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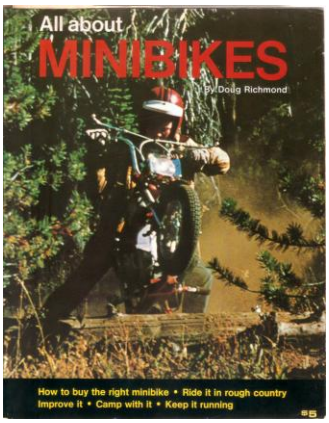
The first book I ever read on mini bikes back in 1973. I got it at the Library. I bought the kids a mini bike for Christmas several years ago, Sarah loved riding and I got back into mini bikes. Hence, the name of our FaceBook page and Website... "All About Mini Bikes" thought you might get the connection. Thanks for your patronage in our hobby and feel free to write us anytime at Przyojski@Yahoo.Com




Your Mini Bike Friends,

Dan & Sarah

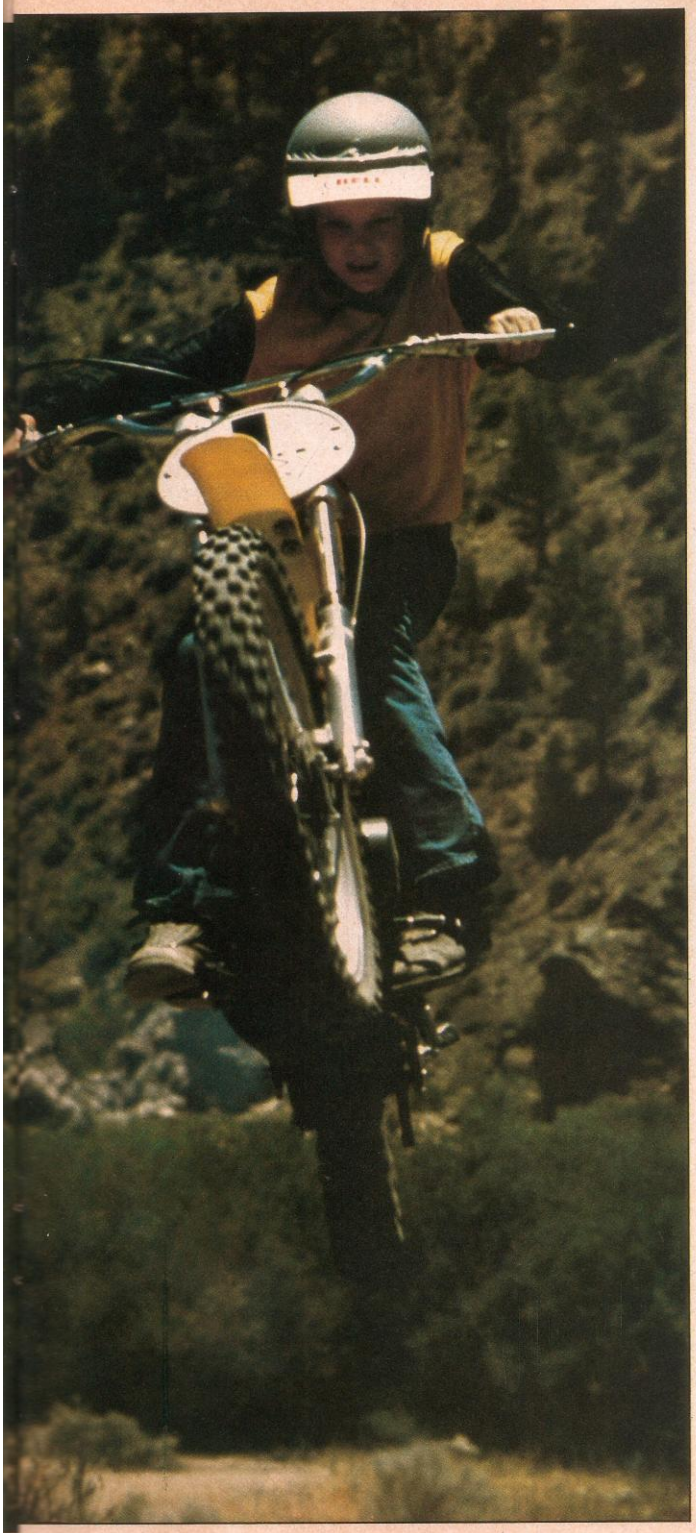
# SUZUKI TM100

We could save ourselves a lot of time and space by simply saying that the Suzy is an exceptional mount, buy one and get it over with now. But that would be an injustice to this fine machine. It should be drooled over and examined like the piece of art that it is.

Possibly the biggest single factor in favor of the TM is its extremely low list price. Compared to other bikes it's a stone bargain at $720.00. Usually a lot of items are sacrificed for the sake of saving money. Not so in this case. If anything, the Suzy is tricked out a little. The appearance and first impression is striking, from the bright yellow paint to the sweep of the exhaust system. The bike obviously spent as much time in the stylist's studio as it did in research and development. It's a refreshing departure from the slapped-together piecemeal look of some of the competitors. Other machines give the impression that they were handmade in the garage of an accessory firm.

The polypropolene fenders are painted to match the tank. Normally these would be molded in a different color to contrast. We were a bit leery of the paint at first but were surprised to find that it stays put even if the fender is bent completely around. The striping and logo are 3-M-type transfers (tape) which are covered with a thin coat of gel for protection. These have been perfected to the point that they are more durable and cleaner looking than paint.

The Suzy was obviously designed to be competitive in the rapidly growing 100cc MX class and yet it isn't so radical that it can't be used as a playbike for cow-trailing. Most of our test riding was under such conditions. The engine is somewhat peaky and requires clutch slipping to get under way, but isn't nearly as finicky as other machines we've tested. Numerous water crossings and several slow trips through the mountains left the engine running as crisp as when first ridden.

