

HUSQVARNA 430CR



The Out-Of-The-Crate Racer Returns.

■ Once upon a time Husqvarna motorcycles were the ultimate racers. They were competitive motocrossers straight from the packing crate. They came with good forks, Girling shocks, chrome-moly frames, 21-in. front wheels, high mounted front fenders, beautiful tanks, expansion chamber exhaust systems and full-blown racing engines. Virtually nothing needed changing before a Husky was race ready. Nothing. Other serious racers of the time were also built in Europe but the other brands needed considerable set-up and modification before you could compete on them. A Husky could be purchased on the way to the race, broken in during practice, and ridden to first place if the rider had the proper skills. Japanese bikes were in their junior stages of development and racing one meant an owner had to convert an enduro mount to a racer—not an easy or inexpensive proposition.

Husqvarna took that dominance with head held high and paid little attention to



the newcomers. It takes years to develop racing chassis and Husqvarna knew it. So Husky just coasted along, making occasional changes. But they almost coasted too long. All at once the Japanese bikes were winning the important races and had most of the really good riders. The Japanese seemed to think nothing of scrapping \$20,000 factory racers to try a new design concept. And the radical factory racers prompted production models that were bristling with trickery and innovation.

We're glad to report Husqvarna is back in the ball game. Several new racers are offered and they finally have large diameter forks and primary kick starting—on certain models anyway. This 430CR motocrosser is one of the most changed models.

The heart of the '81 open Husky is an all-new 430cc engine. It's a short stroke design with an 86mm bore and 74mm stroke. The forged piston used a single ring and the rod has a silver-plated lower bearing cage. Center cases are magnesium and sport a trimmer shape. Most of the trimming has taken place at the back of the engine—rear mounting is simplified by using the swing arm bolt as the rear

mount. And the extra bulk that's been around the countershaft sprockets on past Husky engines has been eliminated.

A small sprocket cover keeps the rider's foot out of the 520 D.I.D. chain. A six-speed transmission lives inside the tidy cases. Six speeds seem like overkill on an open class motocrosser and it is if the bike is used only for motocross. But, most open motocrossers are used as off-road play bikes also. Off-road the extra speed is really nice. Anyway, most of the transmission gears, shafts etc. are new and designed for the 430 engine. Shifting is accomplished by a rotary shift drum that's turned by a hook type linkage under the clutch. The new linkage works more smoothly than past designs used by Husky. Primary drive is via straight-cut gear.

Kick start linkage is also new on the 430. A twisted kick start lever similar to past Huskys is used and has a friction type swivel so mud won't cause it to stick. A small case-mounted bracket keeps the lever from falling out. The kick start lever is held on the shaft by a small snapping. Like past Huskys, the folding shift lever doesn't have to be removed before taking the side case cover off. The shift lever con->



nects to the linkage via a plug-in. The multi-plate clutch is unchanged except for the clutch basket—the rubber cush drive has been eliminated on the 430. Ignition is handled by an internal rotor Motoplant CDI. Past big bore Huskies have used an external rotor ignition. The internal rotor is used so weight on the end of the crank can be reduced. Less weight at the outer end of the crank makes for a smoother running engine. Many 250s use internal rotor ignitions but most open bikes have external rotors to keep the engine from revving too quickly. Husky added weight to the center flywheels to make up for the loss at the end of the crank. Thus, the right

amount of flywheel weight is still used but it's closer to the center of the rotating mass and causes less vibration.

Although the 430 cylinder is all-new it looks like past Husky designs with the aluminum fins shaped slightly differently. The head is radial finned and the fins on both head and cylinder are connected with a cast-in ribbon that keeps vibration from breaking off fins. Bore surface is steel and three oversize pistons are available. Fuel control is handled by a 38mm Mikuni carburetor and an intake mounted six-petal reed.

