kind of edge notwithstanding, Husqvarna knew everyone would be moving ahead with faster bikes, and Husqvarna wanted to keep up.

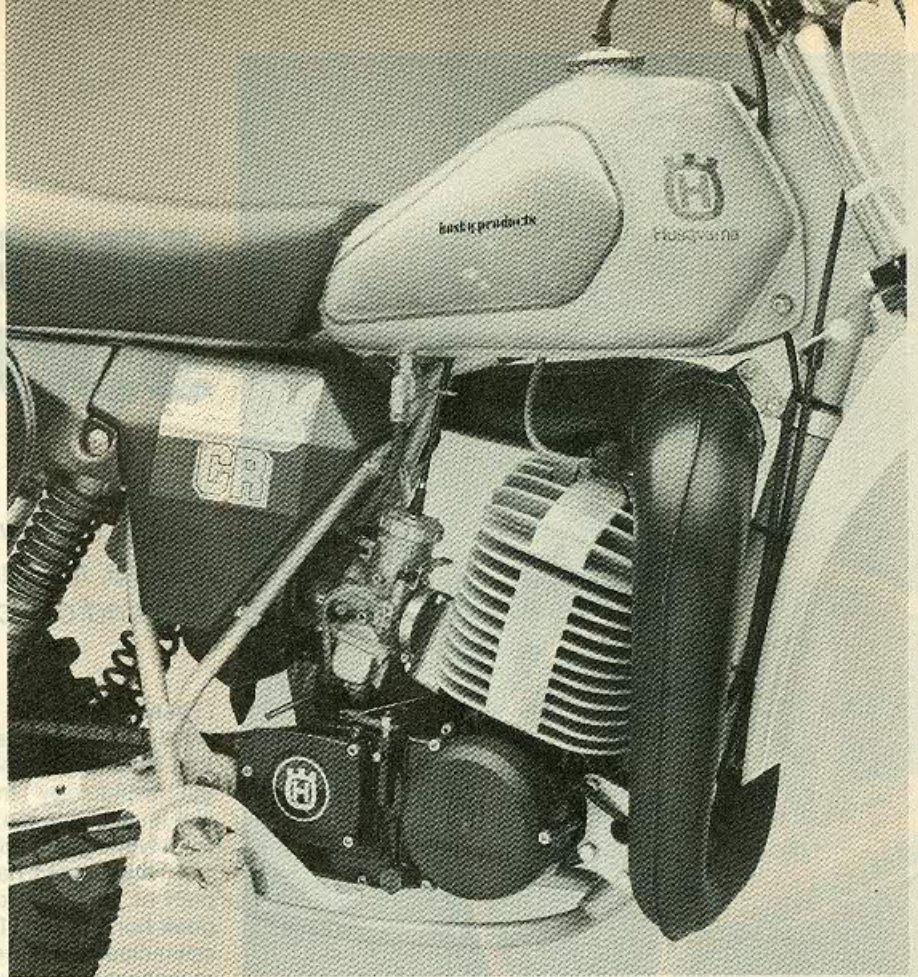
Husqvarna has made a commitment to maintain its edge in mid-range power and catch up in peak power with the introduction of the 500 CR. Increasing the stroke 10mm, Husky brought the 430 up to a full 488cc and brought the peak power level right up there with the best of them. Yet, by going after power through the simple expedient of bumping displacement, the factory did not sacrifice any of the famous Husky power delivery. The long-stroke engine's power output and spread are exceptional and help keep an awesomely fast motorcycle from being unmanageable.