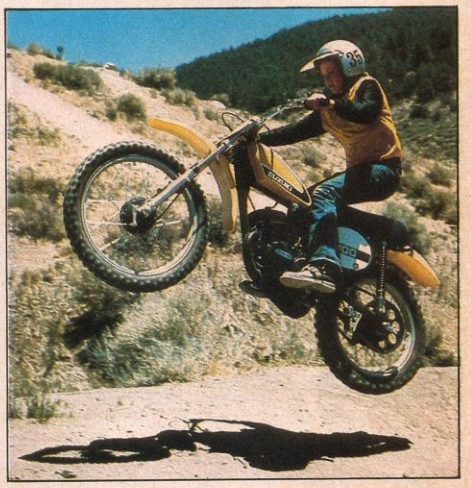
MINICYCLE **test**

## I'm Suzy, fly me

We deliberately tried to load up the plug by idling for long periods. The engine would hesitate but cleaned out instantly.

The output of the engine is fair but not wholly impressive. This bike was built for the 100 class where new riders aren't used to the extreme characteristics of a racing engine. The broad power band and fair low-end torque will keep the novice out of trouble in the corners. It takes an experienced rider like Jerry Shore to run an all-out racer and take advantage of more power.

Because the engine is in such a state of casual

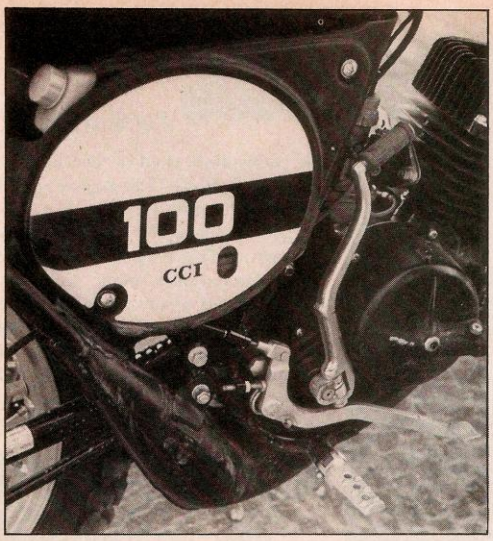


tune, the rider can hop-up as he progresses from beginner time tuning and rebuilding an expensive, high-strung competition engine.

Until recently, most Suzuki's were equipped with rotary valves. The TM-75 still is. We witnessed the extraction of a lot of power from one of those old engines and we're surprised that a switch was made to the new configuration. The possible reason is that a piston-port design can yield better low and mid-range power characteristics with the least amount of effort.

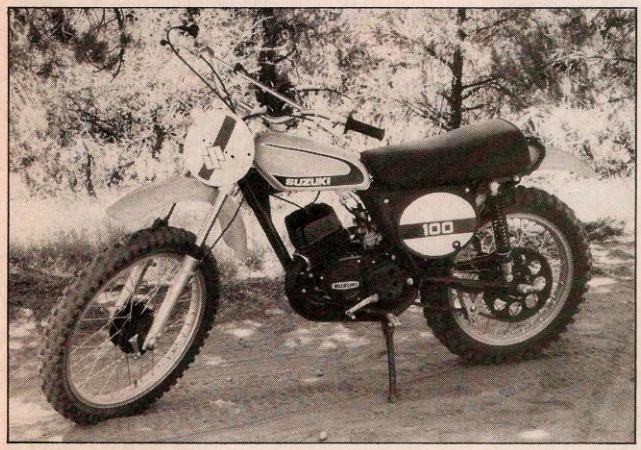
An unusual sight for a bike like this is the separate oil tank. The factory has seen fit to equip the bike with their breed of oil injection instead of using the time honored pre-mix. Apparently, again with an eye to the novice. It's no trick at all for a back yard mechanic to remove the oil injection pump, tank and attendant hardware to decrease weight and eliminate the friction of the pump. This and many other things could be done to lighten the bike less than the already low Bantam weight figure of 187 pounds.

Of the many new bikes incorporating a form of capacitive ignition system each has a pet PR name to distinguish their own make. Suzuki is no exception, naming theirs PEI. We can accurately




*Oil injection is standard equipment and is cleverly hidden as part of a number plate. Most true racers will probably forsake this for pre-mix.*

*The new Suzuki TM100 is a mount ideally suited for the novice MX rider or as a bargain racer for the experienced rider.*




assume that the "EI" portion stands for Electronic Ignition but no one seems to know what the "P" stands for. Regardless, the PEI does all that it's supposed to in providing a hotter spark for more power and easier starting with less fouling. This system does so much for performance on all levels that it ought to be standard on all makes. An added bonus to what seems like the perfect system is that there are no points to adjust or to go out of adjustment.

The bike we received for testing was fresh and not broken in and yet it ran well and faultlessly. The new owner should ride carefully for the first few miles, following break-in procedures carefully as outlined in the owner's manual.

The transmission is a joy, giving the proverbial "knife through butter" feeling while shifting through the gears, with or without the aid of the clutch. Being able to ride a bike for several hours without ever missing a shift or grabbing a false neutral is completely unheard of with many other makes. The clutch is also without fault and performed the same from dawn to dusk even with the extreme abuse we dished out while testing. We're anything but kind to a test machine.

The only possible fly in the ointment may be the exhaust. Compared to the enduro machines and minis we had with us, the Suzuki is brash and embarrassingly loud even with a silencer mounted. We say "may" because we have no positive, objective method of measuring sound yet. We still have to rely on the old subjective pair of ears and pain thresholds.

Coupled with the bike's superlative engine is a good-handling chassis from front to back and top to bottom. The suspension is softer than most other MX'ers and yet it's capable of absorbing staggering jolts (witness the pictures of Hacienda Honda's Jerry Shore). We ran the bike through a rough set of whoop-de-dos where we recently destroyed a 1975 Yamaha and Suzy responded as if on mildly undulating terrain. The rear shocks are equally good and compliment the front suspension. Suzuki is one of the few companies smart enough to figure out that the TM will likely be ridden by young, light, inexperienced riders and not the ugly American. It's as refreshing as a glass of ice-cold Gatorade in the desert.