Huskys have had quality suspensions since Day One. However, the small 35mm

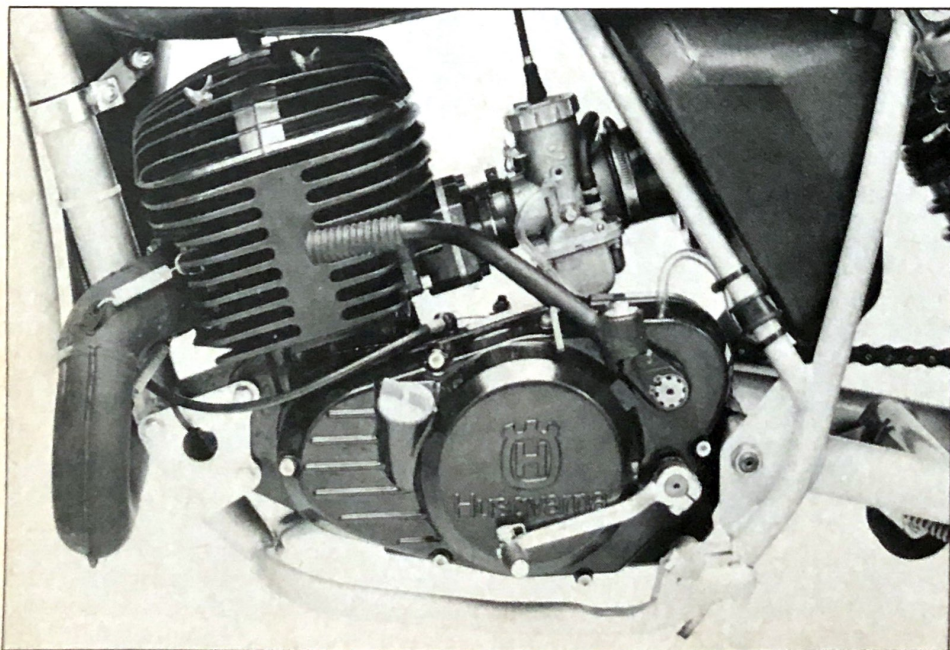
fork stanchion tubes weren't strong enough when fork travel grew to 10 in. and more. We liked the fork action of our last test Husky but bent the stanchion tubes in the first race. Larger diameter tubes have been needed for a couple of years and the '81 finally has them. Beefy 40mm chrome-moly steel stanchion tubes are used on the '81 430CR. Internally new damper rods and springs are matched to the larger tubes and both triple clamps are double bolt cast aluminum. Fork sliders are magnesium and have cast-in stiffeners front and rear. Axle clamping is an important rigidity factor. The new Husqvarna-made forks have a four-bolt clamp at each end of the axle. Front wheel travel is 11.8 in.

Rear suspension is as good as the front. Piggyback Ohlins with dual-rate springs are mounted to the outside of the long chrome-moly swing arm. Mounting the shocks outboard in the center of the swing arm gives a better rising rate to the suspension. The Ohlins are rebuildable and internal damping can be changed if the stock damping rates don't suit you. Also, different rate springs are available from Husky dealers. Rear wheel travel is 12.2 in.

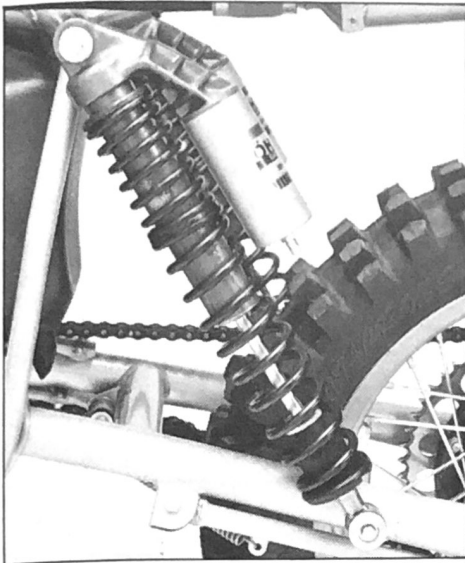
Another all-new item is the rear hub. It's beefier than the old unit and has a new shape. The old hub had a strange lacing pattern that required the use of several different length spokes. Also, the rim had to be offset to one side of the hub. The new hub is a conical shape but the small side has a deep spoke flange so spokes can be equal length. The rim also laces to the center of the hub for even loading. As a bonus, the new spokes are much larger in diameter. The front hub and spokes are unchanged. Both rims are aluminum and have deep centers to make tire changing easier. Wheel sizes are 21 in. front, 17 in. rear. Different Husky models are delivered with different types and brands of tires. The 430CR comes with Pirelli MT Pentacross tires. The MTs are excellent tires that give performance equal to Metzlers.

