



● Last year only Bultaco, Puch, and Penton sold 175cc dirt racers. The class has been so popular in some parts of the country that Yamaha's all-new MX175A joins equivalent models from Can-Am and OSSA to compete with the established three for that particular dirt-bike dollar.

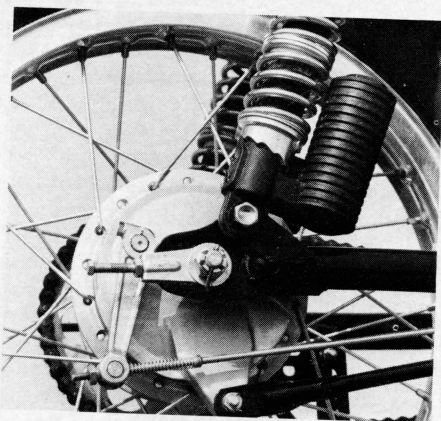
Naturally, the 175 follows the same general design pattern as the other members of the Yamaha MX series. Over the years, Yamaha's dirt racers have gradually evolved from their Enduro models. The handling peculiarities which arose in

the first dirt racers, like the DT2-MX, originated in the street/dirt design compromises made in the Enduro model. Then Yamaha got into motocross racing at the factory level and learned a lot of things about high-speed dirt bike handling in a short period of time. The YZ 250 factory racer replica embodies the conclusions Yamaha reached after building their first GP bikes. Torsten Hallman was hired to develop the handling of those bikes. As a result, the YZ Yamahas handle like Husqvarnas—with much more power.

Cycle-Test

**YAMAHA
175 MX**

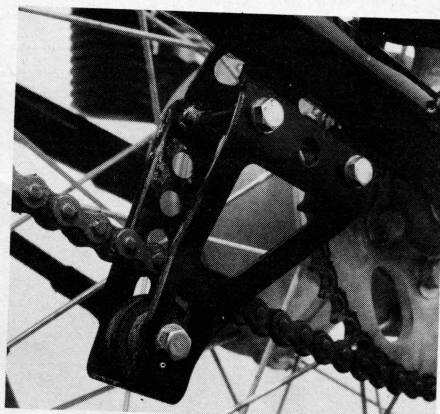




These dual-spring shocks were on the prototype and gave much better action.



Cover removed to show oil pump on production bike. Convenience overshadows weight factor.



Chain guide performed perfectly to keep #428 roller chain from derailing on bumps.

A Husky GP bike of the Hallman era was made to cope with the demands of the typical European circuit. Those tracks were comprised in large part of loose and tacky dirt which gave tremendous cornering traction. Even in the twilight of his racing career, Hallman had cat-quick reactions and he crawled all over the machine as it ricocheted around the course. As one might suspect, given Hallman's experience, the YZ 250 handles like a motorized billiard ball. Professional racers with nervous systems sympathetic to the

YZ seem to be able to make the Yamaha work for them. We couldn't cope with the YZ 250; but, as a salve to our egos, neither could Ake Jonsson.