Assisting in the comfort department is a luxury usually not afforded to an MX bike – a comfortable seat. We've been told that if you have to sit down, you're not riding fast enough. Most of the new bikes seem to be designed just for that riding style. The pros are learning that keeping the weight low by standing on the pegs *doesn't* keep the weight low as they once suspected. The increased height creates more leverage and increased instability.

The front and rear wheels are the excellent DID-style of aluminum non-clogging rims with stainless steel spokes. The front is 21-inches and mounts a 3.00 x 21 knobby tire. The rear mounts a 3.50 x 18. The choice of rubber is very good considering the price of the machine. Most riders will find them adequate until time for a replacement as they wear out. We found traction to be perfect on most surfaces and under most conditions. The bike could travel as fast as sanity and the engine permitted and tracked as if guided by a homing device. We didn't feel any of the tendency some bikes have to wander or plow. Most of this, of course, is also due to the frame geometry and suspension but the tires do contribute.

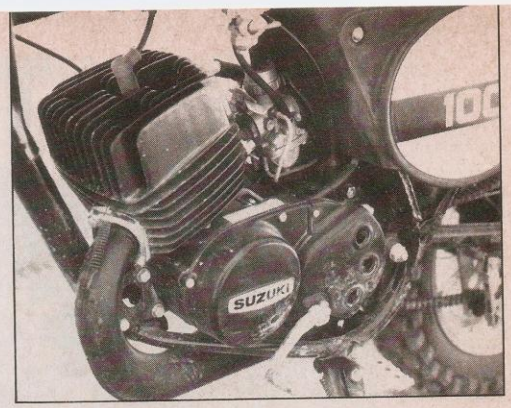
Braking is on a par with most larger bikes and is more than adequate. We personally prefer a bike which has brakes good enough to lock both wheels while still providing a modicum of feeling. There's nothing more frustrating than to run out of brakes just before running out of road. Thanks for allowing us to make the decision.

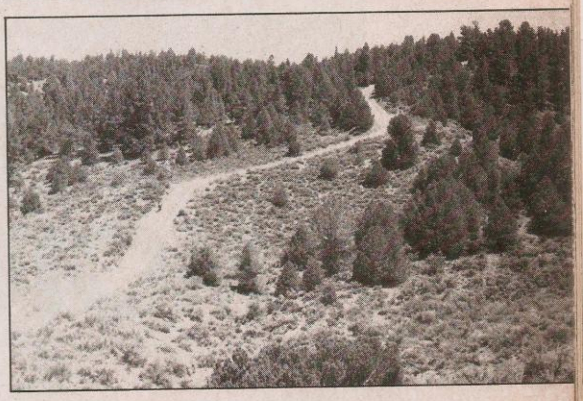
Regrettably this report and test is over. Suzuki will undoubtedly come to take away the bike and we'll have nothing left but fond memories and an empty gas can. We loved Suzy from the beginning, but then, that was the way we felt about Elsie several months ago and how we'll probably feel about some other one in the future. Love comes but once a year in this racket. The guys are already talking about the KX Kawasaki and Can Am. Fickle.

*The 100cc engine has a broad power band and a fair amount of low-end torque. The black finish looks sharp and functional but wears off quickly.*

*BOTTOM — The new forks allow for a comfortable ride without any appreciable loss in control or handling. The TM is an impressive bike to ride for the novice.*

*Suspension is excellent for light to medium weight riders. The choice of tires is also good but should be replaced for serious competition.*



## Manufacturer: Suzuki

**Engine:**
- Engine type - 2 stroke, piston port
- Bore - 50mm
- Stroke - 50mm
- Displacement - 98.0cc
- Horsepower @ rpm -14 @ 10,000
- Compression ratio - 7.5:1 corrected
- Carb - VM22SC Mikuni
- Ignition - Electronic
- Lubrication - Oil Injection
- Fuel capacity - 1.3 gallons
- Fuel requirement - Premium

**Transmission:**
- Transmission type - 5-speed, constant mesh
- Primary drive - Gear
- Clutch type - Wet, multi-disc
- Final drive - Chain
- Gear ratios
  - 1st 2.142
  - 2nd 1.588
  - 3rd 1.250
  - 4th 1.045
  - 5th 0.913

**Chassis:**
- Frame type - Double downtube
- Wheelbase - 52.6 inches
- Overall length - 79.1 inches
- Suspension, front - Tele-fork
  rear - Swing arm, shock
- Wheels - 21 frt., 18 rear
- Tires, front - 3.00 x 21
  rear - 3.50 x 18
- Brake(s) - Internal expanding
- Ground clearance - 7.9 inches
- Seat Height - 31.0 inches
- Handlebar height - 42.0 inches
- Dry weight - 187 pounds