Bumping displacement required other modifications—

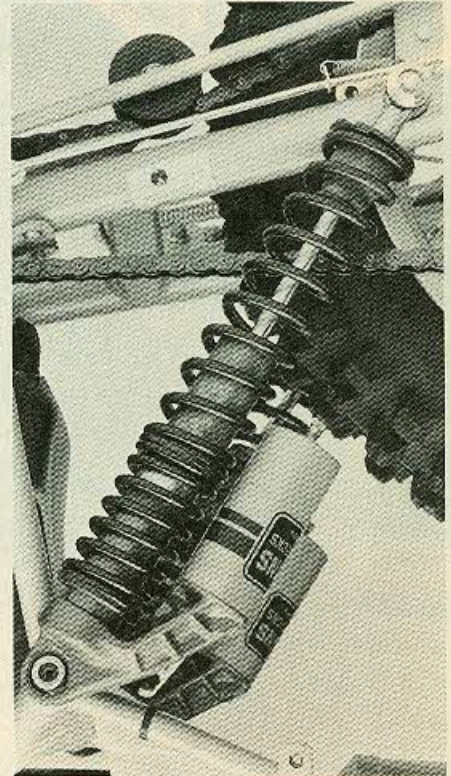
HUSQVARNA 500 CR

some simply to accommodate the size increase and some to retain reliability. Husqvarna left the chassis alone, basically, because it had proven to be more than adequately strong on the 430. The engine is a different story. The factory increased displacement strictly by stroking the 430 (not enlarging the bore). Consequently, the 500 uses a new crankshaft and longer connecting rod. Prototype 500s vibrated more than a fair amount, so the engineers worked toward minimizing the shakes; both crank wheels, for example, show evidence of having been balanced very carefully. This attention to detail has paid off: the 500 vibrates about the same as the 430—not super smooth, but not bad for a single-cylinder engine with three-and-a-third inches of stroke.

Husqvarna modified the top-end in other ways, too. The cylinder, though still composed of aluminum with the familiar pressed-in iron liner, displays new-style porting. Husky abandoned the 430's restrictive twin V-block reed assembly in favor of a single, larger-volume, eight-petal reed. Directly downstream of the reed assembly, the bridged intake port is substantially different from the 430's. The twin finger-type boost ports reaching up from the



Compared to the latest from Japan, the 500 CR can seem somewhat unresponsive. Don't let the feel confuse you; a quick check of your lap times will show you're cutting loops as quick as your best.



port window are gone. In their place, you'll find a pair of window-type ports. And where the 430 had two transfer ports, the 500 has four—two on each side. The exhaust port is substantially wider as well. A new piston, with a 10mm longer skirt, and a new cylinder head lower the 500's compression ratio

to 9.5:1, considerably less than the 430's 11.0:1.

Don't let those numbers fool you. Starting the 430 CR may have been a cinch, but cold-starting the 500 is not for the weak-kneed. Prod the kickstarter like You Ain't Gonna Take No Guff, and it'll heed you. Hesitate,

and you'll likely find your ankle protesting with a two-day dose of pain. When warm, however, the CR usually starts on the first kick. All *Cycle's* test riders preferred to start the 500 while standing on the left side and kicking with their right leg. Leaning the motorcycle toward you brings the kick-start lever closer to the ground where you can get a good stab at it.

