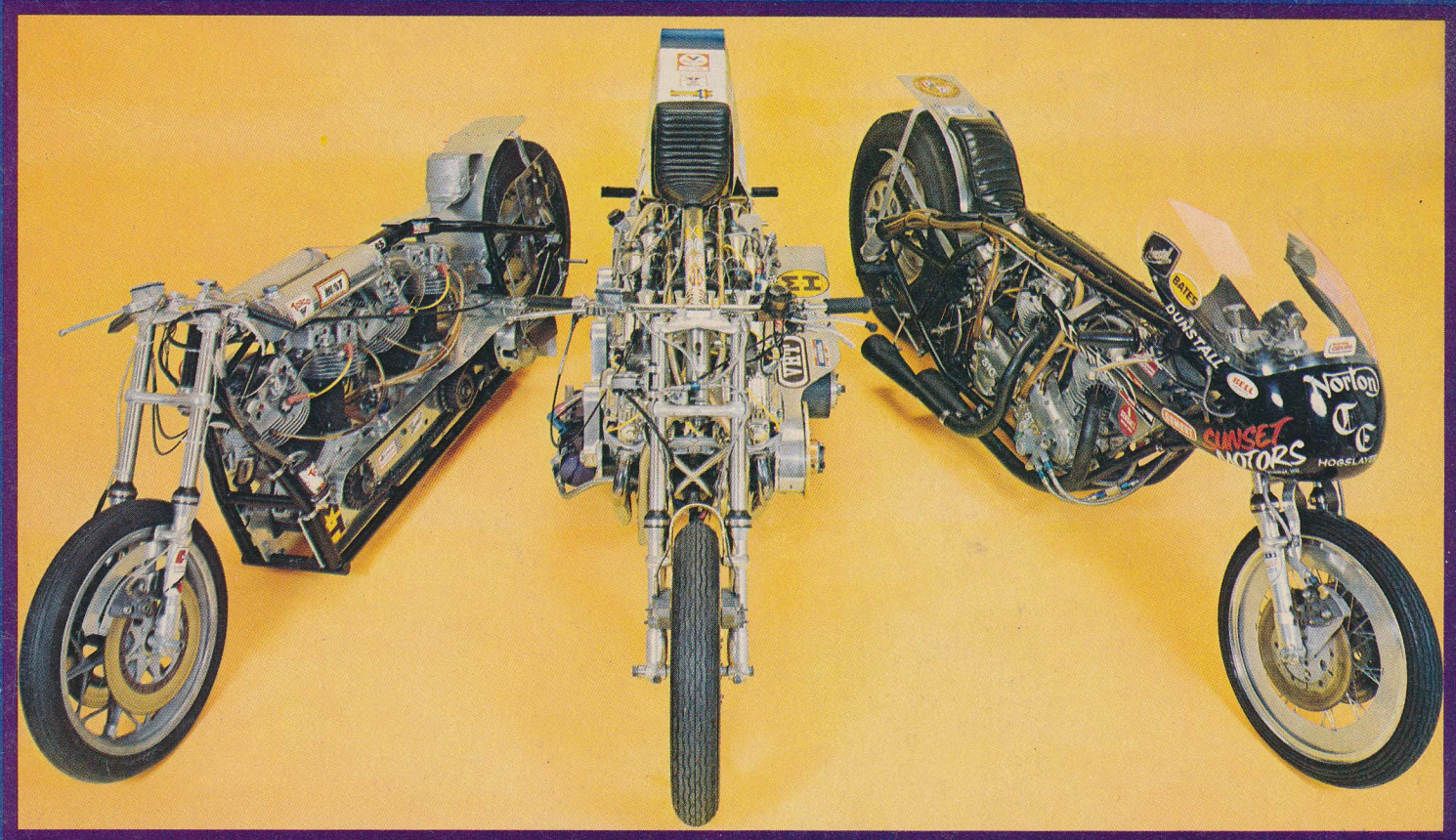


# Cycle

FEBRUARY 1976 75 CENTS

## AMERICA'S TOP FUEL DRAG RACING KINGPINS

**RUSS COLLINS' HONDA (7.86 - 179 mph)**  
**JOE SMITH'S HARLEY-DAVIDSON (8.02 - 183 mph)**  
**T.C. CHRISTENSON'S NORTON (7.93 - 177 mph)**



