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DAVE MUNGENAST, ISDT STAR!**

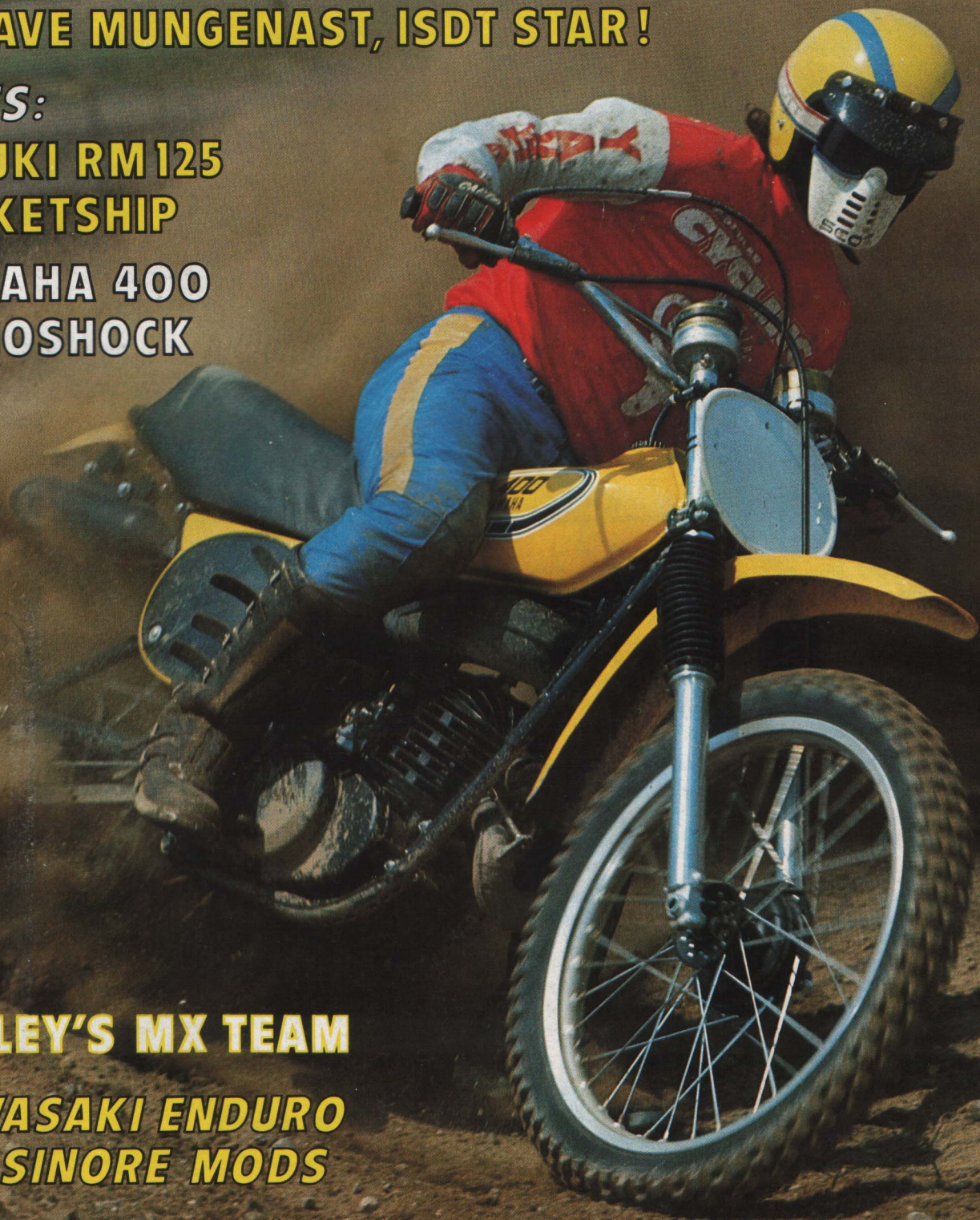
TESTS:

SUZUKI RM125

ROCKETSHIP

YAMAHA 400

MONOSHOCK



HARLEY'S MX TEAM

**KAWASAKI ENDURO
& ELSINORE MODS**

YAMAHA

YZ

400C

New Suspension,
New Powerband,
But Some Old
Gripes Are Still
Around



It's a comfortable
flyer, and the YZ 400C
will guarantee a soft and
controlled landing.