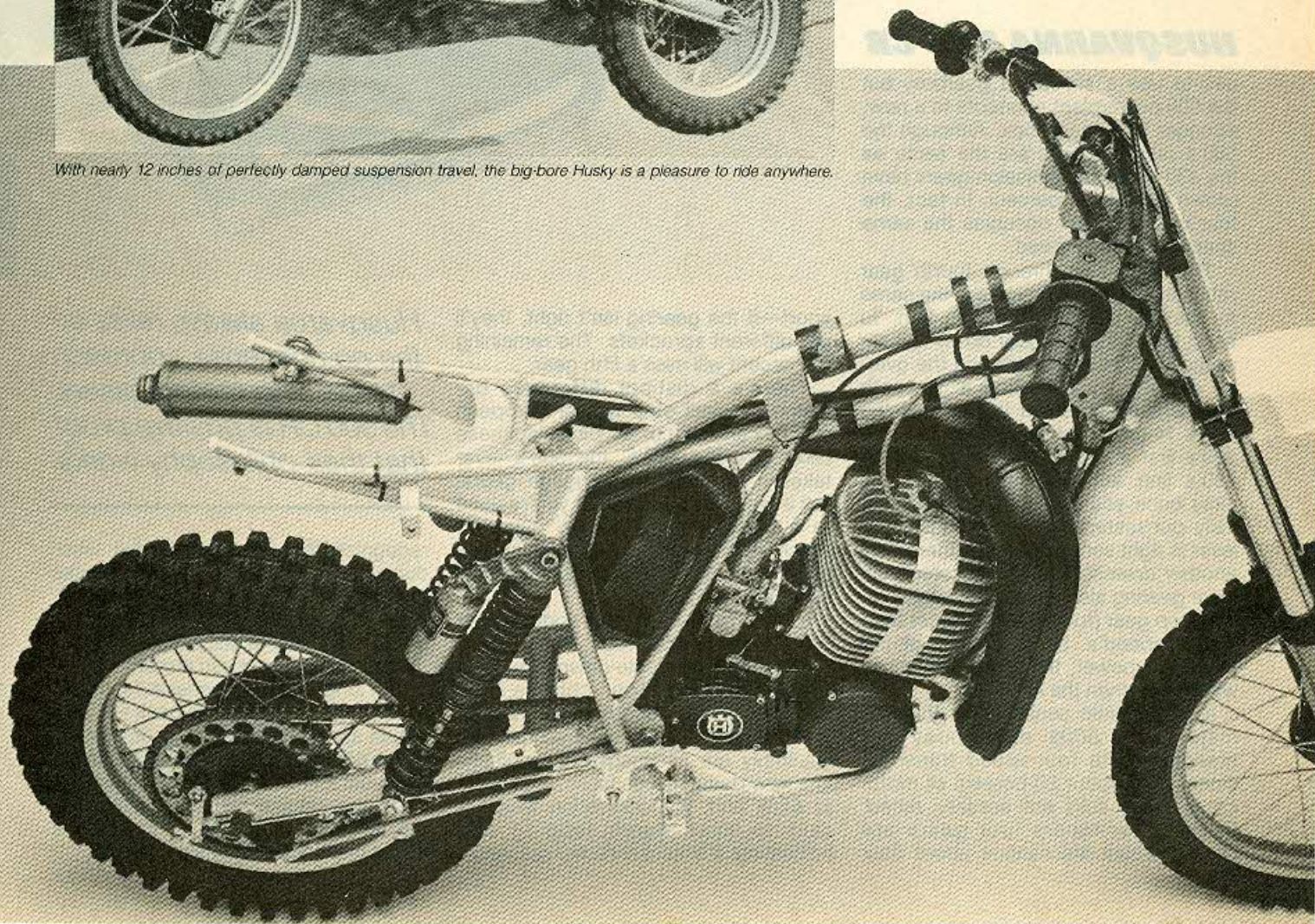
Like newer-model Husqvarna CRs, the 500 uses Mikuni carburetion. Its 44mm mixer is considerably larger than the 430's 38mm unit. Air filtration is standard for Husky—a single-element, oiled-foam filter in an easy-access airbox. To remove the filter simply pop open the sidecover, release the single clip, and the filter is in your hands. Excuses of "It's too much trouble" don't apply here.

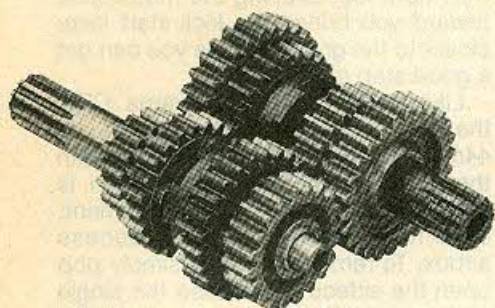
The factory-specified jetting is acceptable if you use Husqvarna's suggested lubricants. Team Husky uses Bel-Ray MC-1+ at a 50:1 ratio. Other oils mixed at higher ratios such as 24:1 will definitely require different jetting after break-in. Either way, jetting specs depend on where and how you ride.