**Rickman's High-Buck Honda 750 and Kawasaki Z-1 Kit Bikes**

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02

**3 Ways To Make It A Winner**

**180 mph Factory Road Racer**

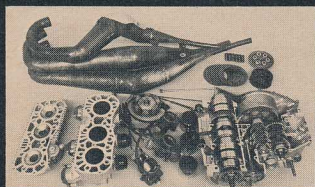
**He Talks About the ISDT**



p.28



p.44



p.50

## Road Tests

- 38 Honda XL-350  
*Engine? Superlative. The rest? Ordinary.*
- 65 Honda CB-125 S3  
*You could call it a second-guess mini-hot-rod.*

## Features

- 28 These Three  
*... have made Top Fuel their own. By Cook Neilson.*
- 44 Custom XL: the C&J Monothumper  
*Some people trick-frame it . . .*
- 46 Custom XL: A Four-Stroke Maico  
*... and others swap-frame it . . .*
- 47 Custom XL: Bell's Baja Bullet  
*... and still others win Baja with it. All by Dale Boller.*
- 60 The Rickman Hyphenates  
*That is to say, hyphen-CB-750 and hyphen Z-1.*
- 78 Double-Time Express  
*When you say ring-ding, you'd better smile. By Cook Neilson.*

## Competition

- 56 Carl Cranke Talks About the ISDT  
*And brother, he ought to know. By Dale Boller.*

## Technical

- 48 How Things Work: Hydraulic Disc Brakes  
*Put the squeeze in here, and it comes out there. By Gordon Jennings.*
- 50 Suzuki TR-750 Road Racer: A Look Inside  
*Grubby fingers on top-secret parts. By Gordon Jennings.*
- 74 Product Evaluation: Widder Electric Vest  
*Brisk-weather warmth at a decent price. By Cook Neilson.*
- 87 The Shop: Honda CB-500 Linkage Fix  
*A two-anna-three-anna-three-anna-three . . . By Jess Thomas.*

## Departments

- 4 Editorial / *Racing* / Cook Neilson
- 7 Letters / *Calculating Readers*
- 8 Newsline / *On the Christmas Rebound*
- 10 Pipeline / *Drags, the English Heartland* / Jim Greening
- 14 Tips / *More Honda Hints*
- 71 Road Test Index
- 98 Classified Ads
- 101 Readers Service

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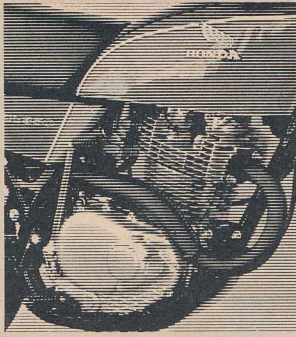
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This Month's Cover: Three bikes, seven engines, and 900 horsepower—that's the substance of the machinery Larry Willett was asked to photograph for *Cycle's* February cover. To assemble that much power any other way would have taken ten Honda GL-1000s, 12 Kawasaki Z-1s, 45 Suzuki 125 MXers or 90 Honda CB-125s.