Price as tested — $720.00

# YAMAHA YZ-80, ONLY BETTER

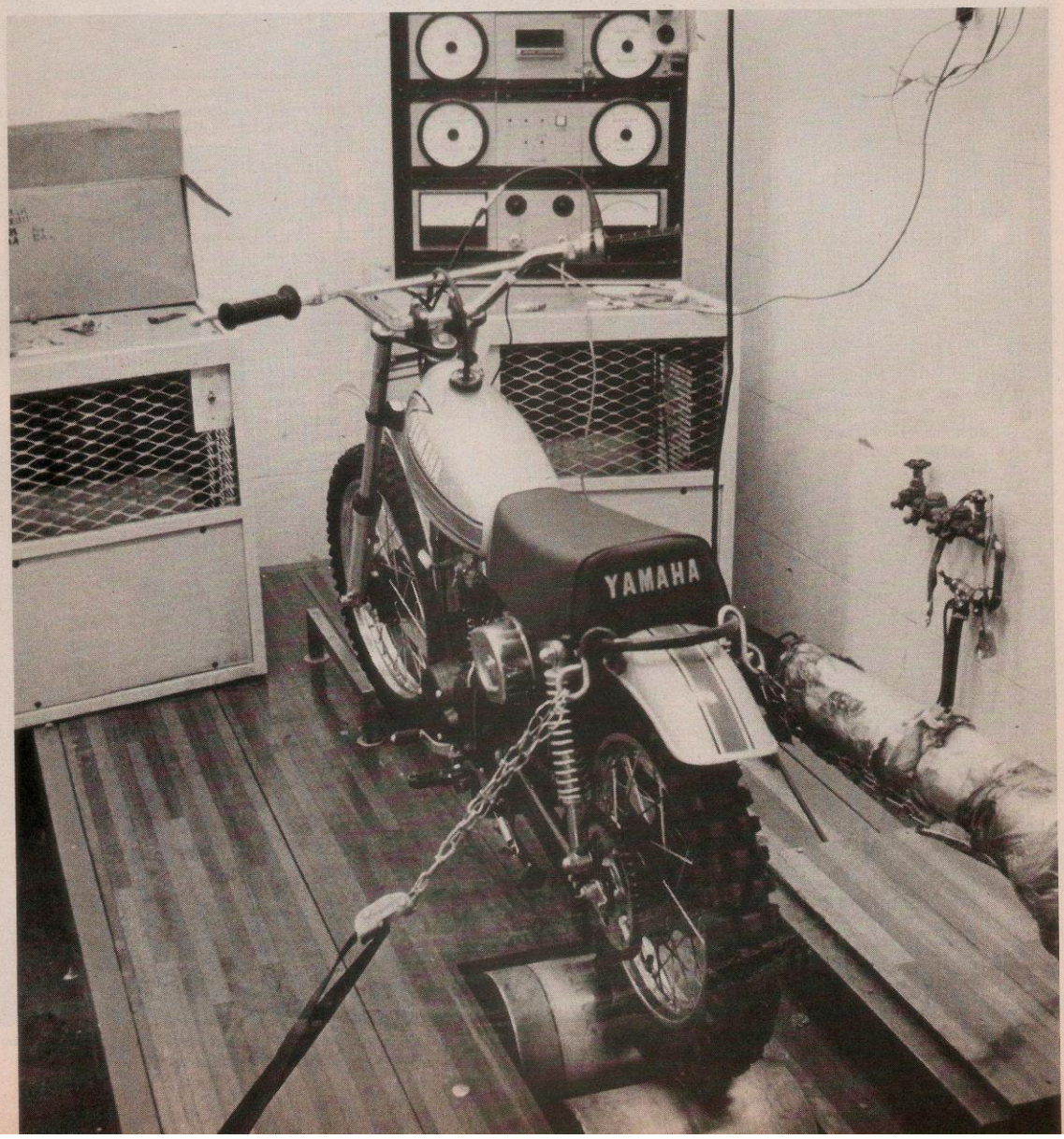
## *The Sport Time Yamaha Treatment*

Although the YZ-80 is a pleasant little scooter with good handling and good looks, it isn't really competitive in 80cc motocross racing in its standard form because the engine is very mildly tuned. The modified version we are about to describe should be very competitive on anybody's race course. The dynamometer (Photo No. 1) tells us that the modified version has twice the horsepower of the stock model. That may sound incredible, but the dyno doesn't lie.

Let's first take a look at some of the stock items that are responsible for the rather low but flat power curve. The intake tract is the biggest culprit so lets look at it.

Starting out at the air filter we find a washable foam filter (No. 2) with a rougher outer surface that looks like a shag rug. It is contained in a small sheet metal air box and connected to the carb via a flexible rubber hose. While this filter is adequate with the stock performance, it is too small to be used on the modified engine, which passes a heck of a lot more air.

A look at the Fun N'Fast conversion used on the modified engine shows not only a much larger filter (No. 3) but the filter cover (No. 4) exposes a larger area of the filter to incoming air. This aids the air flow tremendously but also increases the chance of drowning the filter in wet going. From the air filter the air must pass through the carb and be mixed with the proper amount of fuel to satisfy the needs of the engine.



The standard carb is a concentric float, slide operated, affair, with a small 16mm bore (No. 5). It's easy to see why the 24mm Mikuni (No. 6) on modified engine is able to pass more valuable fuel/air mixture into the engine. The use of a carb this large on an 80cc engine is made possible with the use of reed valves which only let in as much as the engine requires, no matter how big the carburetor is.

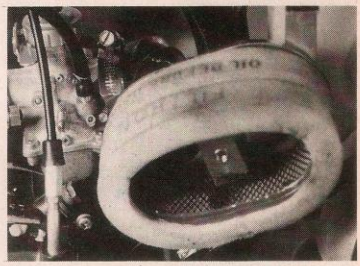
Lets have a look at the standard manifold (No. 7) and reed cage assembly. The small 16mm hole in the manifold matches the standard carb. The standard reed assembly (No. 8) has two small metal reeds on a 45 degree angled cage. The oil is injected through the fitting on top of the reed cage.

A look down the throat of the DH reed conversion shows the large 24mm bore (No. 9) to match the new carb. It also retains the auto-lube fitting on top. The DH reed assembly (Nos. 10 and 11) has two sets of reeds on a triangular cage. The increase in air flow thru here is easily understood—twice the area has to mean more air can get through!

