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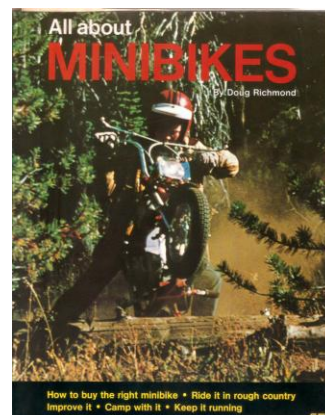


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The first book I ever read on mini bikes back in 1973. I got it at the Library. I bought the kids a mini bike for Christmas several years ago, [Sarah loved riding](#) and I got back into mini bikes. Hence, the name of our FaceBook page and Website... "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

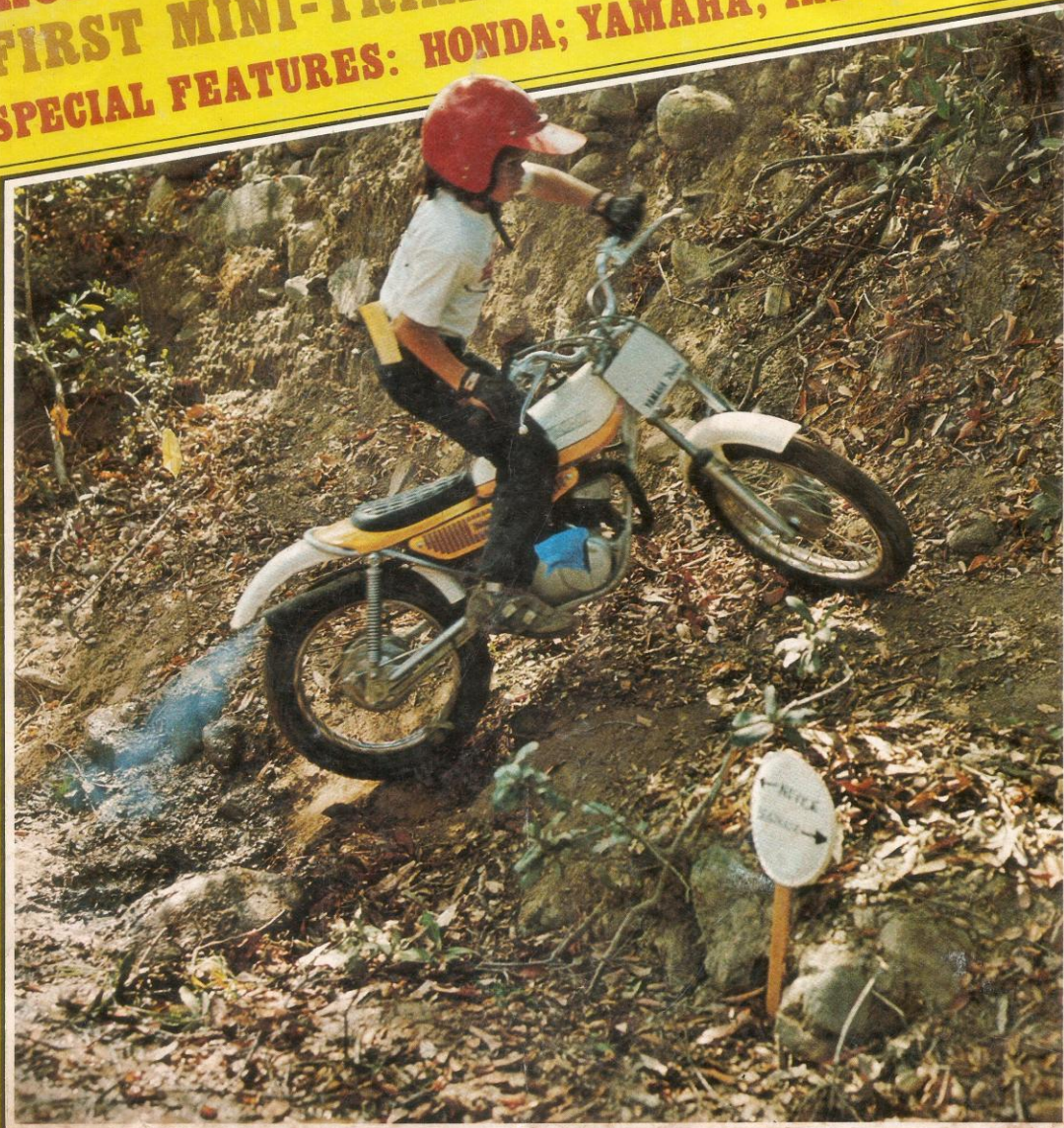


DECEMBER 1973/75c

MiniCycle

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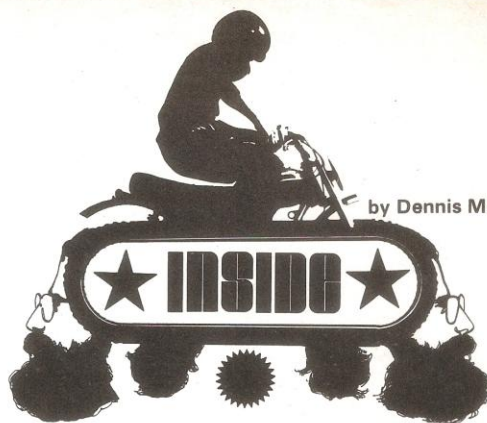
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DEALER INQUIRIES INVITED



by Dennis McClintock

After a little yelling and screaming and arguing (better than getting bored), I talked the powers-that-be, namely the publisher and the editor, into letting me have a column of my own. Why not? I like to speak my piece as much as the next guy. As you might have guessed from the title, this column will briefly talk about how and why certain articles ended up in the magazine. And I'd better get right to it, before you get bored and pick up a copy of *Playboy*.

COVER: Jeff Ward finally made it on the cover of *MiniCycle*, after so many years of fine riding and racing. We all had a good time setting up the cover shot at a trials meet organized by the International Trials Association. Most of our staff is saving nickels and dimes to buy a trials bike.

Would you believe one of our biggest problems was deciding what Jeff should wear for the picture? We couldn't let him wear his Honda jersey on a Yamaha. Jeff's dad suggested the Bell T-shirt. It's pretty neutral. But we'll probably get letters from Premiere...



BIG FOUR MODEL INTRO: Page 50: Brick Price, our super-lucky editor, won't have to save his nickels. He won a not-yet-released Suzuki 250cc trials bike at the Suzuki press preview. All four of the major motorcycle manufacturers introduced their

1974 models recently. Kawasaki got the jump on everybody, but we decided to hold back and report on all four at once.