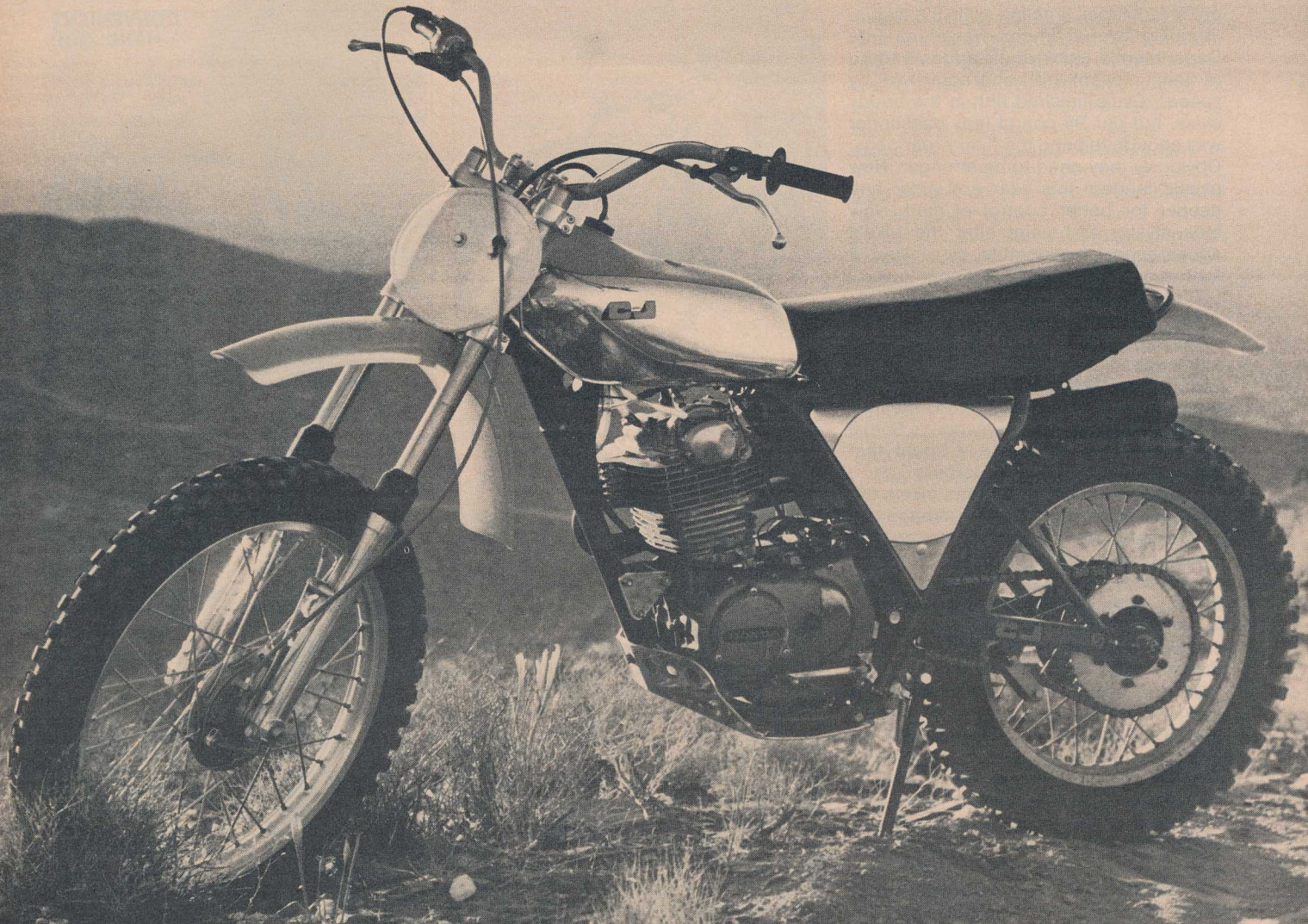
# THE CUSTOM XL



● For C & J Racing Frames of Santa Ana, Calif., a custom frame was the easiest part. They built this bike as a prototype for what is now a stock item in their catalog—an XL 350 Honda frame with Yamaha Monoshock rear suspension. C & J was founded in 1970 by Jeff Cole and Steve Jentges, two former Indy race car builders (the Unsers, Johnny Rutherford), who decided to pack up racing and go into the marine hardware business. Coincidentally, Kawasaki's Racing Division moved in next door, and noticed Steve Jentges pounding out a gorgeous aluminum tank for some kid of boat. This was in 1971 just before Talledega, where Kawasaki was planning to use aircraft-type quick-fill tanks

