

# SMOOTHING OUT THE WRINKLES

*From baffling to berserk!*

*By the thumping Staff of DIRT BIKE, with muchos gracias to Al Baker*



*Once the big Honda is correctly set up, it's easy and fun to fly. Our test riders got absolutely wild with the big red thunder machine and weren't afraid to try anything.*

After several months of abusing the Honda XR600, our minds began to open up to the truly fine virtues of the four-stroke rhino. At first the machine feels too heavy, and on tighter, rock-infested trails, darts around like a Super Ball on a billiards table. But, something about the monster soothed our hardened attitudes. It's a rip-roaring gas to ride and one of the most bulletproof warriors in our stable of machines. We decided to fine-tune the beast in an effort to neutralize the odd-handling warts that bothered us during the initial testing.

We contacted Al Baker and spent several days with him at his ranch in the high desert of California. Al sweats out more knowledge about XRs than most people ever think about learning. He's raced them, lived with them, and in the end, knows every aspect of the machine...inside and out. Al pointed out that the XR600 can actually be improved dramatically without spending a single nickel!

## ON THE LEVEL

Al hammered into us this one important fact: Because the XR600 carries much of its weight up high (a tall and heavy engine, plus the fuel tank), setting up the suspension is actually more critical than it is on a 210-

pound motocrosser! The right balance between the forks and the rear end dictates the handling prowess of the 300-pound animal.

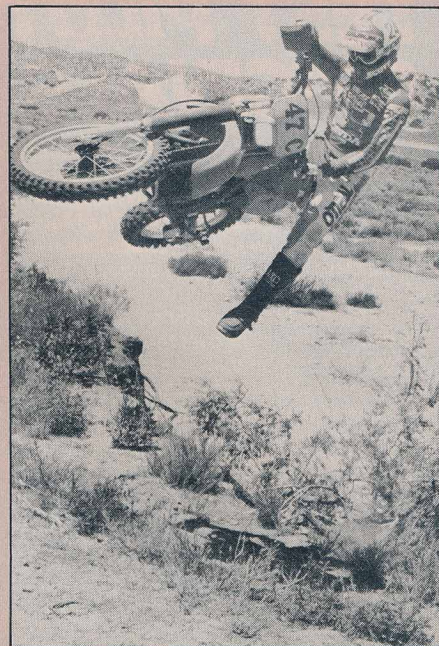
In stock trim the forks have an oil level of 127mm from the top of the tubes (with the springs out and the forks collapsed). He bumps the level up to 115mm from the top of the tubes, using five-weight fork oil. This mod will still let the forks stroke out their full travel but firms up the mid-range damping and lets the forks absorb killer G-out impacts. Heavier riders or experts can benefit by welding up one of the compression holes on the damper rods.

Now, just as significant is the rear shock sag. The steering angle/turning qualities of the XR are very sensitive to the rear-end sag of the machine. Set up correctly, the XR has high-speed etiquette and will carve through a turn like a dolphin. Wrong settings will make the machine push and plow through the corners like the Love Boat.

Sizes and weights of riders vary, so the rear sag is set according to the individual rider's weight. In a fully unladen condition, measure the distance from the axle nut to the seat bolt. Then, with the rider on board, preferably with someone balancing the machine from the front so the rider can put his full weight on the bike with his feet on the pegs, measure again from the axle nut to the seat bolt. A total of 112mm of sag is perfect! Remember, you're setting the steering head angle by setting the sag. Not enough sag will push the forks out, and the machine won't turn. Too much spring preload forces the front end down, and the XR will knife violently in the corners and shake its head like a wounded water buffalo. The 112mm of sag is ideal!

There's a chance that heavier riders (over 200 pounds) will not be able to preload the spring enough to get the needed 112mm of sag. Use a beefier spring, then set your sag at 112mm as mentioned. The stock Honda XR350 spring works perfectly!

