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YAMAHA YZ125E: 11 GRAND GASSER

DIRT BIKE

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RED ROOSTER HONDA CR250R

TESTS:

- HERCULES 250 ISDT
- SUZUKI RM80C
- YAMAHA SR500

CHUCK SUN ON THE RISE



TOMMY CROFT

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TRAINING WITH BRAD LACKEY
FIX FLATS WITH LESS FUSS
KYB PRO-LINE SUSPENSION

DIRT BIKE

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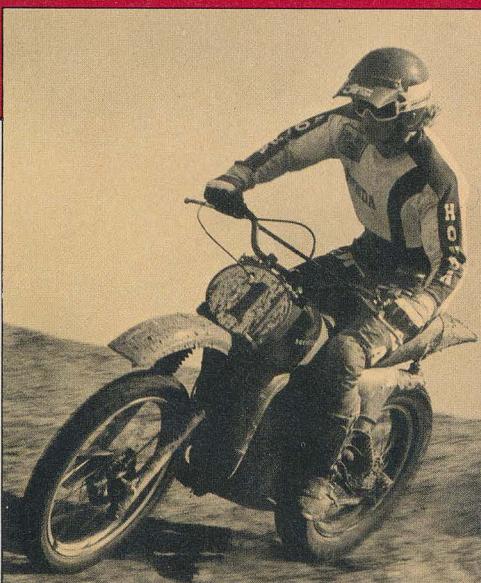
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Testing with Broc Glover . . . Pg. 36



Pumping iron with Brad Lackey . . . Pg. 15

ON THE COVER:
Tommy Croft and the Big Red Machine
that Cincinnati didn't build.
Photo by Len Weed.

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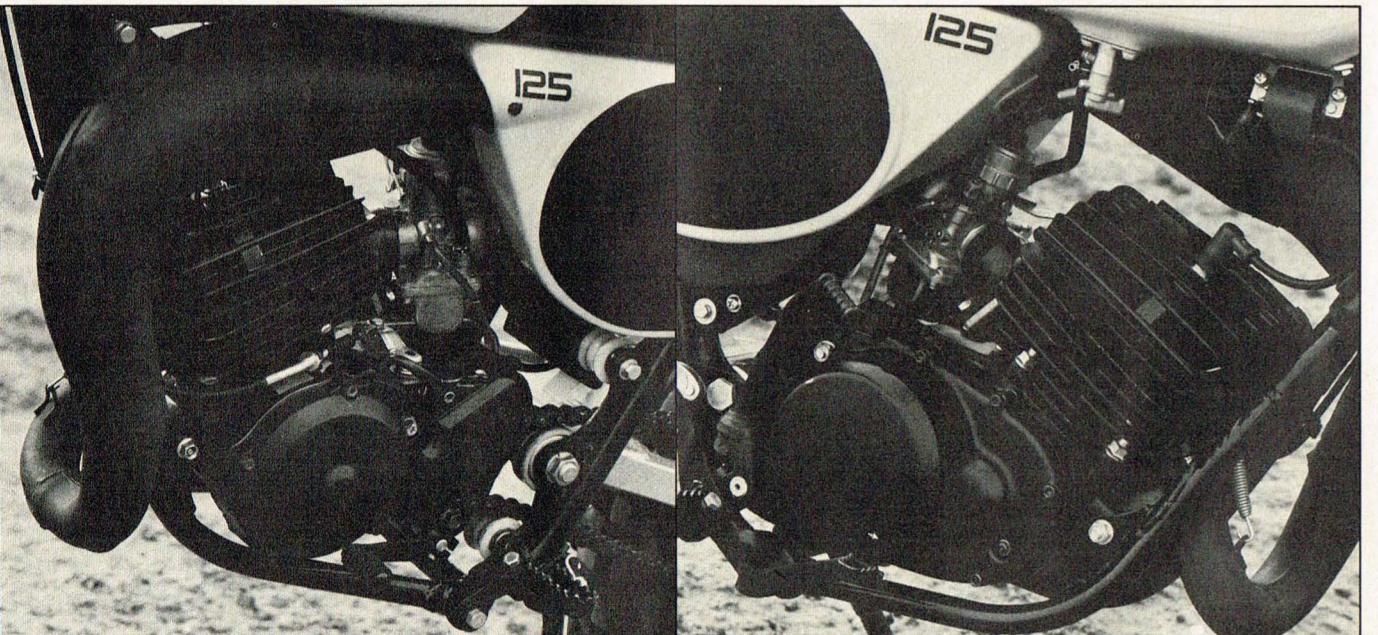
If it's good enough for Broc and Bob . . .