Since the introduction of their Mono-cross rear suspension, the Yamaha motocross machines have been selling like hotcakes. Unfortunately, because of their pipe-y engines and handling and speed shortcomings, many of the bikes immediately returned to the auction block, by way of the local classified ads. People went out and bought the Yamaha, found that in some cases the two of them didn't get along, and sold the machines in exchange for a

European mount.

Most of the beefs and bitches of the consumers were noted by Yamaha. This year, with the new YZ series, and the 400C in particular, the Japanese firm has tried to iron out the bumps.

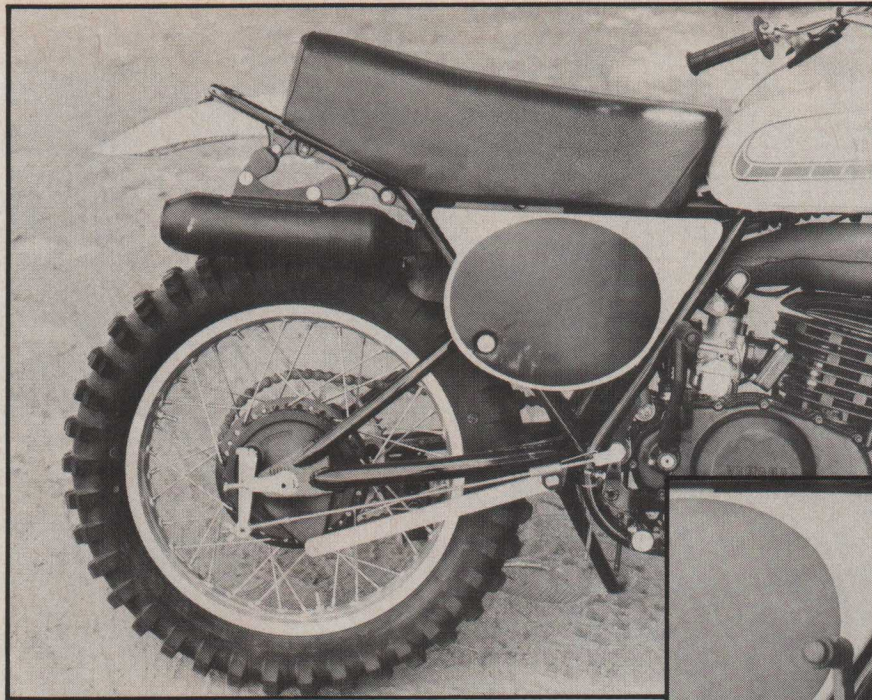
The first, and most noticeable change is the suspension. Although the Mono-cross (as they call it—monoshock to the rest of us) has remained, the design and functions have been changed. The rear end was softened up for this year's

machine. No longer do you have to go at Pierre Karsmakers' speeds (for whom it was set up) to get that rear end to work.

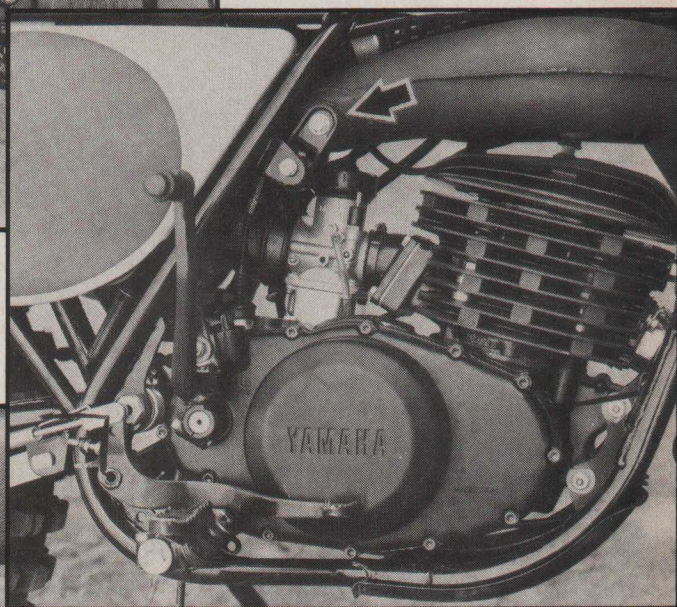
In the construction, the large, heavy square tubing that made up the rear suspension system has been replaced with a lighter tubular design. It works just as well, gives the rider a little more flex, and is slightly lighter than the old method.