Last year's 430 got a stronger clutch basket. With the greater power delivered by the 500, Husqvarna again strengthened the basket and fitted stiffer clutch springs. The 430 contin-

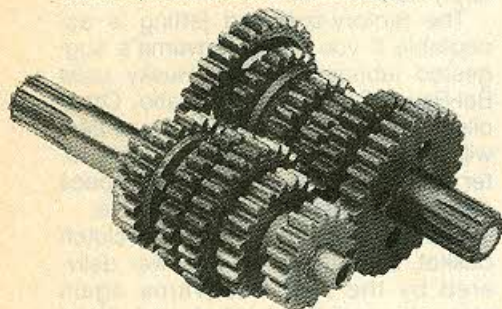


With nearly 12 inches of perfectly damped suspension travel, the big-bore Husky is a pleasure to ride anywhere.





The 500's four-speed (top) is much stronger than the 430's six-speed. Gears are 30 percent larger.

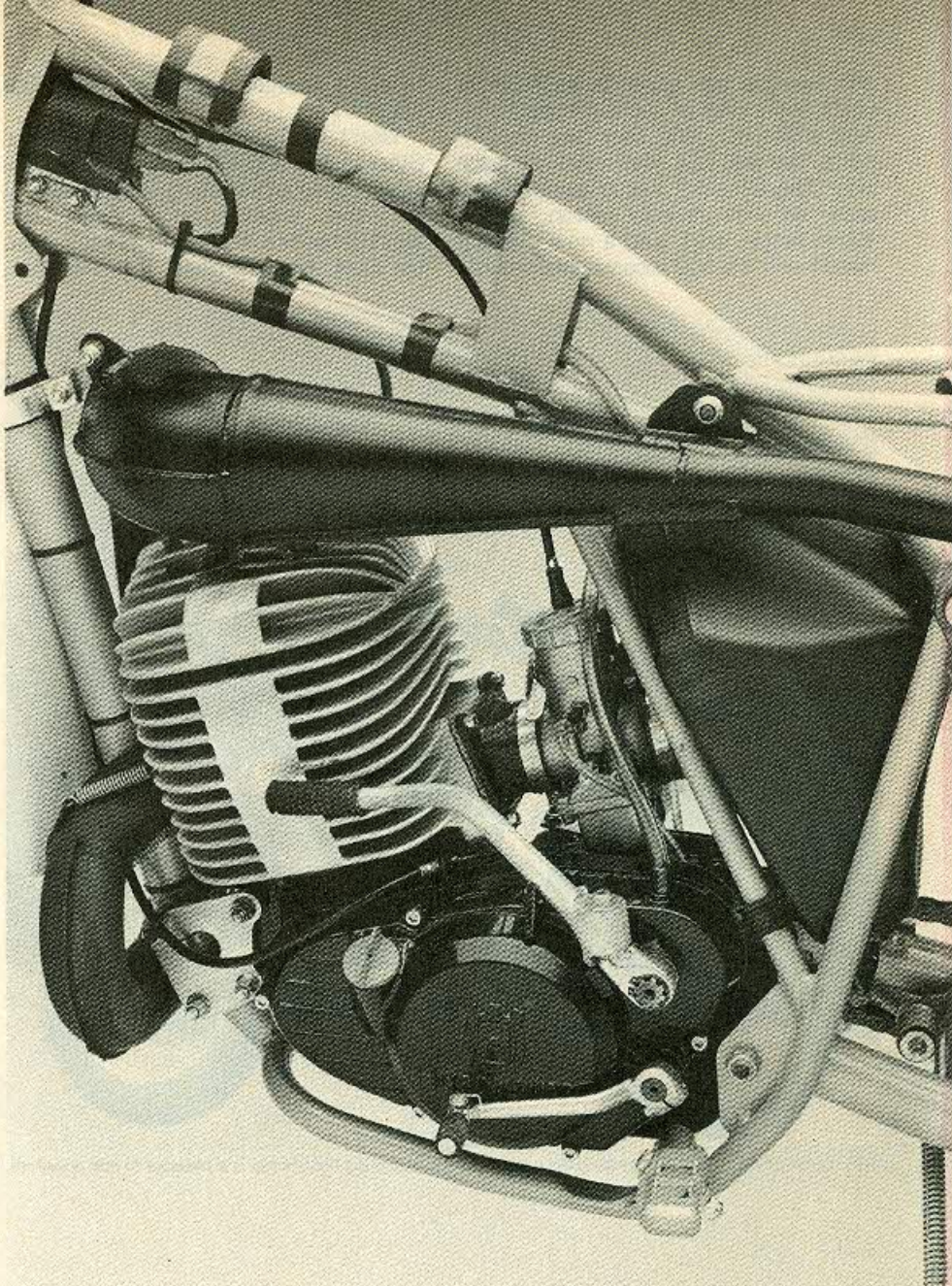


HUSQVARNA 500 CR

ues to use a six-speed gearbox, but the 500 powerplant connects to a new, stronger four-speed box. Although the 500's primary gears are the same as the 430's, the transmission gears have grown in bulk 30 percent. In fact, the four-speed cluster occupies the same space as the six-speed.

The 500's first through fourth gear ratios at the transmission are the same as the 430's second through fifth. To bring the 500's first gear down to a realistic level, Husky shortened the overall gearing by installing a 12-tooth countershaft sprocket in place of the 430's 14-tooth sprocket. This puts the 500's first about midway between the 430's first and second; that ratio is okay once you get used to it, but initially