Honda forgot to give a press preview this year. They invited the press, along with everybody else in Southern California, to a carnival called Expo 74. The press had a special lounge atop the tower at Orange County International Raceway, and from there you could see everything... if you happened to be carrying a powerful telescope. The 1974 models were on display, including the new two-stroke mini (MR-50), but I couldn't coax a gang of nine-year-old dream racers into letting me sit on the bike. "You're *too* big!" Hope that isn't true of Honda.



MORE RACE REPORTS Page 38:

Two more reports from the Y-AMA National series. Kenny Blissett of Indiana seems to have an edge in the top Expert class for a national Y-AMA title.

One of the widest travelers on this year's mini-cycle racing circuit is Brian Ward of Orlando, Florida. Brian even had time to ride some test bikes for us while he was in California for the NMA nationals. His dad, Eldon, had some comments about the different races which we thought you might find interesting. You'll find his comments in the "Letters" section. See you "INSIDE." ☐

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MINICYCLE is published monthly by Friday Publications, Inc., 27762 Forbes Road, Suite 11, Laguna Niguel, California 92677/P.O. Box 2869, Laguna Hills, California 92653. Telephone number (714) 831-0530 or (714) 831-0531. Reprinting in whole or in part is expressly forbidden except by permission of the publisher. Entire contents copyrighted by Friday Publications, Inc. Second class postage paid at Laguna Hills, California, and Effingham, Ill. **SUBSCRIPTION RATES:** \$7.50 for one year in U.S. and U.S. possessions. Canadian and foreign subscribers add \$1.00 per year. Single copy price 75 cents. All subscriptions and subscription correspondence should be addressed to MiniCycle Subscription Service at the above address. Please allow at least six weeks for change of address. When notifying a change of address, state old address as well as new address and enclose, if possible, an address label from a recent issue. **EDITORIAL CONTRIBUTIONS** are welcome and should be addressed to the Editor, MiniCycle, at the above address, accompanied by a return addressed envelope and postage. All material will be handled with reasonable care. However, the publisher assumes no responsibility for return or safety of editorial material.