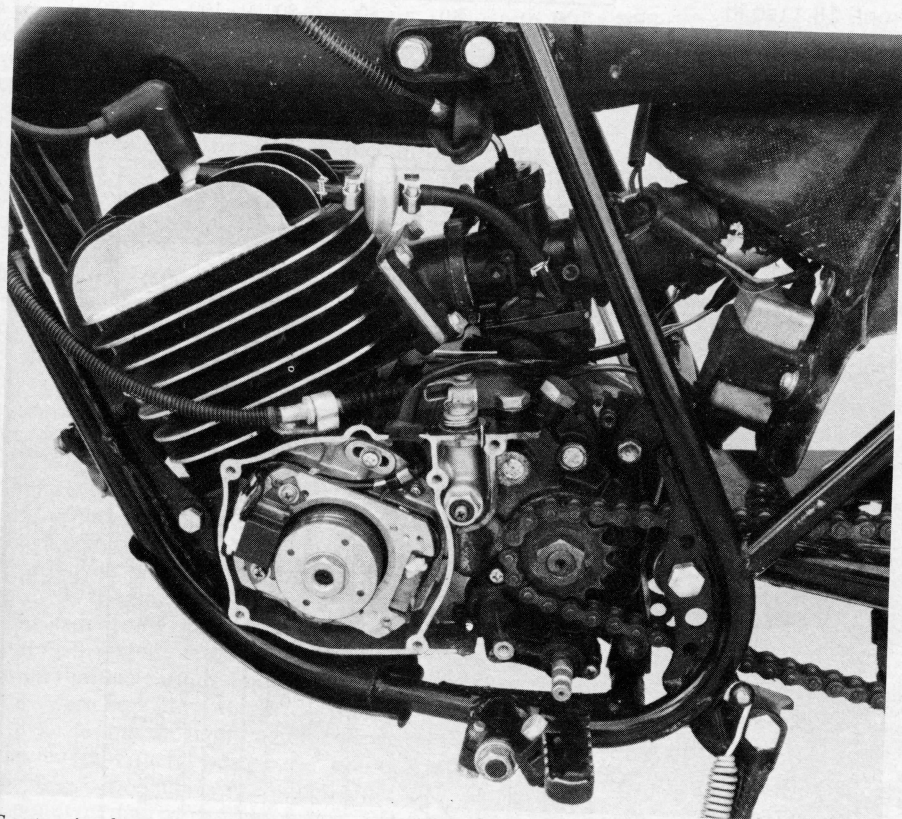
The MX-series Yamahas are somewhere in between the old Enduro models and the greased-lightning YZs. Like the factory racers, the engines are lower and farther back. The resulting change in weight distribution favors straight-line stability over very rough terrain; the set-up also gives better traction during hard acceleration. But the rider must often

compensate for a corresponding loss of weight on the front wheel by leaning as far forward on the bike as possible when cornering. Our test bike was very much this way. On soft dirt turns, or ones with a berm, we could lean back on the pegs to get maximum traction and slingshot into the straight with belly-wrenching acceleration. When smooth, non-banked turns were tried, we had to abandon some old habits. A lot of time was lost trying to slide around the turn with the power on. There was a quick way: accelerate as long as possible toward the apex of the turn, brake hard, downshift, and make a tight turn before entering the next straight.

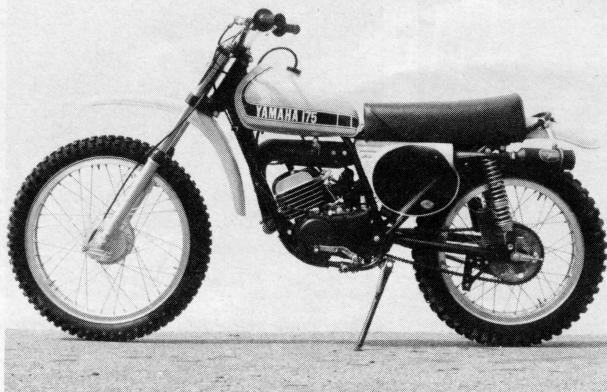
Motocrossers are developed to handle in certain ways so that expert riders can take tactical advantage of track conditions. Motocross is a very defensive form of racing. A combination of rider and bike that could set the fastest lap times on a circuit empty of competitors might be entirely thwarted by savvy pros on less powerful bikes during the race. The most consistent winners will be the racers who can best adapt themselves and their bikes to take advantage of the competition's weaknesses and still get around the course in the least time.

For a rider whose racing philosophy centers on defensive circuitry, two of the MX175A's strongest points immediately endear themselves. Both brakes are extremely powerful and progressive and the bike is very light. With the fuel and oil tanks both full, the MX175A weighed a mere 199 lbs. on our certified scale. Even on bumpy approaches, control feel through the brakes tells the rider just how hard he can stop without getting into trouble. Both the brakes and engine have less to do in any maneuver on this ultra-light bike.

The MX175A is so light because it's identical to the MX125A except for the cylinder assembly, the ignition system, and the swingarm length. The strokes are the same: a ten millimeter larger piston bore gives the 175 its extra displacement. The 175 has a CDI ignition instead of a fly-wheel magneto, and its swingarm is two inches longer.