Inside, the damper piston unit has been changed so that both the compression and rebound characteristics have

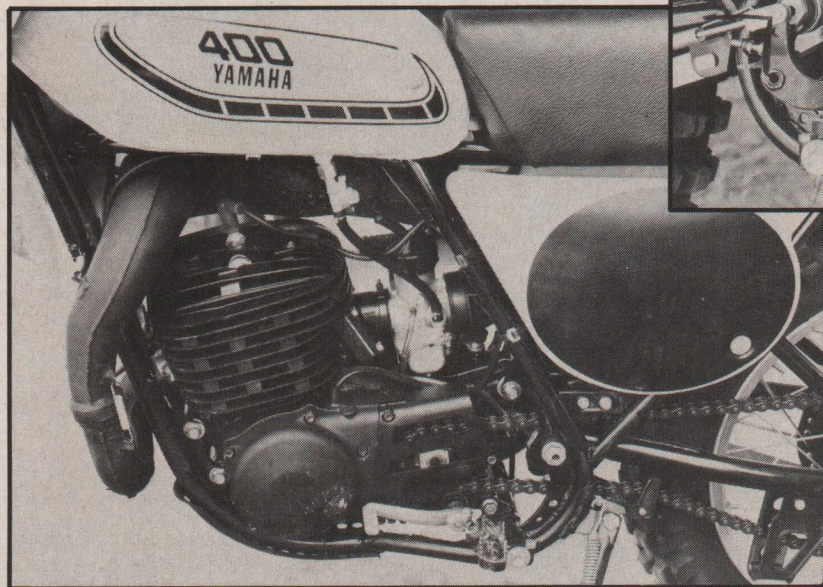




A new monocross system, new silencer and antiquated rear braking system are all standard on the bike.



The arrow points to the spot in the pipe where it's probably going to break. Also visible is the choke pull rod, a good reason to commit suicide when it won't cooperate.



Reed valve, radial finned head, aluminum shifter and carb, all neat and trouble-free. The footpegs, pipe springs, cable routing and fuel line should be improved.

improved. The bike doesn't rebound as quickly as before, and the down dampening is softer and more controllable.

A lot of people have been playing with the air fork system for quite some time, but Yamaha was the first manufacturer to come out with it as a stock item on their motocross machines this year. Those funny looking speedo and tach goodies on the front forks are actually

bowls and air inlets for the suspension system.

We found out quite a few things about the front air forks after doing some fiddling. First of all, they work beautifully with a 10-weight oil poured in. Both Yamaha 10-weight shock and fork oil, and Bel-Ray shock or fork oil do the job well.

In the air pressure department, you'll

find that the Yamaha is easier to work with than most air fork kits when it comes to adding or subtracting air to dial yourself in. The pressure that you end up with is decided by the rider—your style, speed and preference of fork stiffness. With the air-cushioned forks, you can really dial yourself in. Just make sure that both forks have equal amounts of air pressure before you swing a leg over the

Rebound at both ends is excellent. Once the bike takes to the air, the forks and rear end is extended, awaiting the landing and next series of bumps.



saddle and go out riding.

Internally, the front forks have gone through a similar revamping as in the rear. The dampening and rebound characteristics have been changed. The dampening has been slowed down somewhat, giving you an easier ride, and allowing the forks to float over obstacles that previously would have given you sore wrists.

In rebound, the damper rod holes have

been enlarged, giving you quicker rebound but, with the help of the air pressure, less topping out. The old thumping sound found in the past Yamaha forks due to the quick rebounding and bad dampening is now gone. We would estimate that you're now getting about $7\frac{1}{2}$ inches of actual usable fork travel in the front, to go along with the $7\frac{1}{4}$ -inch of rear wheel travel. That's

a very big improvement over what was available last year.