to shave a few seconds off pit stops. Jentges' racing bug hadn't been completely squashed, so C & J consented to build the tanks for Kawasaki. In the process they effected a few frame modifications which helped Kawasaki win Talledega. Soon they were working on a frame for Brad Lackey's National Championship-winning 450 Kawasaki motocrosser. Their boating business sunk as Dave Aldana, Gary Scott, Gene Romero, Gary Nixon, etc. all wanted C & J frames. The company built Ossa frames for Bruce Brown and Malcolm Smith as playbikes; they built Evel Knievel's first Sky-cycle and Bob Gill's jumper; Jeff Ward won the minibike National Championship on a

An off-road rider must perform massive modifications to the chassis of his XL 350 to make it suitable for fast dirt riding. The following builders of custom XLs took the Dempsey Dumpster approach to chassis modification, and came up with three very impressive machines.



## C&J MONO-THUMPER

C & J frame and all of Kenny Roberts' race frames will be built in Santa Ana next year.

Enough for credentials. XL 350 Honda frames are their biggest seller. When a person wants one he explains to Cole, Jentges or Sales Manager Gary Drea exactly what he wants in geometry, footpeg height, suspension, etc., or he can buy an off-the-shelf XL 350 version for \$479. Custom prices rise appropriately; the monoshocker pictured here costs \$515.

Tubing is TIG-welded chrome moly and fasteners are aircraft-quality in American sizes. Sheet-stock gussets and engine mounts are also chrome moly. Tapered Timken steering head bearings join a spiraled bronze swingarm bush with O-ring seals. All frames locate the swingarm pivot point as close to the countershaft as possible so the chain doesn't have to run dangerously loose with long-travel suspension.

Since C & J operates within the industry on a distributor level, a customer can order parts such as wheels, tanks, seats, complete engines, etc., through them and receive a 20 percent discount on these parts with the purchase of any C & J frame. This helps defray the cost of a custom XL, which can reach \$2200 if C & J supplies everything. Assembly is always done by the buyer. In comparison to the cost of a new Penton Mint 400 Enduro—\$1880—the custom route suddenly doesn't seem quite so extravagant.

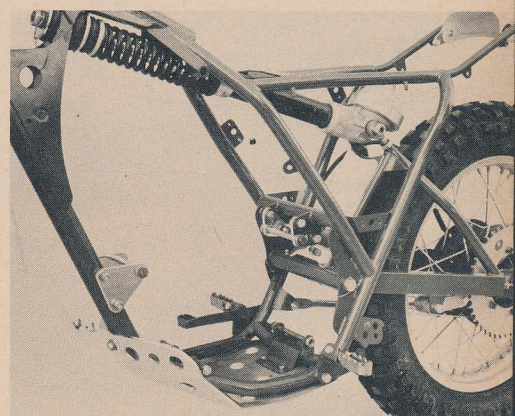
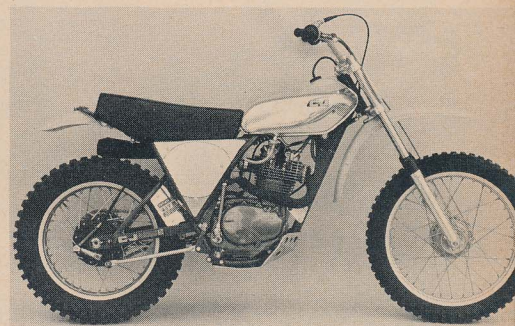
The advantages are numerous. First of all, it's fun. A custom XL builder is delightfully challenged by the number of good chassis components available. Should it be Akront rims or D.I.D.s? Stock spokes or Buchanan spokes? Cheng Shin tires or Metzlers? The Monoshock or S&Ws? How nice to have a white sheet of paper and a stack of catalogs. But it's the engine that provides the greatest advantage to most people. They like four-stroke low-end power and four-stroke reliability. No two-stroke can match the XL's gas mileage. Plugs don't foul, pistons don't seize and even oily Mexican gas doesn't cause pinging. You can do a tune-up with a wrench, screwdriver and feeler gauge. But most of all it's the way a big thumper single feels and pulls. It delivers useable power just about anytime you twist the throttle. With a few modifications the motors will make 30-36 horsepower.