By the Staff of DIRT BIKE

□ So you hang on to the 125 National Championship, by winning the last ten motos in the series after bike problems at the Hangtown opener. Then what you do, if you're Yamaha, is pump all the race input into the latest YZ125 racer. What Hannah and Glover rode in '77 National competition is reflected in the '78 production bike which they tested throughout the '77 season.

What's new for you

Chrome moly frame. Longer needle bearing swingarm, made of boxed aluminum instead of steel. Yamaha added two chain rollers, upped ground clearance, reduced the head angle and trail, trimmed the weight one kilo, increased rear wheel travel, changed some holes in the engine, fiddled with the pipe, added a second piston ring, upped the power and fixed it so that the head and cylinder can be removed together. There's more what's-new info in the captions.



One fin was added to cylinder for better cooling. Head and cylinder can now be removed together. Piston now has two rings. The combustion chamber was switched from offset to centered in the head. Port shapes were changed along with contour of intake. Exhaust timing was increased and port timing raised.

On the track of e-xcellence

Stretching out the wheelbase doesn't seem to have affected the little yellow zipper's total non-reluctance to change directions at an instant whim. The Why Zed, with its new, less-rakey 30-degree head angle, takes to corners like rabbits take to making bunnies.

No one's going to come in mumbling about swingarm flex, even if they are actually capable of detecting it. That's one rigid rear end.

Initial impressions were that the forks were a little harsh over small bumps. We made some adjustments in both the front and rear suspension after talking to Jim Felt, tuner for 125 National Champion Broc Glover.

Some riders felt that the bike needed help in the mid-range. Then we compared our bike with Broc Glover's practice E and concluded that our bike was representative of the production batch. Remember we said they changed to factory porting? To get that