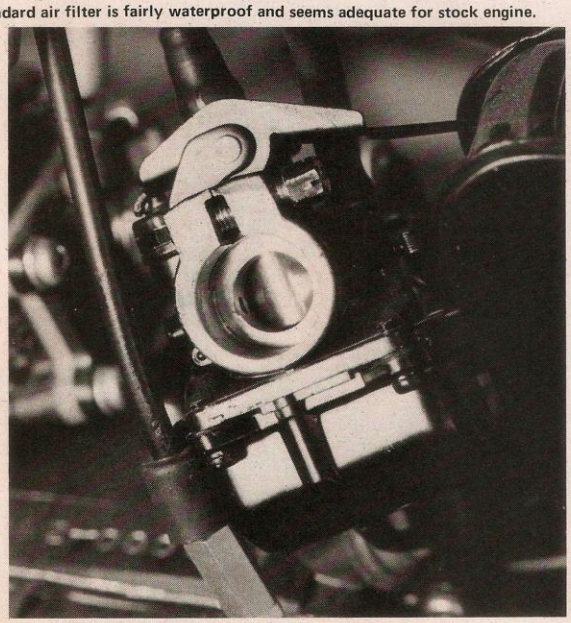
Once through the reeds, the fuel/air mixture passes through the intake port (No. 12) into the crankcase. When the piston starts its downward stroke, the reeds close and compression of the fuel/air mixture in the crankcases and the cavity of the piston begins. The mixture is compressed until the top of the piston uncovers (No. 13) the transfer ports in the cylinder wall. The mixture then flows up through the transfer passages

2) Standard air filter is fairly waterproof and seems adequate for stock engine.

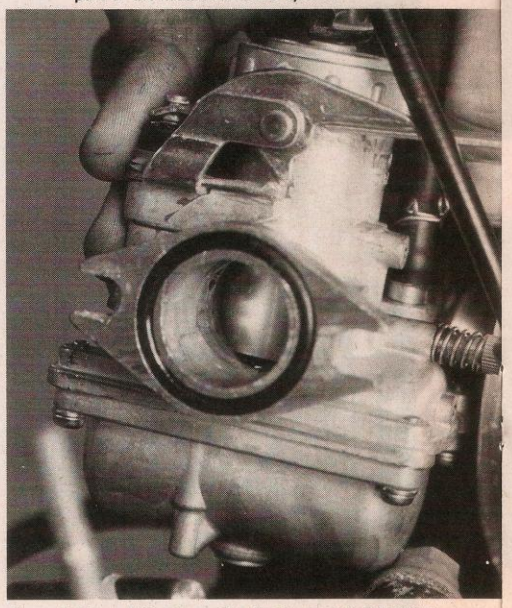
3) Fun N'Fast air filter conversion has attractive, large, aluminum cover, stays out of riders way but may be susceptible to water problems.



4) Greatly increased volume of air box and giant filter are a necessary part of the modified intake system.



5) The standard carb is an eye-dropper compared to the 24mm on the modified engine.



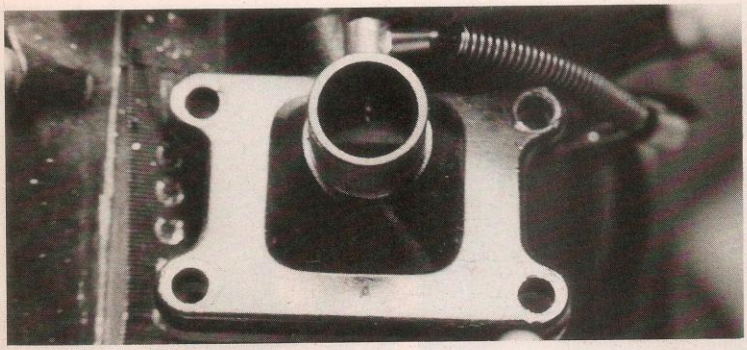
6) A 24mm Mikuni supplies the increase in breathing capacity for the modified engine.

(No. 14) cast into the cylinder, up into the combustion chamber through the transfer port windows.

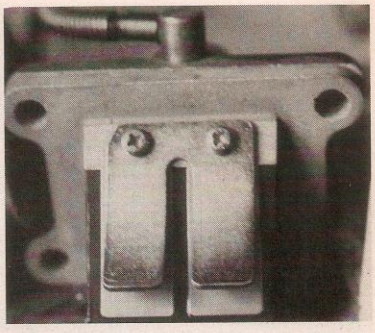
On the Yamaha, use of the reed induction allows the intake port to also function as a transfer port. Normally, in a piston-port engine the intake port is closed before the transfer ports are open very far, keeping the mixture from escaping back out through the carb instead of being forced up through the transfer system. With the reed valves in place, however, the mixture can't escape back through the carb, so the intake port can be left open longer.

At the rear of the cylinder base an additional transfer passage (No. 15) is cast into the crankcase. A matching one (No. 12) is connected to the intake port, which has two additional transfer windows cut into the cylinder wall above the intake passage. The mixture flows up through this passage until the intake port is closed by the piston. Then the mixture continues flowing through holes in the piston skirt (No. 15) until the reed valves open again starting the whole process over. Sport Time's hop up department elected to leave these passages untouched, and the only modification to the cylinder is at the exhaust port.

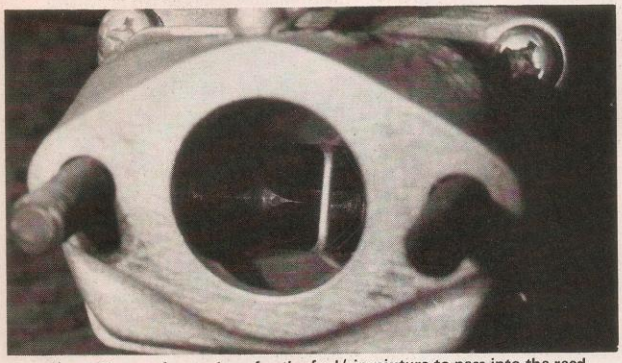
The exhaust port window (No. 16) has been raised and widened and the port ground and polished to match the new size and shape. This gives the effect of lengthening the duration of the exhaust opening time and increasing the flow coefficient through the port. These two modifications tend to narrow and



7) This peep-hole is where the standard carb mounts to the reed cage.