our testers were dabbing at the lever in tight sections hoping there was another downshift left. The lower final-drive gearing also makes the overall ratio in top gear (fourth) a bit shorter than the six-speed's. So regardless of the additional power, the 500's top speed will be less than the 430's.

It makes little sense to us that the majority of 500s sold today are equipped with four-speed transmissions. Only about 20 percent of motocross bikes sold are actually *raced*. Perhaps for racers four gears are plenty; racers are serious about their



sport—if the gearing isn't right, they'll get different sprockets. The remaining 80 percent will miss a fifth gear.

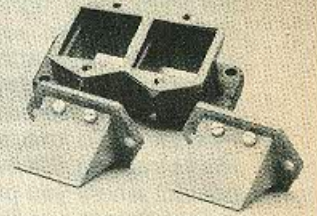
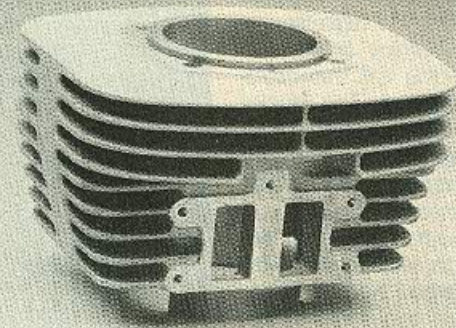
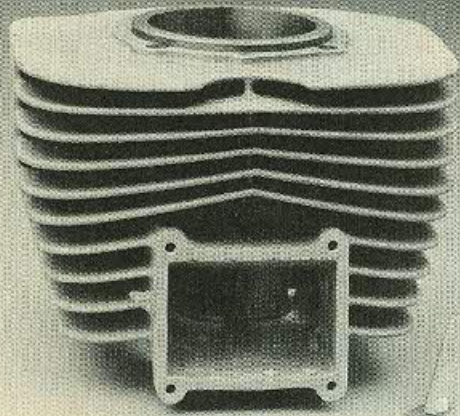
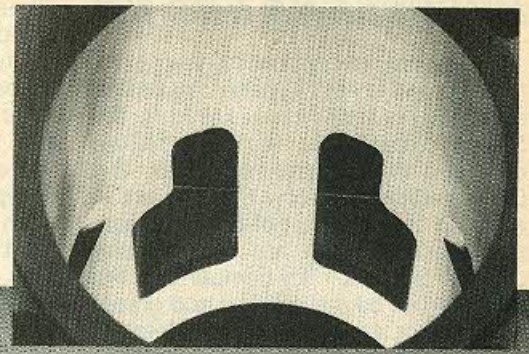
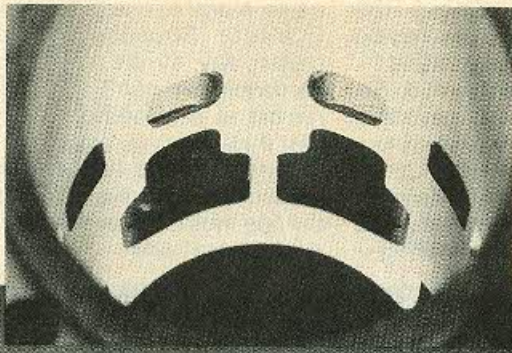
There's a distinct difference between the feel of a typical European gearbox and that of a typical Japanese bike. Like the 430's, the 500's lever takes a long throw to engage gears, but it feels more precise. If you're used to a Yamaha open-classer, however, which has a very short, precise engagement, the 500's long throw will seem awkward.