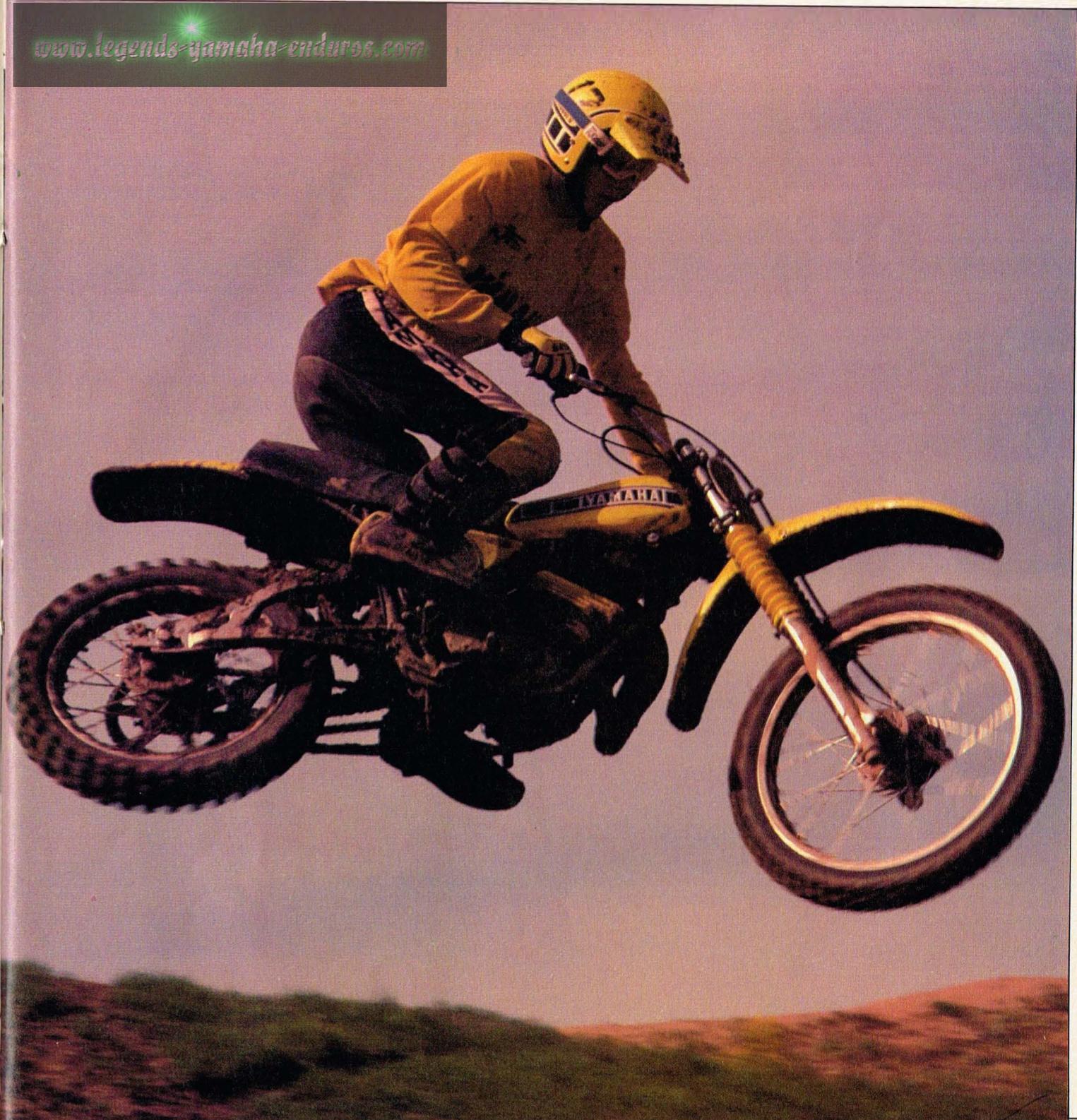
extra power on top cost something in the mid-range. For instance, our dyno test on last year's D reveals ten horsepower at seven grand. The E shows only 7.4. Last year's bike hit 20 horsepower sooner but signed off after 21.4 at ten grand. The E keeps winding out to 11 grand and 22 ponies.

At the time we rode with Broc he was testing a head for DG Performance, otherwise the bike was as stock as the one Joe Motocross can buy. Broc told us that the factory 125 has a bit more power, but not that much, and more travel, but there really isn't that much difference.

Cross talk

Some comments from Senior Tester Jim Connolly: It steers just super. It's really neat for the ricochet-type tracks. Those changes you made to the suspension really worked for me. I felt more stable in the whoops on the YZ than on the Honda. I'd like more

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YAMAHA YZ125E

YAMAHA YZ125E

mid-range, but it definitely moves out on top. It's really comfortable. After a few minutes I had really adjusted to it. I prefer Monocross suspension for straight-line running; I can ride looser, forget about what the bike's doing and think about the next corner. You really have to keep it buzzing. You have to think about the shifts, come off the gas while you snick it in.

Motocross instructor Russ Darnell also mentioned the shifting: It has good power, but you can't hold it on and shift. It needs more preload for my 180 pounds. I'd also dial in the forks some. They bottomed too easily for my taste. The brakes are super and it turns extremely well. Maybe six-foot is a little too large for the bike. I had to push back

a little in the seated position. The stock bike should be competitive in most classes. I don't think a good rider would be unmercifully blown away even at the National level on the stock bike.

Other comments: Me, I'm not prejudiced, I just hate all 125s. They ought to melt them down and turn them into 400s. Besides that . . . it really turned nice and the brakes were good. The suspension was a lot better after we got the word from the Midnight Rambler. It's really peaky and pipey.