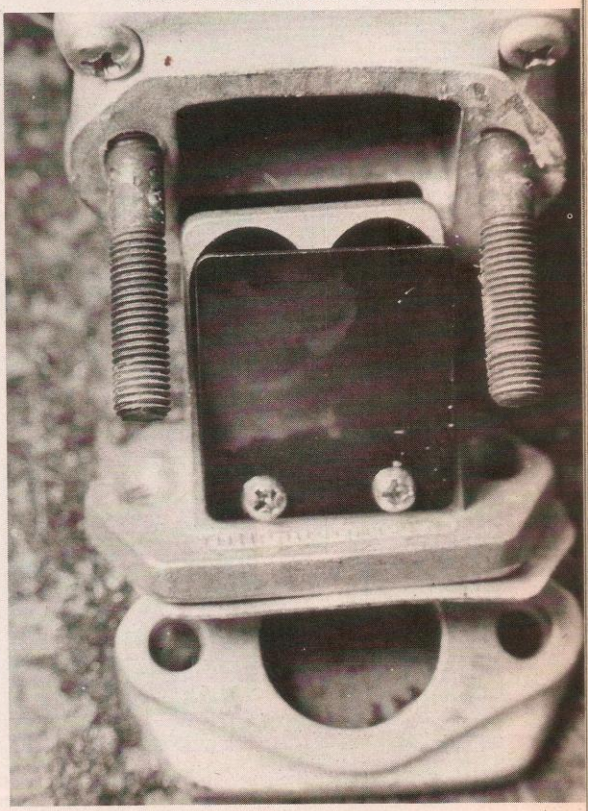


8) Two-petal reed cage on the standard engine has about one-half or the area of the DH conversion.



9) Plenty of room here for the fuel/air mixture to pass into the reed area. 24mm Mikuni bolts up flush.

10) Triangular shape of DH reed cage allows use of two sets of reeds, making better use of the available port area.



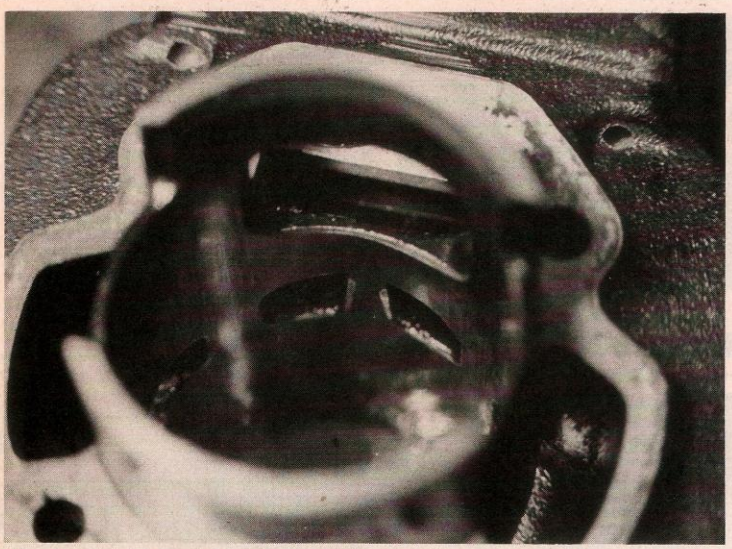
11) This is how the reed assembly mounts to the standard cyclinder. No drilling or tapping necessary for installation.

elevate the power band, depending upon the length and shape of the exhaust system.

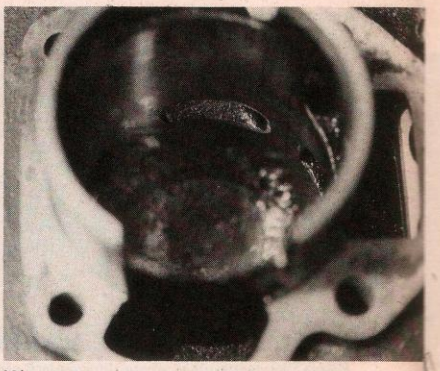
A look at the standard exhaust system, versus the expansion chamber worked out by Sport Time and Tommy Turner, helps explain, along with the modified exhaust port, the difference in the shape as well as the level of the horsepower curves on our dyno sheet (No. 17). Notice that the standard engine shows an extremely flat power curve, while the modified version has a much higher, but shorter, peak power range. Part of this difference in curves can be explained in the design of the two exhaust systems. The standard pipe has a rather long (No. 18) head pipe connected to a sort of expansion chamber/muffler (No. 19) of small angles and dimensions. The Turner pipe has a much shorter head pipe (No. 20), and a large angle of divergence and larger diameter overall (No. 21). The long head pipe is one way to widen the power curve on two strokes, but is detrimental to peak power after it passes certain proportions related to the entire design of the system.

The Turner pipe used on this application certainly is the key to the high performance brought out by this hop-up. Although it tends to get in the way of the rider's leg, there is no doubting its effectiveness in increasing power output on the YZ.

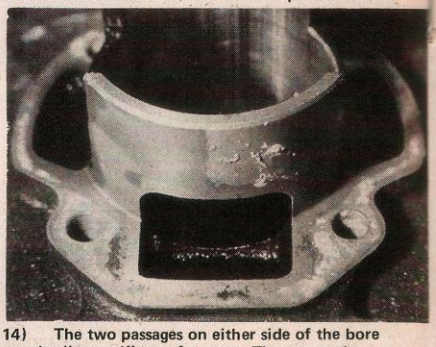
The next step in this hop-up is a modified cylinder head. Milling and reshaping of the combustion chamber (No.



12) Large intake port also serves as an additional transfer port when reeds are closed. Notice the two transfer windows directly above the intake.

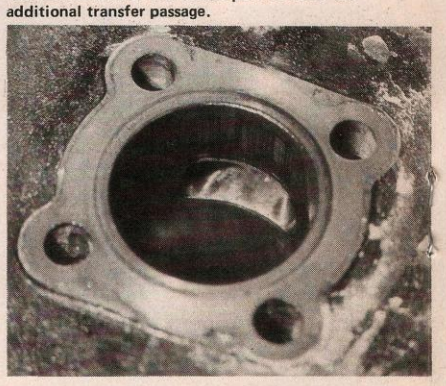


13) Small window visible on left of cylinder wall is one of two "normal" transfer ports.