Except for a few minor updates, the 500 chassis is 430 stock. The frame is a chrome-moly, single-downtube affair with an oval-section, chrome-moly swing arm. The 40mm tubes, sliders and stanchions that make up the fork assembly are all Husqvarna originals. The new damper rods have more taper at each end, a modification which is said to ease harsh topping and bottoming. If you're a Husky nut, you'll

Husqvarna always relies on the no-nonsense approach to building motocrossers. The 500 CR is positive proof that their philosophy works.

recognize this as a refinement introduced on '81 H-bikes. The rear shocks are Ohlins nitrogen-charged, piggyback reservoir dampers. They work superbly, and they're still a match for any rear suspension system around.

The long-travel suspension functions great, but it has a drawback—it produces a seat height of over 38 inches. Short riders may have difficulty straddling the CR at a standstill. However, once on the track it's easy to manage; our five-eight rider had no complaints about manageability while in action.



The 500 cylinder (left) shows considerable updating when compared to the 430 jug. New reed valve and added transfer ports speed the incoming charge.



HUSQVARNA 500 CR

Like all Huskies of the last few years, the 500 is a stable handler regardless of terrain—a trait closely linked to the 59-inch wheelbase, the 30.5-degree rake and the 6.0 inches of trail. The CR's stability and slow steering are in contrast to most run-of-the-mill Japanese bikes, which are sudden and quick to the touch. By comparison, the big Swedish bike is relaxed and graceful. It's not at all snappy; instead, it goes about its job predictably and deceptively fast.

Its steering makes the 500 nice for a variety of tracks. Take the high line or the low, come to a bumpy or smooth section, no matter—the CR maintains its composure throughout. The Husky works especially well on open, high-speed tracks. Its stability at high speed is forgiving if, or when, you err. When the track gets tighter, though, you must be precise with your line, like when you approach slow, first-gear corners with small-lipped berms. If you lose aim just before the mound you thought you'd use to keep the front wheel tracking, it's unlikely you'll make contact where you planned. If you get in right, though, you'll jet out of the turn.

Husqvarna's drum brakes probably have a reputation as widespread as Ohlins shocks but, unfortunately, less positive. The brakes on our particular test unit, though not superb, did the job throughout the test. It is, however, still wise to avoid water; Husqvarna has had problems with waterproofing for years. (Recently, there have been sightings of various Husqvarna models with double-leading-shoe front brakes in European magazines; let's hope it's something we'll see on 1983 Huskies.)