This engine was built by Bill Bell of Long Beach Honda and features 402cc, a Venolia piston, 36mm Mikuni carburetor, special cam and a hand-built pipe which is much too loud. Effectively silencing a hopped-up Honda would add 20 pounds of weight and rob a third of the horsepower gained by hopping it up, so most people run them noisy—and noise is the single biggest problem facing custom XL builders.

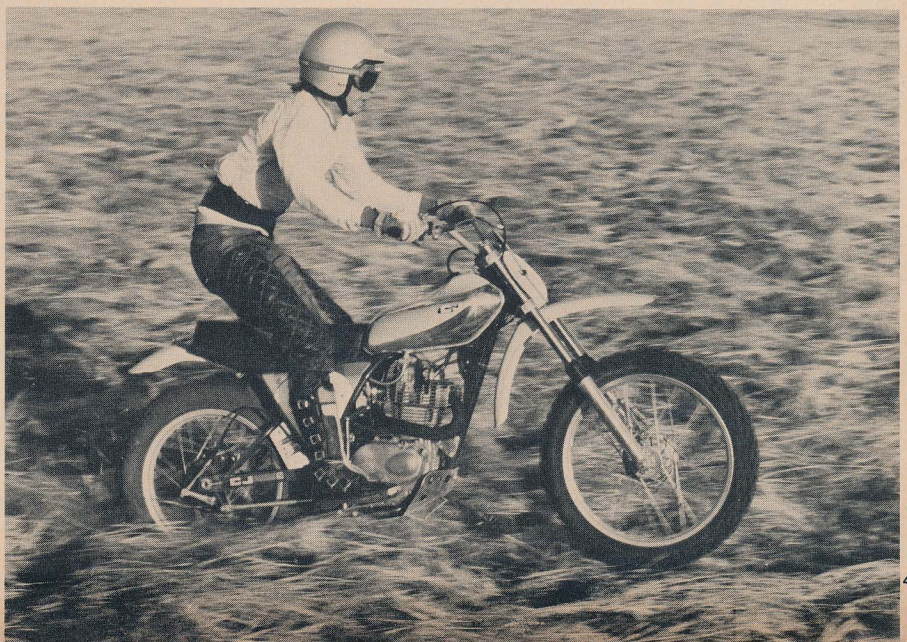


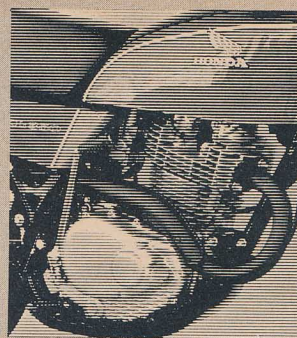
*A dream suspension combination for the C&J custom builder is Yamaha monoshock and Betor fork units. Trim, slim and light, the C&J Honda weighs in at 262 pounds wet. Engine is 402cc big-bore torquer.*

With the polished aluminum YZ tank full of fuel, the MonoThumper weighs 262 pounds—69 pounds less than a stocker. C & J can supply titanium axles and other goodies that knock off more weight, but good geometry, the monoshock and 8-inch-travel Betors work so well that the bike never feels heavy. It will climb any hill and out-gun any stock dirt bike on top end. Its dominant handling characteristic is a willingness to slide—long, pretty, mile-track sweeps around fire-road corners. It's sure-footed and stable in rocks. You will have to spend time matching the spring and damping rates of the front and rear suspensions, but the rest is pure bolt-up playbike. Everybody notices the Honda/Monoshock combination. It's a natural—and it works.