Construction detail shows beautiful craftsmanship on lightweight bike. Engine needs development.



YAMAHA MX175A MOTOCROSS

Price, suggested retail..... \$1071 plus tax, freight, and dealer charges.

Tire, front..... 2.75in.x21in. Yokohama Y-611 motocross knob

rear..... 3.50in.x18in. Yokohama Y-612 motocross knob

Brake, front 4.33in.x1.0in. (110x25mm) SLS

rear..... 5.125in.x1.125in. (130x28.5mm) SLS

Brake swept area 13.5sq.in. front, 18.11sq.in. rear, 31.71sq.in. tot.

Specific brake loading.... 11.71lbs./sq.in. at test weight

Engine type Reed valve controlled piston port two stroke single

Bore and stroke..... 2.6in.x1.97in., 66mmx50mm

Piston displacement 171cc

Compression ratio 7:1 actual

Carburetion 1; 28mm; Mikuni VM28SC

Air filtration Dual density oiled urethane foam

Ignition..... Hitachi magnetically controlled CDI

Maximum BHP @ rpm..... 16.59 @ 8500rpm; actual

Maximum torque @ rpm 10.56lbs.ft. @ 8000 rpm; actual

Rake/Trail 29°30'/5.5-inch (140mm)

Mph/1000rpm, top gear 5.88 (9.46kph)

Fuel capacity 1.6gal. (6 liter)

Oil capacity48qt. (.45 liter)

Transmission oil capacity69qt. (.65 liter)

Gear ratios, overall (1st.) 37.0 (2nd.) 24.51 (3rd.) 17.88 (4th.) 14.26 (5th.) 12.49

Primary transmission Helical gear (74/19)

Secondary transmission # 428 roller chain (1/2x5/15-inch)

Wheelbase 53in. (134.6cm)

Seat height 30in. (76.2cm)

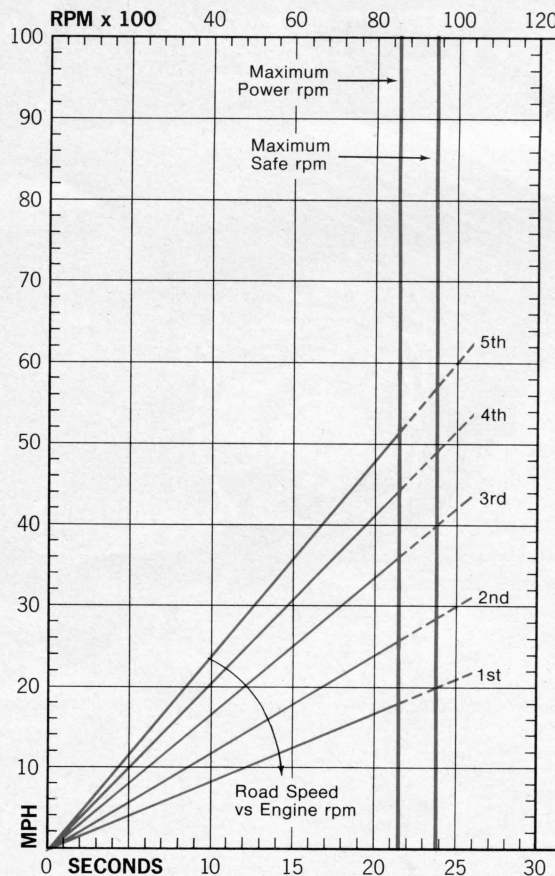
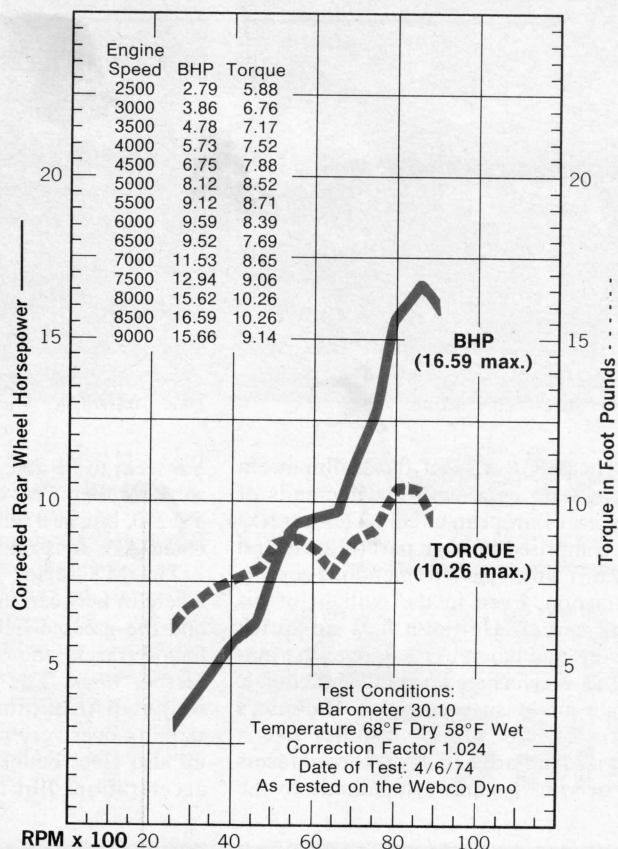
Ground clearance 10in. (25.4cm)