The CR430 has a beautiful hump-back aluminum gas tank. Keeping with tradition, the sides are polished and a wide white stripe separates the painted area from the polished. Our test bike had Husky Products accessory tank protectors. These are clear plastic patches that cover the sides and top rear of the tank. Husky dealers usually stock them and they will keep the tank looking like new for a long time. After 10 years of leaky gas caps Husky has finally provided one with a plain old vent hose. Good. It's simple and doesn't leak. The petcock is the one used by Husky for years. Down is on, sideways is off. The control lever faces in so it's impossible to turn off with your knee while riding.

Many small problems have finally been taken care of on the new Husky. Integral



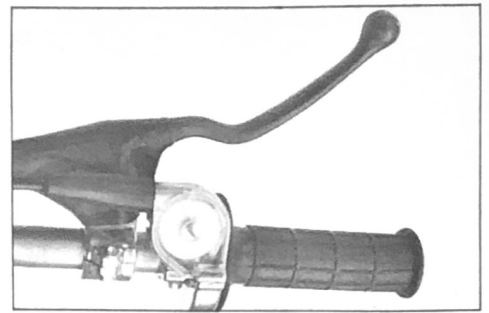
Cylinder is reboreable and the aluminum cooling fins are tied together for strength. Shift lever has a folding tip.



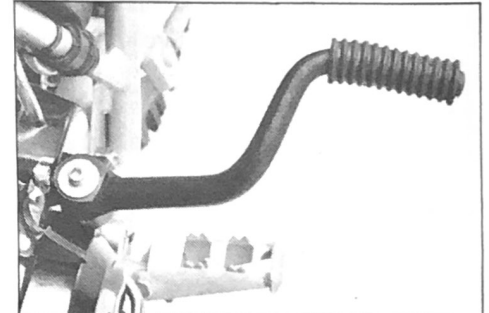
Piggyback reservoir Ohlins shocks are adjusted perfectly for the Husky.



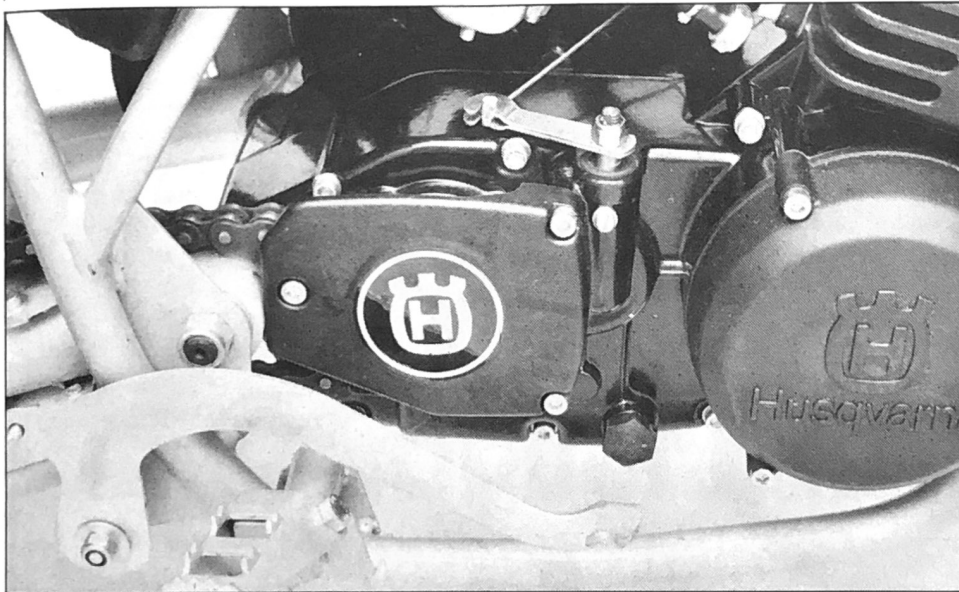
New forks have 40mm stanchion tubes and 11.8 in. travel.