You have to learn to back off when you shift and it works just fine. I don't think I like it as well as the RM. It's set up for a smaller rider than the RM and the power isn't as wide. There are a lot of changes, but nothing really significant

except for the swingarm. Its handling is now much more precise with that beefy box aluminum swingarm. It has to be close to the factory bikes and who can argue with winning?

Rapping with a golden wrench

Jim Felt gave us some inside info. Both Bob Hannah and Broc tested the pre-production E prototypes last year, part of Yamaha's triple-tiered development program: works bike, pre-production prototype and production bike.

The production cylinder is almost identical to the works engine in port timing. The E-model has a cast iron liner while the works bike uses a chrome liner, but the holes are the

same. Obviously, the factory ports receive a lot of cleaning up and matching. Both bikes use the same head. The new two-ring piston adds about one and a half to two horsepower on the dyno, because of better sealing characteristics. The crank and transmission of the E and the works bike are identical. And Jim defies anybody to come up with a better pipe. Yamaha spent months on the dyno trying.

It is possible that the new boxed aluminum production swingarm is better than the swingarm on the works bikes last year. Not one of the pre-production units was broken during last year's testing.

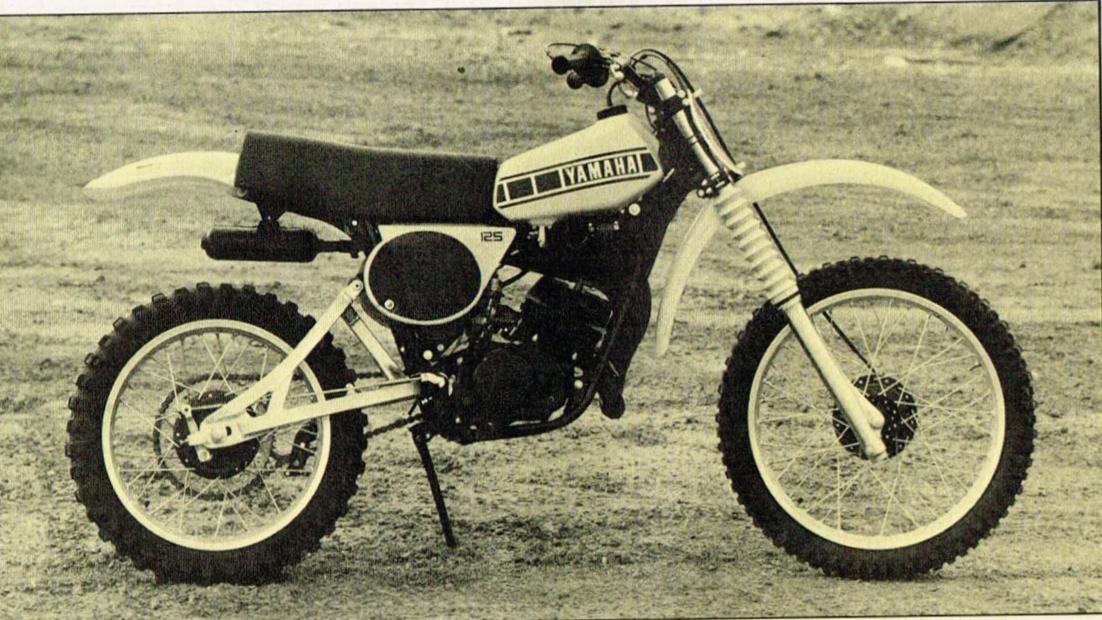
Here's Jim's basic suspension set-up for Broc's production bike. A 10 or

15-weight oil in the forks and 13 pounds of air. Jim levels his fork oil off 180mm from the top of the fork tube. The forks should be fully extended and pumped up and down to get any air out. The forks should be replenished one leg at a time. A heavier rider should probably shorten the distance from the oil level to the top by adding more oil. This gives a more progressive air/spring effect. A lighter