14) The two passages on either side of the bore are the "normal" transfer ports. The one at the rear connects with the intake port to form the additional transfer passage.

15) The two normal transfer ports cast in the crankcase are on either side of the cylinder. The additional port is shown at rear of piston. Holes in the intake skirt of the piston allow the mixture to transfer through it into the intake port area after the skirt has closed the port.

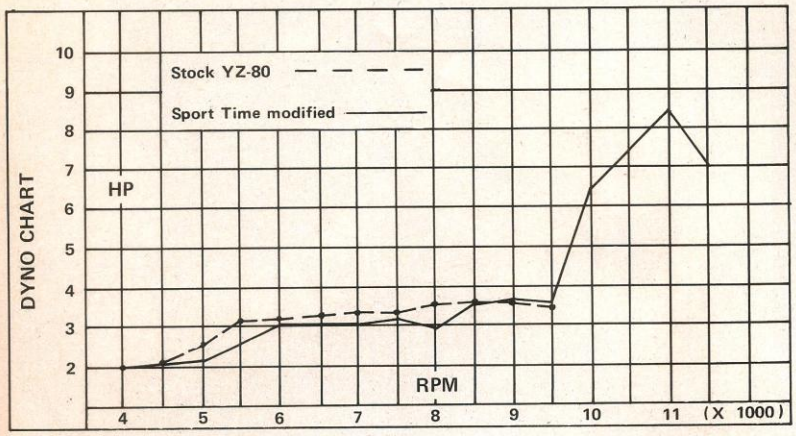


16) This view shows the modified exhaust port. Raising the top and widening the sides allow more efficient flow and longer duration of opening time.

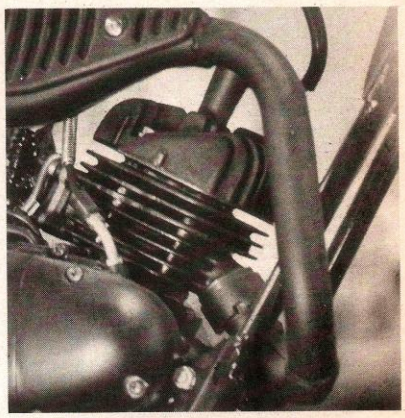
22) has raised the compression cranking pressure from 95 pounds per square inch (with the modified exhaust port) to 125 p.s.i., which allows a much greater torque peak due to the increased compression. Although the modified standard head didn't create any really bad overheating while dyno-testing, Sport Time is only using it as a prototype combustion chamber. They hope to have a racing cylinder head ready for production shortly, to go along with their hop-up kit. It will have increased cooling fin area and mass to aid cooling for longer engine life and sustained high performance running.

That rounds out the modification of the engine, a nice, simple, package that brings out a great, big boost in power at relatively small cost per power increase to the buyer. Riding the modified YZ is a blast. It seems to have two separate power ranges as the dyno would indicate. The use of the reed valves allows good low speed running and the bike can be used for puttering around or trail riding. However, once onto its second power range ("on the pipe"), it turns into a real tiger. Wheelies, power slides, fast starts and flat-out going are a real thrill on a bike this size, and the Sport Time hop-up kit supplies these in spades.

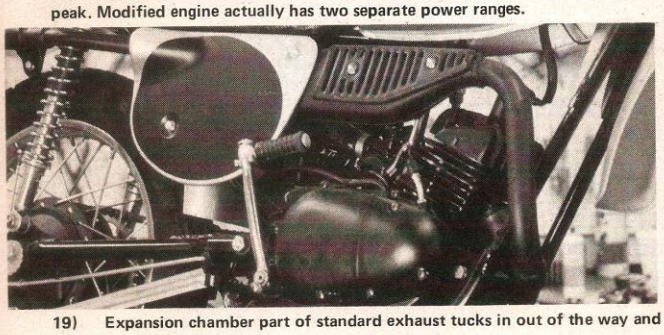
The final kit, still in the late stages of development, will probably cost under $225. For further information, contact Howard Hooper, Sport Time Sales and Service, 18449 Ventura Blvd., Tarzana, CA 91356. Phone: (213) 343-1936.



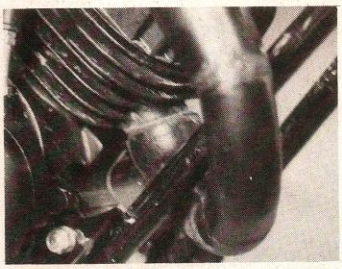

17) Notice the difference in the shape of the power curve as well as the maximum power peak. Modified engine actually has two separate power ranges.



18) YZ's standard exhaust system features a very long head pipe which provides a flat power curve.

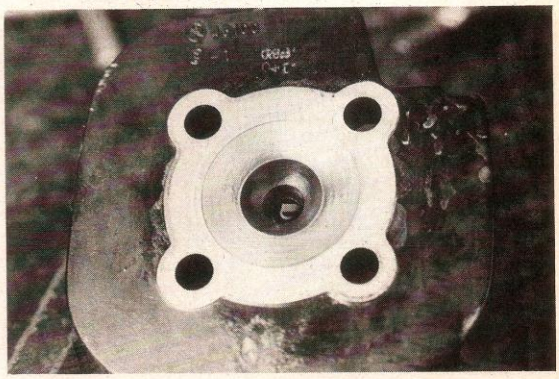


19) Expansion chamber part of standard exhaust tucks in out of the way and is very quiet but lends little to engine performance.



20) The short head pipe of the Turner exhaust slips over the standard threaded flange and is held in place by a spring.

21) Huge Turner pipe is bulky but effective. Heat shields offer some protection to the rider's leg. The long stinger-silencer helps tame roar.



22) Standard head is modified by milling and reshaping. Sport Time intends to replace it with a complete new head for better cooling.