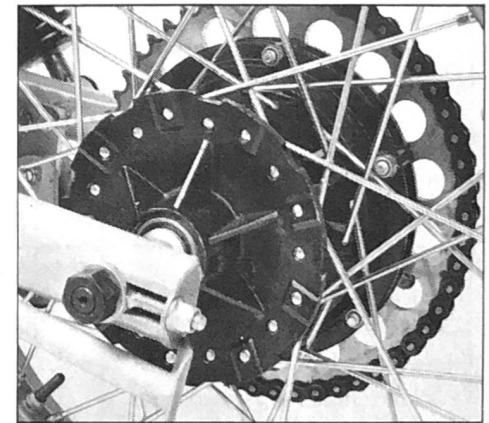
Gunnar Gasser throttle and Magura levers with split perches are standard equipment.



Primary kick starting is standard but weird shaped kick lever doesn't engage until it's half way through its travel.



New cases are slimmed and trimmed at the rear. Swing arm bolt is used for rear engine bolt and bracketry from years past is eliminated.



New rear hub is strong and features larger diameter spokes that're equal length.

side numberplates, a front numberplate with cable guard, airbox with water drain, Magura levers with split perches, and decent control cables that're nicely routed make the Husky ready from the packing crate.

Although the 430 looks new, the frame is basically the same as last year and the year before. No complaints here though. All tubes are chrome-moly steel. Two large backbone tubes parallel each other from the steering head back to the rear of the tank where they join together. An equally large single front downtube welds to wishbone-shaped engine cradle tubes that turn upward and end at the center of the frame rail tubes. Another small tube connects the rear of the main backbone tubes to the area just above the swing arm pivot, forming a strong triangle in the center of the chassis. Flat gusset plates add strength around the steering head. The swing arm is also chrome-moly steel and slightly longer this year.

The high snake pipe is much the same with different cone sizes. The headpipe

winds around like everyone's but doesn't protrude below the frame. Mounting brackets are strong and well placed and the large silencer is repackable.

Like most open motocrossers, the Husky isn't much fun to start. The weird shaped kick lever moves the starter's foot away from the footpeg but doesn't engage until it's half way through the stroke. Thus, the engine doesn't turn over much with one kick. The lever is easy to push through and it's a good thing—six to ten rapid kicks are usually required before the big bore comes to life. Kicking the lever hard isn't required: kicking it fast is. The engine has to spin before the ignition will produce a spark. Seems awkward at first but after a few rides it becomes almost easy.

The engine vibrates some while sitting still and while under way but it's not enough to be tiring. Shifting is superb. Low gear is engaged without clunking or jerking, upshifts are quiet and smooth. Lever throw is just right. With six gears you don't have to worry about having a

gear for everything. Low is low, high is high, and everything in between is perfect. We used the bike for motocross and off-road riding without changing the final gearing. Several different countershaft sprockets are available if needed but no longer come with the bike.