Al also recommends several companies who offer products for the expert XR owner: Progressive Suspension, Al Baker R&D, and Works Performance. Progressive sells a heavier set of front springs that are ideal for the hard-charging rider, and Al Baker R&D can revalve the stock shock, altering the compression shim stack and reducing the inherent fade problems of the shock. Works Performance can modify the stock shock with their Transplant kit. Works resprings and revalves the shock. We'll go into these mods in more detail at a later date, but for



*If you want to try maneuvers like this, you have to dial in the suspension properly. Setting the rear shock sag is the key to making the XR handle. If the sag isn't set correctly, the big beast will wallow around like a shopping cart full of cement. Exactly 112mm of sag is ideal!*

now, we thought we'd pass on the info. **HERE ARE SEVERAL OTHER NOTES**

- Do not run heavier oil in the forks (five-weight is ideal). Thicker oil pressurizes the air volume in the forks and makes them too stiff in the mid-stroke.
- Lubricate the dust seal on the forks. Simply lift the fork boots, pop off the dust/scraper seal and drip some oil under it. This makes the damping action smoother.
- If you blow a fork seal, DO NOT buy the XR600 seal kit! It retails for around 20 bucks. A standard CR480 Honda fork seal works perfectly and sells for about \$4.

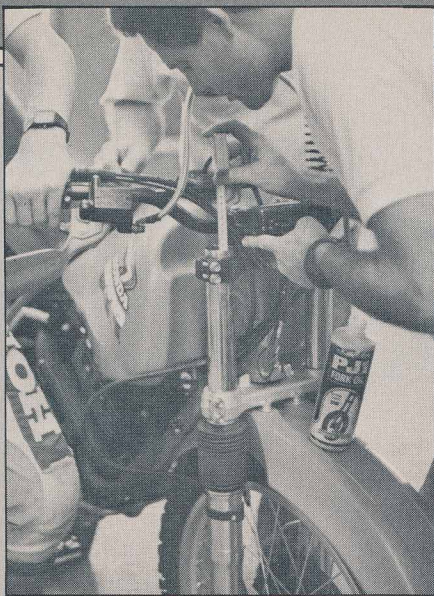
## POKIN' AND STROKIN'

We're going to run down a list that Al Baker gave us on setup and minor modifications—other than suspension.

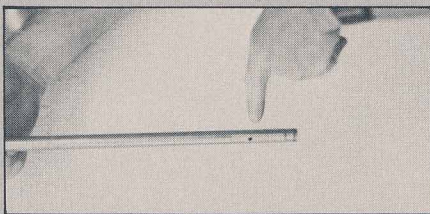
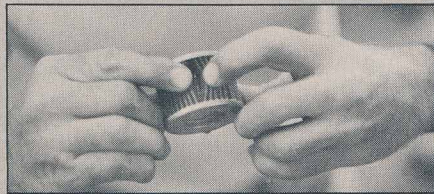
- Brand-new XRs should be broken in with *non-detergent* oil. After 200 miles, switch to a high-performance motor oil and change the oil filter. The first 200-mile oil filter change is critical, because all kinds of little metal chips are floating around and can plug up the filter. After this, change the oil and the filter every 1000 miles.
- Cut the fire retardant screen out of the air filter. It's as thick as a Brillo Pad and chokes



## XR600 TUNED-IN TIPS



The XR comes from the factory with the fork oil set at 127mm from the top of the tubes (springs out and forks collapsed). Al Baker suggests 115mm from the top and five-weight fork oil. It works perfectly for all sizes of riders!



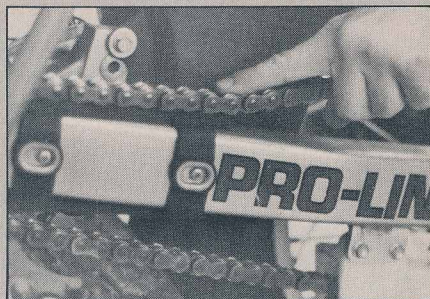
If you're a big, heavy human being or an Expert rider, don't use heavier fork oil. The best method is to stay with five-weight and weld up one of the compression holes in the damper rods.