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Sarah's first ride on a mini bike (Honda QA50) with a transmission

https://www.youtube.com/watch?v=RiHh-Obtvtg

Build Your Own Mini Bike Video…
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# COMPLETE VINTAGE PLANS HOW TO BUILD A MINI BIKE

## PLUS.. "RUTTMAN MINI BIKE STYLE PLANS"

http://www.allaboutminibikes.com/vintage-mini-bike-plans.html

## Original Plans from “Boy's Life Magazine” 40 years ago.

You might have to explain to a young person what this is. But if you grew up in the 1950s, '60s, or 70s – you saw this exact Mini Bike all over America. It was frequently constructed by kids working with their Dad. It usually had a lawnmower motor on the Mini Bike and made a lot of noise as it screamed down the block. But it was COOL!

I did some research back in the 1990s and actually found the guy who created these plans. These exact plans were the ones sold in Boy's Life Magazine for 40 years. Yes, THIS is the Mini Bike you remember seeing and loving as a kid.

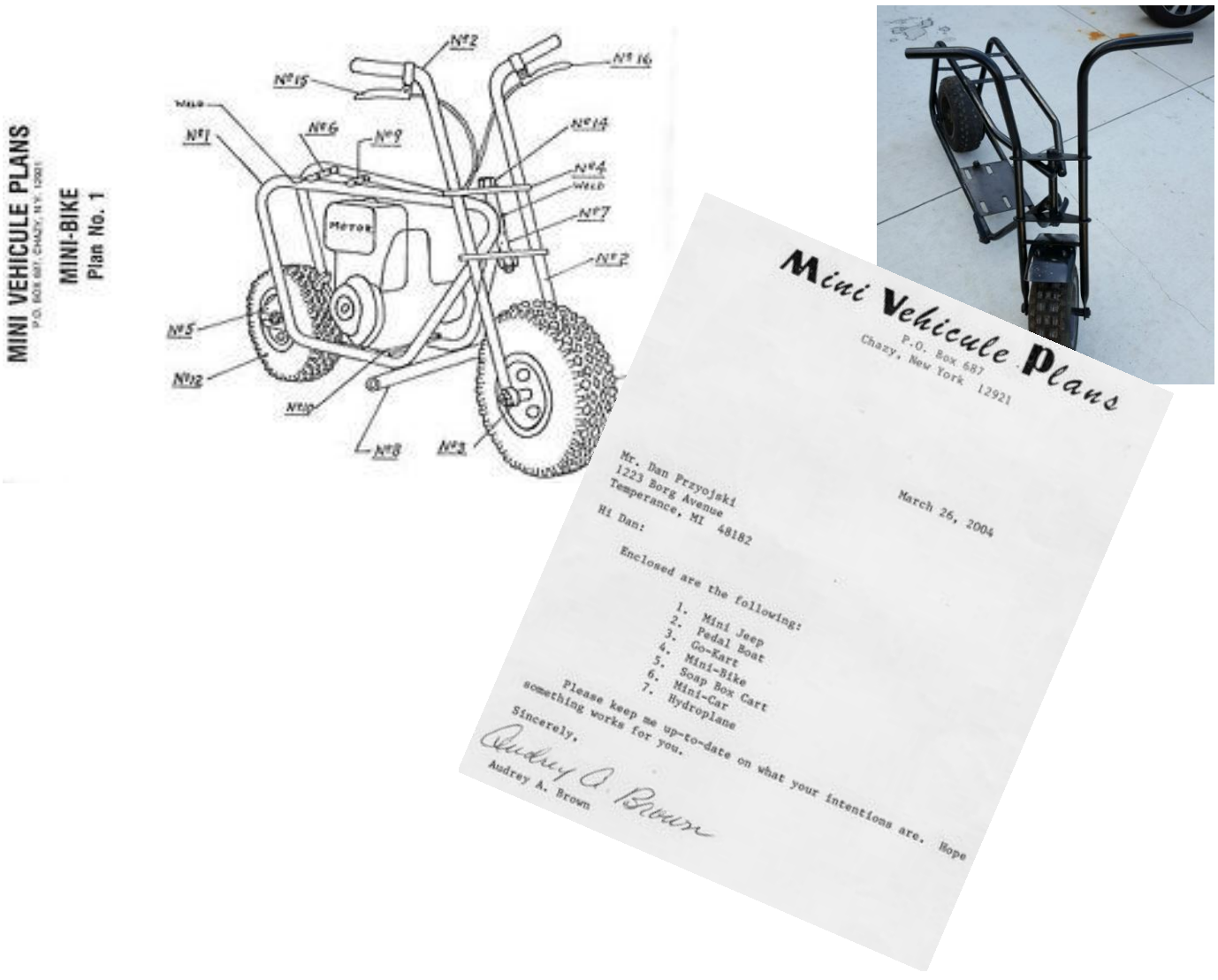
Please take a moment to look at the image up close. You can get a good idea of how this is built. It wouldn't be much work to make one of your own, especially when you have the FULL ORIGINAL PLANS.

**You can modify the plans to the size you want just like we did on the pictured MiniBike!**

Take a trip back in time. Or simply share an important part of Americana with your kids or grand kids. Back when having a Mini Bike was the most fun a kid could have.

ORDER YOURS NOW!

PDF Download **PLANS ONLY - NO PARTS INCLUDED!**



# VINTAGE JB RACING AD FROM 1974
# Popular 1970's Ad From MiniCycle Magazine

This is a clean copy of the JB Racers ad that was in the Aug/September 1974 MiniCycle magazine, NOT the origial, ad copy. It was an ad that was two pages when you opened up the magazine. I had the center crease photo shopped color filled in because the original ad is on two pages. Suitable for framing. Would look great in your den or garage. Ad will be shipped in a tube so there will NOT be a fold. P.S. THE WATERMARK IS NOT ON THE COPY YOU WILL RECEIVE. Thank you, Dan. http://www.allaboutminibikes.com/jb-racer-ad.html