Huskys have always had a character all their own, a tall lean feel no other bike has. They're a natural wheelie machine and always have been. Even with a 59 in. wheelbase and 21 in. swing arm, the front end is light. Engine power is controllably non-explosive and predictable. The engine will wind if needed but most of the power is made at lower revs and winding feels wrong. Short shifting works best. Listening to a racer ride an open Husky tells the story—the engine sounds as if it is running just above idle—burr, burr, burr. Impromptu drags against other open class racers proved the 430 about the same speed as a Honda 450CR, Yamaha YZ465, and Maico 450. All of the above are about six bike lengths slower than a Maico 490 though.

HUSQVARNA 430CR

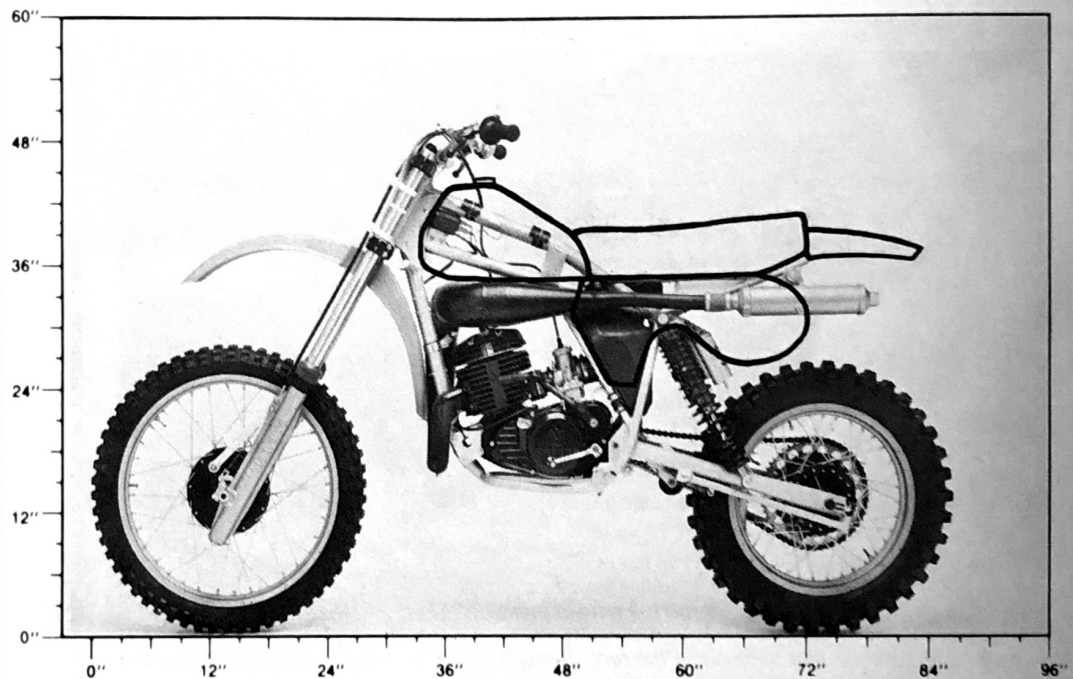
SPECIFICATIONS

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|---------------------------------|-------------------------------|
| List price | \$2685 |
| Fork travel | 11.8 in. |
| Fork stanchion tube diameter | 40mm |
| Rear wheel travel | 12.2 in. |
| Front tire | 3.00-21 Pirelli Pentacross |
| Rear tire | 5.00-17 Pirelli Pentacross |
| Engine | two-stroke Single |
| Bore x stroke | .86 x 74mm |
| Piston displacement | 430cc |
| Compression ratio | 11.1:1 |
| Claimed power | na |
| Claimed torque | na |
| Carburetion | 38mm Mikuni |
| Ignition | Motoplat CDI |
| Lubrication system | premix |
| Primary drive | straight-cut gear |
| Gear ratios, overall:1 | |
| 6th | 5.97 |
| 5th | 6.73 |
| 4th | 7.96 |
| 3rd | 9.94 |
| 2nd | 13.08 |
| 1st | 18.05 |
| Oil capacity | 2.7 pt. |
| Fuel capacity | 2.7 gal. |
| Fuel tank material | aluminum |
| Swing arm material | chrome-moly steel |