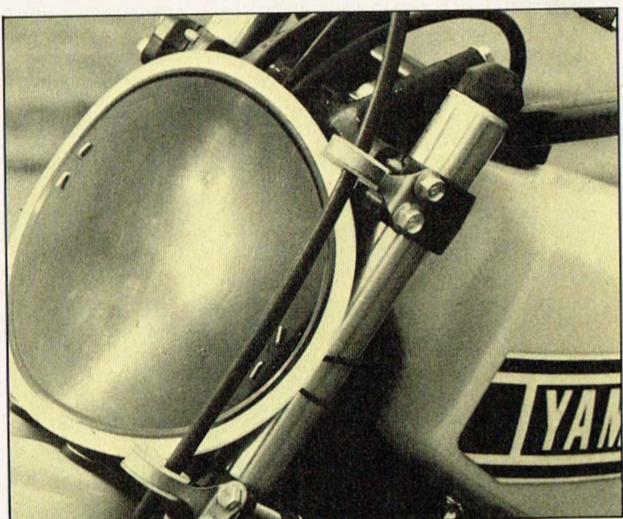
rider can lengthen the distance by removing oil. Just five millimeters of oil level can make a real difference for fine-tuning the forks.

Broc runs the standard gas pressure. He also used the Luft reservoirs to retard fade on his practice bikes last year. He dials in 10mm more preload than the standard setting and goes with

(continued on page 54)



Seat height is up 5mm, ground clearance was increased 15mm. Rake was decreased from 31 to 30 degrees. Trail was decreased 6mm. Wheelbase is an inch longer at 56. Weight distribution was moved forward. Weight is 197.5 pounds, ready for gas.



Ballpark figure for air pressure is 12-15 pounds. Travel remains 230mm. A little aluminum was cut out of the fork sliders below the leading axle. Yamaha went to IRC rubber in '78.

Number plate is now black instead of peel-on that peels off. Fork boots are now yellow.

YAMAHA YZ125E

PRICE: (retail, approx.) \$1024

ENGINE TYPE: Two-stroke, reed valve, single

DISPLACEMENT: 123cc

BORE & STROKE: 56mm x 50mm

COMPRESSION RATIO: 7.7:1

CARBURETION: 32mm Mikuni

HP at RPM: 22.0 at 11,000 rpm

PRIMARY DRIVE: 3.28:1, helical gear

TRANSMISSION RATIOS:

1) 2.46 (34.3 overall)

2) 1.88 (26.2)

3) 1.50 (20.9)

4) 1.25 (17.4)

5) 1.09 (15.2)

6) 1.00 (13.9)

FINAL DRIVE: 4.25 ratio

12-tooth countershaft

51-tooth rear sprocket

AIR FILTRATION: Oiled foam

ELECTRICAL SYSTEM: CDI magneto

LUBRICATION: Pre-mix

RECOMMENDED OIL: Yamaha

FUEL CAPACITY: 6.3 liters (1.5 gallons)

FRAME: Chrome moly

SUSPENSION:

23.0 cm travel (9.0 inches) air forks

24.0 cm travel (9.3 inches); measured at the rear axle

WHEELS: D.I.D

TIRES:

3.00x21, IRC knobby

4.10x18, IRC knobby

DIMENSIONS:

Wheelbase: 142.2 cm (56.0 inches)

Swingarm length: 48.3 cm (19 inches)

Ground clearance: 29.5 cm

(11.6 inches)

Bars, width: 86.4 cm (34 inches)

height: 111.0 cm (43.7 inches)

Pegs, height: 38.1 cm (15 inches)

width: 47.8 cm (18.8 inches)

Seat height: 89.0 cm (35 inches)

Rake and trail: 30 degrees, 133mm (5.2 inches)

Weight: 86 kg (190 pounds) dry
claimed: 89.5 kg (197.5 pounds)
ready for gas

BRAKES:

Front: Cable-operated

Rear: Rod-operated

SILENCER: Yes

SPARK ARRESTOR: None

PRIMARY KICK: Yes

WARRANTY: None

PARTS PRICES

Piston: \$14.40

Rings: \$6.00

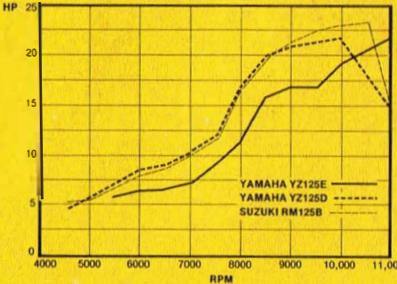
Clutch cable: \$5.42

Cylinder: \$82.77

Shift lever: \$4.40

Brake pedal: \$6.50

Clutch lever: \$5.60

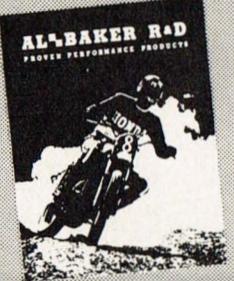


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Diameter of cross-brace for bars was increased from 10 to 12mm. Outside diameter of brake cable was increased one millimeter. New levers are contoured to the hand.

YAMAHA YZ125E

(continued from page 39)

two more clicks on the dampening. This shuts off some valving and gives more dampening.

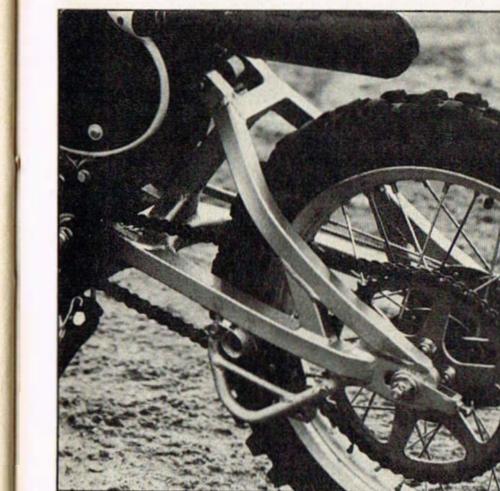
The YZE Is ez to like

Yamaha took a popular, proven bike and made it better for '78. It's really the first of the new 125s we've been aboard, so who can say if it's the best in the new, exciting moto game called Who's Going To Top What This Month. Coming up are an updated RM125 and the brand-new Kawasaki KX125. And who knows when the race replica CR125R will show up, if at all this season? And what about the new 125 Husky? All we can say is that the YZ isn't that far off from the factory bike that romped and stomped through the 125 National class last year. If that's not enough, what is? So give it the Las Vegas Showgirl of the Year Award because it's a proven money-maker with long legs, little middle and a lot on top. ■

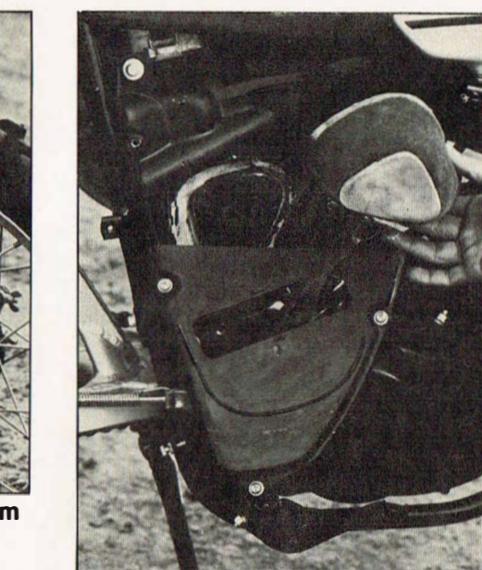


Backing plate is magnesium. Rear brake adjuster uses handy wingnut. Swingarm is now aluminum, with needle bearings. It's also almost an inch longer. It will interchange with D-model bikes with addition of E axle. Rear wheel travel is up ten millimeters to 240. That's 9.3 inches.

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Chain tensioner has beefy aluminum tube for protection. Distance from center of swingarm pivot to countershaft sprocket center is just 3½ inches. Two chain rollers up near swingarm pivot are new with E-model.



One Phillips holds on side cover. Remove three more Phillips' to get to fuzzy-type foam filter. Air box is designed to keep water out.



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thousand words...
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