Curb weight..... 199lbs. (90.3kg) with full tank of fuel

Test weight 365lbs. (165.6kg) at curb weight with rider

Sound level (AMA Standard)..... 91 dB(A)

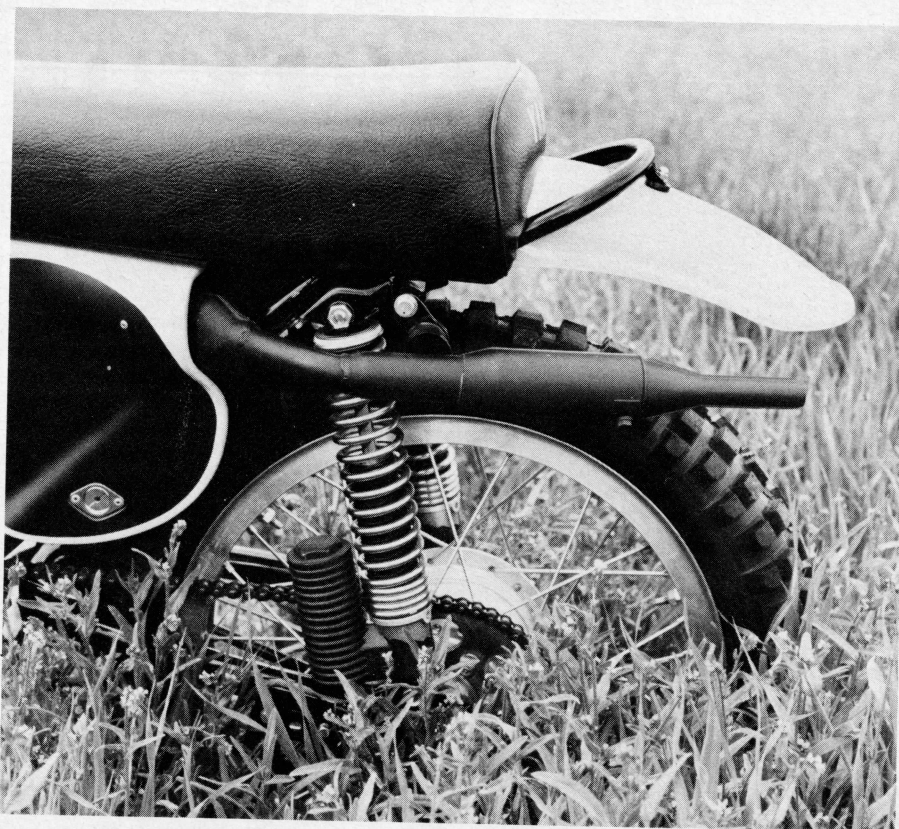
Top speed 56mph (90.1kph) with standard gearing