Trelleborg tires grace each end of the CR and mount on gold-anodized 21-inch and 17-inch rims. Both front and rear tires work very well on soft-surface tracks and provide the rider with smooth and reliable response. For harder surfaces, though, some riders might fit a different tire.

Several detail changes also distinguish the 500 from the 430. The steel fuel tank has been enlarged to 2.7 gallons to ensure adequate range. The handlebar has a new bend (though we admit it's a subtle difference): it's slightly narrower and somewhat flatter. The Magura controls are first-rate when it comes to quality, but the "shorty" front brake still requires extra effort to operate. Although the throttle assembly is a side-pull whirlpool type, as before, a Magura replaces the Gunnar Gasser.

Each new-model Husqvarna is equipped with a sidestand. Though it adds weight, the Husqvarna stand mounts to and folds tightly against the swing arm, unlike those found on most

bikes. Racers should remove the stand, but play riders will like having this functional, out-of-the-way stand.

The CR was introduced in mid '82, but it will be updated for '83, nevertheless. Compared with the '82 run of motocross machinery, the 500 CR is competitive with the front-running open-classers. It has power equal to the best (at last), and its handling—

never a problem with Huskies—is also first-rate. Because we haven't yet tested any of the new batch of '83 hardware, we can't say if the CR will remain at the forefront. Our hunch is that if Husqvarna makes the big 500 a six-speeder, and improves some other areas—like the brakes—their top-of-the-line motocrosser will continue to be a threat next year. ■



TEST SPECIFICATIONS

Make and model Husqvarna 500 CR
Price, suggested retail (as of 10/8/82) \$2950

Engine

Type Two-stroke, reed-valve-inducted single-cylinder; air-cooled
Bore and stroke 86.0 x 84.0mm (3.39 x 3.31 in.)
Piston displacement 488cc (29.8 cu. in.)
Compression ratio 9.5:1
Carburetion (1) Mikuni 44mm round-slide
Exhaust system Upswept expansion chamber with silencer
Ignition Capacitor-discharge; external-rotor magneto
Air filtration Oiled foam element
Oil capacity 1.5 qts. (1.4 l)
Bhp @ rpm 46.30 @ 7000
Torque @ rpm 37.63 @ 6000

Transmission

Type Four-speed, constant-mesh, wet-clutch
Primary drive Straight-cut gear; 70/39, 1.79
Final drive #530 chain; 12/53 sprockets, 4.42
Gear ratios (transmission) (1) 29/17, 1.71
..... (2) 26/20, 1.30
..... (3) 24/23, 1.04
..... (4) 22/25, 0.88

Chassis

Type Single-downtube, full-cradle, chrome-moly frame; oval-section chrome-moly swing arm
Suspension, front Leading-axle, air-assisted fork with 40mm tubes and 11.8 in. (300mm) of travel
rear (2) nitrogen-charged, piggy-back reservoir shock absorbers, adjustable for spring preload, producing 12.2 in. (310 mm) of rear-wheel travel
Wheelbase 59.2 in. (1505mm)
Rake/trail 30.5°/6.0 in. (152mm)
Brake, front Cable-actuated, single-leading-shoe drum
rear Rod-actuated, single-leading-shoe drum
Wheel, front 1.60 x 21 aluminum alloy rim
rear 2.50 x 17 aluminum alloy rim

Tire, front 3.00 x 21 Trelleborg Deep Grip Motocross 544
rear 5.00 x 17 Trelleborg Ten Master Motocross 744
Seat height 38.1 in. (968mm)
Ground clearance 13.6 in. (345mm)
Footpeg ground clearance 15.3 in. (389 mm)
Fuel capacity 2.7 gals. (10.3 l)
Curb weight, (w/ 1 gal. gas) 246.0 lbs. (111.6 kg)
Test weight 396.0 lbs. (179.6 kg)

Customer Service Contact

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San Diego, CA 92111
(714) 565-1414