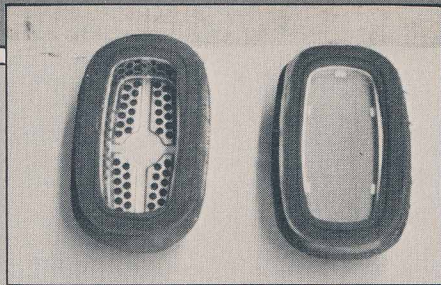
The dust seals on the forks come greased from the factory. A peculiar property of grease is that it dries out quickly. Al Baker recommends dripping some oil on the dust seals now and then to keep them lubricated. It helps keep the damping action smooth.



**Critical!** Use non-detergent motor oil for the first 200 miles of break-in, then switch to a high-performance motor oil and change the oil filter! The break-in period produces all sorts of little metal filter cloggers which, if left unchanged, can damage your engine.



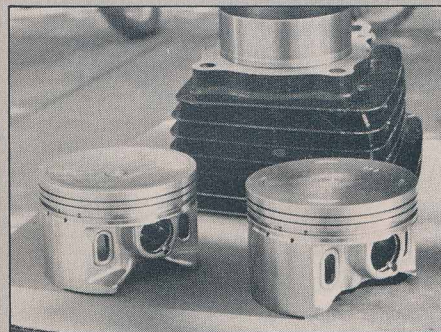
To set the chain adjustment just right, put the XR on a crate and adjust the chain so you can push it down enough to touch the end of the chain pad on the swingarm.



Free horsepower! The "Brillo Pad" fire retardant screen in the air filter hampers the big thumper's breathing abilities. Cutting out the screen improves throttle response and yields a five-percent gain in horsepower! If you do this, make sure you use a non-combustible filter oil, such as PJ1. Otherwise, you risk having your air filter catch on fire.



Bump-starting the XR600 can be a nightmare because it's impossible to use the compression release and the clutch at the same time. The perfect solution is to turn the compression release lever around so it can be thumb operated.



Look for more XR600 hop-ups in the following months. We plan on building a Barstow to Vegas 650 desert destroyer for the annual off-road classic.

the XR's breathing. Breathing is critical to a four-stroke! The main benefit here will be improved throttle response and about a five-percent horsepower gain! You won't feel the difference on top, but coming out of the corners or in thick, heavy loam, you will feel the improvement. **IMPORTANT!** Al uses PJ1 filter oil. Some filter oils have combustible properties, and without that screen the air filter can catch on fire. Al has used PJ1 for years and has never had a problem.

- Turn the compression release around so you can use it with your thumb. In tight, ugly trails you can pull in the clutch and stab the lever quickly if the machine stalls. This makes bump-starting a cruise.

- The stock rear brake shoes are garbage. They work well but wear out quickly. When you're ready for a new set, get '85 OEM re-

placements. They're more durable and made from a tougher compound.

- Desert racers may prefer a 46-tooth rear sprocket rather than the standard 48. You still have plenty of low gearing for the tight dez, and the engine actually runs cooler at high speeds.

- The front IRC tire actually works better reversed. This simple mod can save some bucks and lend a new polish to steering manners.

- Torque the footpeg bolts to 45 foot-pounds. They'll loosen under stress and need constant attention.

- Replace the stock handlebars with Answer Products models. The stock bars are rolled and welded steel, with the crossbar brazed in place. The Answer chromoly units are twice as strong.

### FLYIN' FOOL

Without slobbering on these pages, we'll tell you that the simple dial-in modification on the suspension turned the XR into a well-mannered weapon. It steers like a motocrosser and is stable over the roughest of terrain. If you own a 600, *do it!*

All the little dos and don'ts Al told us will not only make your XR live longer, they will make your life when riding the Honda that much better. Over the next few months we'll dig into the heart of the XR, spend a little money coaxing more power out of the engine, and slip on a few custom suspension goodies. Until then, *buuuurrrrrmph!*

### WHO TO CALL

Al Baker R&D: (619)949-1299; Progressive Suspension: (714)898-2951; Works Performance: (818)701-1010. □