The next major change is in the engine department. Yamaha motors have always been known for their speed. Few will argue that the powerplant is quick revving, fast in producing horsepower, and basically bulletproof.

And that was part of the problem. The engine came on too soon, resulting in a



Thanks to the new suspension and engine powerband, you can really stuff the bike into corners, and still have a very good chance of coming out the other side.

lot of useless rear wheel spin, a switching back and forth of the rear wheel and basically a handful for the rider. Lots of horsepower is good, provided you can use it.

To compensate for that problem, the new YZ400C has gone through a few changes. The first is the carburetion. The fine Mikuni people did a little tinkering, allowing their fuel feeder to

now open up and allow mixture down into the cylinder at a more controlled rate, instead of blasting down gas to the cylinder like a suddenly broken dam. This was accomplished through a combination of jetting, slide design and internal little goodies that even we don't understand.

To work in conjunction with the carb, the cylinder porting has been changed. It

now allows the port timing to be retarded slightly, giving the bike a chance to receive gasoline at a slower rate, especially at the bottom end. This is a result of, in simple terms, what would happen if you were to drop the cylinder lower, resulting in a sooner port opening, quicker response from the engine, and most importantly, more horsepower availability at the lower rpm range.

YAMAHA YZ 400C

ENGINE

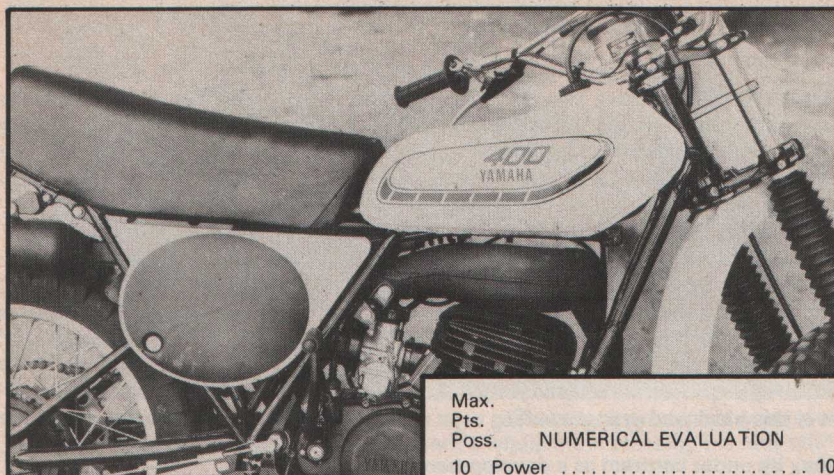
Engine type	2-stroke, reed valve
Bore and stroke, mm	85 x 70
Displacement, cc	397
Horsepower/rpm (claimed)	N/A
Torque/rpm (claimed)	N/A
Compression ratio	7.6:1
Air filtration	foam element
Carburetion	38 Mikuni
Lubrication	in fuel
Ignition	CDI

DRIVE TRAIN

Transmission	5-speed
Clutch type	wet, multi-disc
Primary drive	gear

CHASSIS

Chassis type	split downtube
Overall length, in.	83.5
Seat height, in.	36"
Peg height, in.	10.7
Ground clearance, in.	10
Wheelbase, in.	56.3
Weight as tested, lbs.	241
Tires, front	3.00 x 21
rear	5.00 x 18



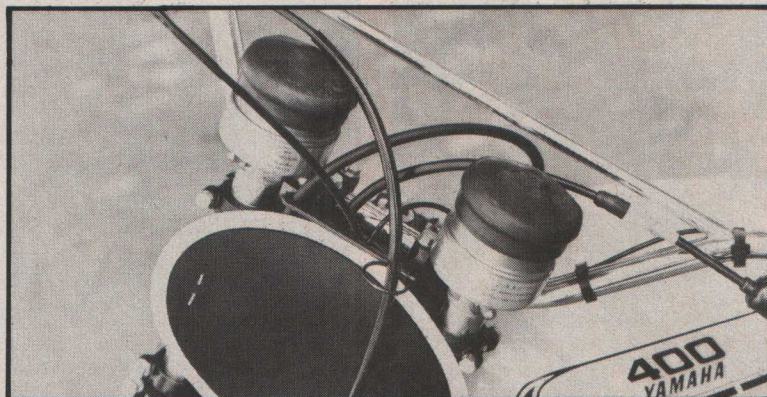
The gas tank is very hard to fill because of the opening and frame hump in the way. The seat and tank junction is smooth, allowing the rider to crawl forward easily.