The first test bike that arrived at our shop turned out to be a prototype. It had an unsilenced exhaust system and the Autolube pump and tank were not installed. In order to comply with the law, a Skyway silencer/spark arrester was fastened to the expansion chamber stinger and pre-mixed fuel, at a 20:1 gas/oil ratio, was used in the tank. During our initial rides, the prototype was very impressive. Its engine had a broad and smoothly progressive power curve that made it very easy to ride around a tight MX track. Webco's Schenck dynamometer documented our seat-of-the-pants feelings. The power rise increased at least a whole number each 500 rpm until the torque peak of 11.27 lbs.ft. was reached at 7000 rpm. The power peak was 16.69 bhp at 8500 rpm. Certainly nothing special about it, but a good, respectable, easy-to-ride power band for an MX-type bike. Then we got the shop manual and discovered that the bike was indeed a prototype and it differed from the production counterpart in too many instances to be of any value as a test bike.

Upon our receipt of the production bike, the only obvious differences were the Autolube system and the expansion chamber silencer. But a few rides proved the new machine to be significantly different. Its ride was more harsh at the rear wheel and the engine had entirely different characteristics. When exiting a rough turn on Valley Cycle Park's short MX course, the engine would start to pull hard from low revs, then feel absolutely flat for a while before coming on with a hard rush again. It's a very impressive feeling when the rush does come, but that rush won't help you to good lap times on a rough track. An engine producing a sudden burst of power in the middle of the band will waste most of the effort in wheelspin and make directional control by the rider very difficult. The power curve on the data page will show you that the power stays in the nines between 5500 and 6500 rpm and even drops slightly at 6500. Where the production bike shows 9.52 bhp at 6500 rpm, the prototype bulged to 13.76 bhp at the same engine speed. Though both engines peaked at 8500 rpm, the prototype dropped way off to 13.16 bhp at 9000 rpm, while the production engine faded only slightly to 15.66 bhp at the same rpm. Sparkplug readings showed that the carburetion and ignition timing were very close to perfect during the dyno testing on both engines, so we suspected that there were basic tuning differences between the two engines. Since the prototype had already been returned by the time we tested the production bike, it was not possible to check the cylinder timing. The porting in the production engine was the same as shown in the shop manual, a check which led us to conclude that the exhaust systems must have been either purposefully or accidentally different. The sort of differences which the

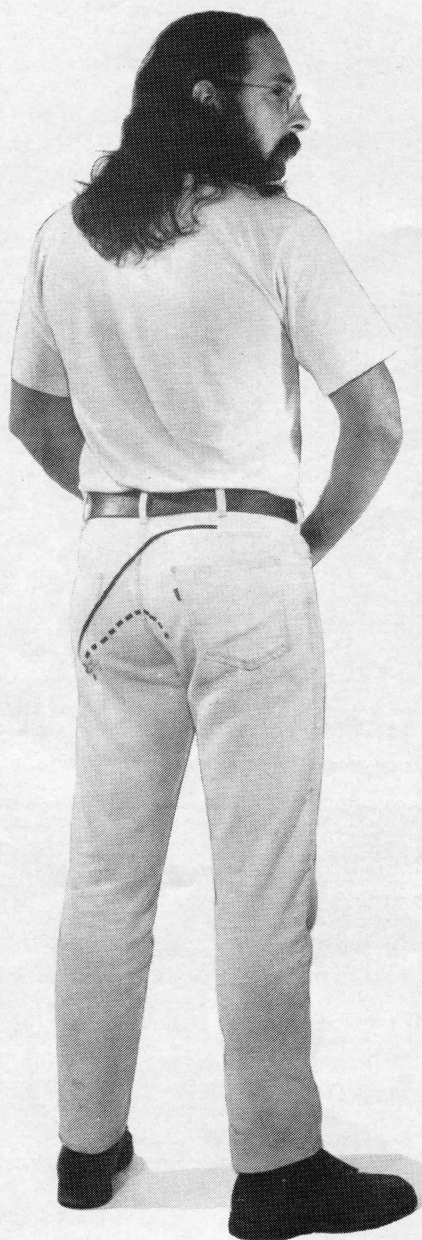
JULY 1974



Shock absorbers and expansion chamber silencer on production bike contributed to criticisms.



Prototype responded best to Hallman-YZ tactics. With more power, the 175 would handle like YZ.