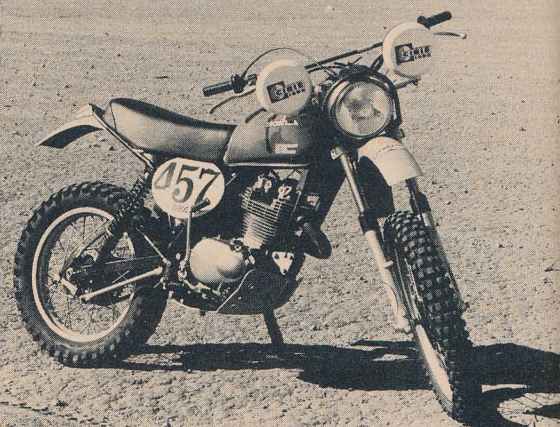
*The entire frame is TIG-welded chrome-moly. This keeps the weight low and the strength high. Chassis geometry is set to individual orders. Improvements in handling and performance justify cost.*





## THE CUSTOM XL

*Bill Bell's Baja winner is dominated by the huge lights which add 30 pounds to overall weight and allow night pilot Al Baker (left) to see 75 yards through tar-like blackness. You can buy virtually the same machine without any lights for \$2295.*



PHOTOGRAPHY: DALE BOLLER

## BELL'S BAJA BULLET

● Without question the toughest test of off-road racing machinery is the Baja 1000. This XL 350 Honda beat 34 other motorcycles and 205 high-powered cars in winning the 1975 1000 overall (see story on page 00). Engine maestro Bill Bell of Long Beach Honda built the bike with help from C & J and the S & W shock absorber people. Like C & J, Long Beach Honda is in the business of supplying part or all of the components for custom XLs, but they specialize in high-performance engine parts.

Bell came to Long Beach Honda 14 years ago as a carpenter to build a few work benches. He was a scrambles rider who knew a lot about four-strokes, so they hired him as a tuner when he finished the woodwork. He's been there ever since. In 1968 Bell built the 350 Honda twin that was the only other motorcycle to win the 1000 overall. He has developed XL cams and pipes, big-bore and stroker kits and helped his 18-year-old son become one of the top 125cc motocrossers in the West.

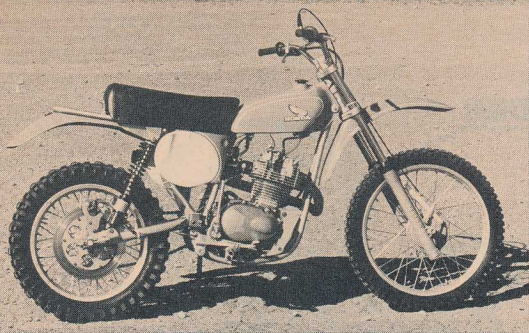
About a year ago John Blum of Honda Racing introduced Bell to Al Baker and Gene Cannady, a formidable pair of off-road riders capable of winning any cross-country race in the world. In their first ride on Bell's Honda the pair teamed to win the Parker 400. They broke a gear in the Mint (an item Bell now replaces with his own design) and won the Open Class in the Baja 500 last year. Baker, 24, has raced everything from desert Triumphs to motocross in 14 years of riding. He presently operates Al Baker R & D in Van Nuys, Calif. Cannady, a 34-year-old undercover police officer, has been known for blistering speed and bad luck since he began racing 6 years ago. In the last year Bell's XL has improved both his speed and his luck.

The bike has a C & J frame, MR tank, Betor fork, S & W gas/oil shocks, Honda wheels and special lighting coils built in Japan that power three enormous Ciebe lights. In Baja's blackness the bike could be seen for 10 miles and heard for three.