Max. Pts. Poss.	NUMERICAL EVALUATION	
10	Power	10
10	Powerband	10
10	Acceleration	10
10	Transmission	
	(5) Ratios	5
	(5) Operation	5
10	Suspension	
	(5) Front	5
	(5) Rear	5
10	Brakes	
	(5) Front	5
	(5) Rear	3
10	General Handling	8
30	Miscellanea	
	(5) Starting	3
	(5) Rider comfort	5
	(5) Quality of craftsmanship	3
	(5) Riding maneuverability	4
	(5) Tires	4
	(5) Noise level	4
100 pts.	Overall Rating	89 pts.



The best front brake in the industry, next to the best Japanese forks, and finally, a set of alloy rims that are good enough to leave on.

Up on top of the forks, you'll find these little goodies, part of the secret to the good forks. The valves for air addition or subtraction are right under the bowls.



In the midst of all this trickery is the good old standby—Torque Induction, which is Yamaha's fancy name for reed valves. The Torque Induction system is similar to the one found on the Husky. When the engine requires more fuel, revs quicker, and wants to build more horsepower, the reeds are opened by crankcase pressure, allowing everybody to get what they need internally.

Add to these goodies a chain tensioner (which you'll probably have to put on yourself, but is included in the package) some new rims that are actually of good sturdy material, fork boots, an off-road riding kit, and a new 5.00x18 rear tire, and you've got the changes on the new Yamaha YZ400C.

How does the new bike perform? Very well, actually surprisingly well when

compared to the previous models. It still has its drawbacks and problems, for it's still a Japanese machine without the European trimmings, but for the most part there are no new grievances.

The suspension package really works. It just doesn't even feel like a Yamaha product any more. The front forks work so well that you'd suspect they were of

Continued on page 66

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European design. This is the first air fork system that we've experienced that actually works better than spring forks. The action is smooth, the reaction is right up there, and generally it's a very good-feeling front end.



Over all, the new Yamaha looks like a serious racer. On your first outing, you'll think the same. It isn't until you've lived with the bike for a while that the little problems start surfacing.

When you first ride the bike with the new forks, you get the feeling that they're too soft. They seem to drop considerably when the brakes are applied or when you come over a large jump. It isn't until a few hours later that you realize what's going on internally. The forks have a very plush feeling through their first half of travel, past which point they get progressively stiffer due to the compression of the air inside. The result is that you get a smoother ride over the smaller bumps, and a very firm but controllable reaction when the forks are really put to the test.

Working in conjunction, the rear end is very similar. It, too, has a soft feeling at first, and then gradually becomes harder and harder as you push the suspension to its limits. For a change, a Japanese machine has come out where both ends of the suspension package are working in harmony, instead of having a contest between themselves to see which can work with the least amount of cooperation.

The other change in the YZ400C, the engine, is also considerably better. Suddenly you've got a powerplant that isn't always trying to be a drag racer. The motor pulls well from the bottom, giving

Continued on page 72

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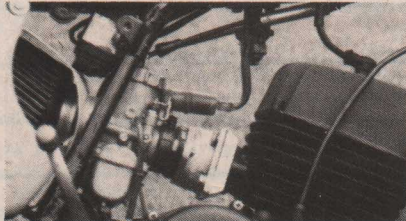
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YAMAHA

you an advantage coming out of the corners. Most big-bore machines are traditionally tractors, offering the owner a lot of low-end torque. The Yamaha's powerband is similar, except for the fact that it doesn't have any flat spots. The power starts way down low and continues smoothly up to the top rpm range.

With the smoother powerband, smoother suspension and better ride, you've now got a bike that's willing to work with you. You're not always fighting the machine to see who decides which line to take. The Yamaha is willing to compromise with the rider, and now with these changes, will even concede to let you make the plans and execute them on a track.

Before you start thinking that we're totally in love with the new Yamaha, we'd like to point out a few of the things that we didn't like about the machine. Most of our beefs are things that you've heard before. If you presently own a Yamaha, or have had one in the past, you know about them already.