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|---------------------------------------|--------------|
| Starter | primary kick |
| Air filtration | oiled foam |
| Frame material | chrome-moly |
| Wheelbase | 59.2 in. |
| Seat height | 38.0 in. |
| Seat width | 6.1 in. |
| Seat length | 22.5 in. |
| Seat front to steering stem center | 14.6 in. |
| Handlebar width | 33.3 in. |

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| Footpeg height | 16.4 in. |
| Footpeg to seat top | 21.5 in. |
| Footpeg to shift lever center | 5.0 in. |
| Footpeg to brake pedal center | 5.0 in. |
| Swing arm length | 21.3 in. |
| Swing arm pivot to drive sprocket center | 3.2 in. |

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|--------------------------------------|-------------|
| Gas tank filler hole size | 1.6 in. |
| Ground clearance | 13.1 in. |
| Fork rake angle | 30.5° |
| Trail | 6.0 in. |
| Test weight w / half tank fuel | 236 lb. |
| Weight bias, front / rear percent | 46.2 / 53.8 |



Suspension is stiff, especially the forks, until several miles are traveled. After a day of riding, the forks still hurt our wrists when square edged ground was encountered. We called Up-Tite Husqvarna in Santa Ana, Calif. and they recommended using 15 oz. of 15 weight oil. We drained the stock oil and filled the tubes with Spectro 15 weight. Fork compliance improved considerably but another full day of riding was required before they loosened up and became really good. The Ohlins smoothed out in a couple of hours. Spring rate and damping rates are perfect for the bike. Compliance is good and bottoming is rare.

The big fork tubes have made a tremendous difference in steering and handling. The big Husky goes where pointed and the bike has lost the go-where-it-wants feeling. Smashing into the opposite side of a double jump doesn't cause a flexing feel any more and the tubes didn't bend.

Huskys have always been sand track specialists and still are. Rake is set at 30.5° and trail is a whopping 6.0 in., not exactly the norm for motocrossers. Sounds

like good desert racing geometry though. Surprisingly, the Husky turns well despite the long wheelbase, kicked-out rake and long trail. The strong chassis and forks are responsible. Still the Husky doesn't zip in and out of corners like a Japanese bike. It'll go through a corner just as fast, but the technique is different. Forget about making a square berm turn and hitting the clutch as the berm is smashed, it's not necessary. The slower revving torquey engine doesn't need clutching. Just roll the throttle and forget the clutch. The engine pulls from just above idle. No sudden bursts, no uncontrolled wheel spin, no lurching or leaps. The bike does require a forward riding position though. If you don't ride at the front of the seat, the front wheel may try to rise. Same thing will happen if the throttle is snapped open in the turn. Roll the throttle on, sit on the front of the seat and lean forward. To make a square turn, use the berm or slide on the flat part of the turn. Any style will work as long as the throttle is rolled on.

High speed stability is another Husky

trademark. The 430 stays straight at speed. No wandering or head shaking. It goes where pointed, doesn't try to get sideways or do other spooky things. This straight line stability at speed is responsible for Husky's popularity in desert racing. This kind of confidence makes for a great play bike also.

Brakes are better this year due mainly to the new rear hub. The rear is positive, doesn't chatter or lock, and gives good feedback to the rider. The front is progressive and has good rider feel but doesn't match the sheer stopping power of a Honda CR or Yamaha YZ.

None of our riders liked the hard grips but then \$4 will fix that complaint. Otherwise we couldn't find much wrong with the new 430. It has competitive power that's delivered in a smooth usable manner, good suspension that's rebuildable and strong, solid frame and swing arm, excellent tires, strong hubs and spokes, beautiful aluminum gas tank and something no other racing bike offers—a 30 day warranty. Welcome back, Husqvarna. 