With the big tank and 30-pound lighting system it weighs 302 pounds wet.

But weight isn't a problem for Bell's 410cc, 38-horsepower engine. Only Mitch Mayes' Husky was faster, and nothing had the Honda's drive out of a fast turn. Bell says all the power is in the head. Jerry Branch flowed this one, and Bell fitted needle bearings on a Long Beach Honda grind cam. A Lockhart oil cooler adds oil capacity and "saves the motor at wide open-speeds," according to Al Baker, who said he could remove the oil dipstick with his fingers instead of the pliers necessary without an oil cooler.

Reliability and speed win Baja. This bike ran 800 banzai miles in 18 hours 22 minutes without a speck of trouble or power-fade. It hadn't been touched except for cleaning when we rode it a week after the race, yet the engine was still crisp and the suspension supple. The weight of the lights definitely gives the front end a bulky feel—but you won't need them on your bike anyway.



A slicker-looking dirt bike would be hard to find. C. H. Wheat, shown on the TT jump at Valley Cycle Park, built it from a Honda engine and Maico frame. The tank is a one-off two-gallon special which Wheat replaces for his long rides in Mexico.



## A FOUR-STROKE MAICO

● Of all the special Hondas presented here, this one is the most personal. C.H. Wheat of Sunnymead, Calif. has had a love affair with Maico handling for years and four-stroke singles even longer than that. The inevitable marriage resulted in one of the best-executed and best-looking custom dirt bikes ever built. In person the Maico (or is it a Hondico?) sparkles in a rich red/orange paint accented by pinstriping and polished metal. One would hardly expect Wheat to jeopardize its mantelpiece finish by actual use, but he built it to race TTs, scorch fire roads and play in Baja. He pursues all of these endeavors with a smooth, fast riding style that belies his 46 years.

Snuggling the Honda engine in a Maico frame required new motor-mount plates and careful alignment in a frame jig. Wheat couldn't use a Maico rear wheel because he needed fewer than the 46 teeth on Maico's smallest rear wheel sprocket to get the proper final drive ratio. So he took a Barnes spool hub and simply fitted a disc.

FEBRUARY 1976

The entire front end is Maico except for a D.I.D. alloy rim. With the latest Maico fork (delivering 1.4 inches more travel) and S&W gas/oil shocks moved forward, Wheat's playbike has incredibly effective suspension. By choice he has located the pegs low and rather far forward, so once perched on the tall Maico seat, the most comfortable riding style is sit-down. The suspension allows an almost constant sit-down position without being cushy or insulating the feel of the ground's texture. Steering is typically Maico—a bit slow but sharpshooter accurate. Wheat is particularly qualified to perfect his bike's handling because he works at S&W Engineered Products doing suspension research with Tim Witham.

Like the other two custom XLs, this one has a 402cc Bill Bell engine. The usual Bell modifications have been made to a new center-port head which Wheat has fitted with a Lectron carburetor. The bike feels more powerful than the other two XLs primarily because of its incredibly low wet

weight of 228 pounds. Based on an estimated 34 hp, its power-to-weight ratio is 6.7 lbs./hp, which is equal to the lightest and most powerful motocrossers produced today. Not bad for a private effort.

Riding the Wheat special is similar to riding the other custom XLs. Noise dominates the experience, followed closely by constant reminders of the engine's power: breathtaking speed arrives with a lot more revs left to go; the Honda can dig out of tractionless sand and skim across the top in a straight line; more throttle is usually equivalent to downshifting; unconquered hills become scarred with one lone tire track; in mud just sit on the seat and let the engine lug. It was because of this motor and its characteristics that all the custom frames and chassis were conceived, so it isn't surprising that engine performance is the most impressive feature of a custom XL. But it takes the engine and chassis expertise of the Bells, Wheats, Coles, Jentges to bring it out. ©