First on the list is the braking problem. Yamaha's brakes are almost to the point of being superior to the rest of the field. Utilizing good shoes, an excellent drum, and a magnesium backing plate, they're covered on all the angles you'd think.

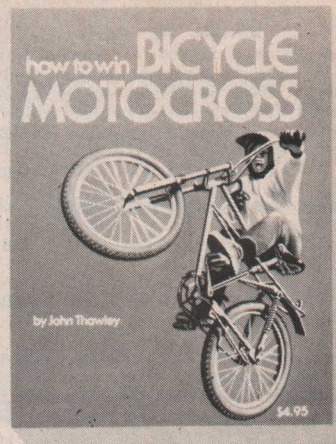
In the front end, it's true. Yamaha has for the past few years had the best front brake in the industry. The same holds true for the rear. It's a very good brake, bordering on outstanding. The only drawback is that it's not full-floating. You go into a corner, and if you're not ultra precise with the rear brake, the back wheel will lock up.

There's really no excuse for this. Yamaha is aware that the back brake should be full-floating. It wouldn't take all that much to change it. Just move the stay arm from the swingarm to the frame. No big deal, a very small, minor change on a jig, and a lot of happier people. Instead they still pawn this horrible design off on the buying public.

Before you even ride the bike, get a full-floating brake. There are a lot of companies that have them available. One of the finest is White Brothers in Garden Grove, Calif. Their full-floating rear brake kit will let you realize just how good the Yamaha back brake really can perform. Without it, and with the bike in stock trim, the back brake borders on being totally useless.

The footpegs also fall into this category. They're skimpy little devils, too small for the average foot, with less teeth than a one-year-old child. Your feet are constantly slipping off the pegs when they're wet, and not getting an altogether good grip when they're dry. They should also be replaced before you break an ankle.

The opening in the gas tank is another



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problem that should have been corrected
long ago. It's too small, doesn't allow the
owner to see how much fuel he's pouring
in, and is basically a hassle to work with.
Most Yamaha owners end up buying
funnels to re-fuel their machines because
a gas can nozzle won't go in far enough
to fill up the bike without pouring gas all
over everything.

The grips have gotten better, a little
softer, and a little easier to work with.
Many Yamaha buyers will probably leave
them on. Get a good set of Magura dog-
leg levers. You'll be really surprised at
the increased control over both the front
brake and clutch operations with a set of
decent levers on the machine.

Whoever thought up the choke pull
rod should be hung. It doesn't work well,
is a hassle to grab and quite often will
stick. Webco, and various other compa-
nies, now offer a little plastic goodie
that slips over the top of the choke rod
and makes things more bearable. Even
still, the old push-down lever should be
retained.

When dirt gets on the machine, the
kickstarter still refuses to come out of its
locking position. Last year Suzuki went
to a little rubber cover that solves this
problem. Surely Yamaha could find
room in their production line to install
one on their machines.

The pipe still breaks at its mounting
point just above the carburetor on the
right side. You've really got to keep your
eye on it, and can figure that eventually
you're going to have to do some welding.
The silencer has been changed to a
Krizman model, instead of the ornament
found on the machine last year. The two
mounting points that hold the silencer to
the frame need to be beefed up. By
drilling a hole large enough for two small
bolts and nuts to go through the round
section, you lessen the chances of
breakage.

Because of the monoshock design, the
air filters, and air box design are very
limited. When you're servicing the filters
and reinstalling them, make sure that
you use ample grease to compensate for
the problem of dirt passage.

As we mentioned before, these grips
about the bike are not new. If you go
through old road tests, both ours and the
other monthlies, you'll see the same
points brought up again and again. It
doesn't come as a surprise.

Over all, the new Yamaha YZ400C is
a big improvement. The factory concen-
trated on three of the biggest complaints.
They changed the habits and powerband
of the engine, put on a set of very good
forks that really work, and modified the
rear end so that the bike is no longer a
kangaroo. To make the machine a top-
of-the-line competitor, they're going to
have to concentrate on the smaller prob-
lems, which, when lumped together, are
going to turn a lot of perspective buyers
to a different mount that has gotten more
attention to detail.



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