Bassani's Dyno Facility

Other pipe builders may try to dazzle you with flashy dyno charts that show fantastic peak H.P. at wide open RPM, but don't be fooled. That doesn't mean you'll pull the next gear change, or come out of the first turn first at the track. Only the ability, skill and experience of Darryl Bassani himself can build a Bassani exhaust system—the system that *totally* performs.

Bassani personally designs each pipe with a kind of "Seat of the Pants" testing. Building... riding... modifying... riding again... actually feeling the bike until the maximum performance level is attained.

Bassani doesn't have to impress anyone with Dyno curves—because you'll be impressed with the product.

Send 50¢ for brochure.



3726 E. Miraloma, Dept. C
Anaheim, Calif. 92806 (714) 630-1821

Even if we took for granted that the prototype engine was closer to what you would get from a dealer, the engine is woefully short on competitive horsepower, even for local motocross. Take the TM125K Suzuki, for example (see *Cycle*, October 1973). It made 17.41 bhp at 10,000 rpm and 8.35 bhp way down at 6500 rpm. It weighed exactly the same as the MX175A and the latest version of it now sells for \$720. And for a real mind-bugger, take a look at the \$1095 Can-Am MX. This 175 does weigh 16 pounds more than the Yamaha, but it produces 22.5 bhp at the top of a very broad curve and has a six-speed gearbox. Absolute slaughter.

Photographs of the prototype explained why the production version was rougher-riding and why it didn't get rear-wheel traction like the prototype. The nice dual-spring shocks on the prototype had been replaced with single-rate single-spring versions which felt like rigid struts after five laps on the Valley Cycle Park course. The front springs were very stiff also. Any rider lighter than our 175 pound tester (with full MX gear) would have to cut the pre-load spacers somewhat (they're almost three inches) on the springs to get decent travel.

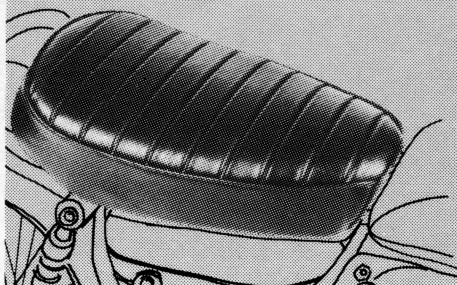
Many of the components on the MX175A are of extraordinary quality. In the hands of a knowledgeable tuner, the bike could be made into a formidable weapon. But it makes little sense to rave about its fantastic ignition system when the bike is so near the top of its price range—and still is so sadly lacking in the engine and suspension departments.

A very positive aspect of our experience with the bike came when we attempted to perform basic maintenance chores in the shop. The shop manual, which includes all the MX series as well as the SC500, is extremely well organized and illustrated. A separate section in the manual is dedicated to normal race-to-race maintenance. The usual practice with racing bikes, and indeed for many road models, is for the manufacturer to provide the absolute minimum of guidance and instruction to assist the owner with repair and maintenance. There are even a magnet rotor puller and spoke wrench in the tool bag of the MX175A.

Because of its lightness and small stature, compared to a 250, the MX175A would be attractive as a playbike if its rear shock and front fork springs were replaced and the flat spot were tuned out of its power curve. Still, \$1071 is a lot of money for a playbike that needs extras. If you are in the market for a 175cc motocross racer, you should buy one of the other already-proven brands. ©

SEAT COVERS

OLD ONE HOLED-UP?
THIS BOLD ONE WILL
HOLD UP!



BOTH PLAIN AND PLEATED DESIGN TO MATCH ORIGINAL EQUIPMENT!

Genuine NAUGAHYDE, with strongest nylon stitching. Fastest installation for several hundred models including Honda, Suzuki, Yamaha, Kawasaki, Maico, Ossa, Bultaco, Montesa, Jawa, Monark, Sachs, DKW, Husqvarna, Hodaka, AJS, Indian and Penton! All models priced at \$13.95 retail. See your ANCRA dealer for list of models, or write us for free catalog.



ANCRA
Corporation



P. O. BOX 891
EL SEGUNDO
CALIF. 90245