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Starting from scratch, again, on the winners.

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A swappers' and budget racer's delight.

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Sacrificing quantity for quality.



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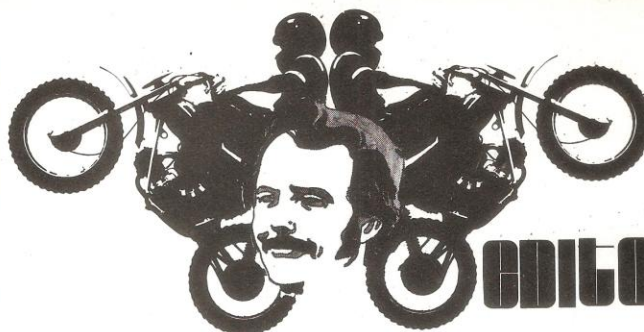
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EDITORIAL

If you think trials riding is easy just give-it-a-go once and see for yourself. Trials riders are the artists of motorcycle riding. It may not appear that way on the surface, but it is so. No amount of money, power or "trick" parts can buy the rider a win, as is possible in other motor sports.

Trials is a rapport of man and machine. A game of supreme skill, not speed, although many of the fastest riders learned their bike-savvy in trials. The bike must be strong, light and agile. The rider must be strong and precise with the combined qualities of juggler, magician, acrobat and contortionist. The feats of balance and finesse are thrilling to watch for any but the most jaded of speed-freaks. In most sports, such as motocross, the action happens too fast to really comprehend. You'll find yourself sitting in one spot waiting for the hero to jet past on his way to another victory. It's difficult to grasp what has taken place or to learn anything from the experience. The trials rider, on the other hand, is in plain view at all times. Every mistake is recorded and, if it results in a "dab," counted against him in trying for a trophy.

Scoring is taken in reverse of any other sport. The rider starts with maximum points and is expected to keep them for a win. Dabbing, touching the ground with a foot to maintain balance, is taboo and can cost one to five points against the total score. To "clean" a section requires staying within bounds without dabbing or (gasp!) dropping the bike. As many as 30 sections may be run during competition. Each rider is supposed to run the sections in the time allotted or classify as a DNF.

Riders advance through the ranks depending on how they finish in each competition. Five points are needed

to jump from Novice to Amateur, ten points for Expert and twenty for the prestigious Master class. Getting there isn't easy. Three points are given for first, two for second and one for third.

The sections are clearly marked with stakes, limed marks and/or rope. These are observed by judges who determine whether or not a point is lost. A typical section may include transversing a large boulder, stream bed, tree trunk, steep hill or anything a perverse mind could dream up. Try climbing a tree trunk with your Superhorse 100 MX someday and see what happens. You may find that you're not the rider you thought you were.

As you should see by now, trials is a competition of riders rather than machines. Horsepower races and loud, obnoxious exhaust systems are useless. Trials is the type of motorcycle competition to take home to Mom or the Sierra Club. The bikes are whisper quiet. This is partly of mechanical necessity and to accommodate the concentration required. Most of the engines are two-strokes, because of their light-weight, and need considerable backpressure for torque.

Compared to most cycles, the trialers are weird looking. The handlebars are wide and flat with little rise. The seats are barely larger than the Sting Ray bicycle type since the rider spends most of his time on the pegs for balance. The tanks are narrow to allow the rider room for body English on the high, narrow pegs. Ground clearance is substantial to clear the ever-present obstacles without hanging-up. To the uninitiated the bikes look like science-fictionalized insects.

As you may have noticed by now,

(Continued on page 18)



THINGS TO PUT UNDER A MINI-CYCLIST'S CHRISTMAS TREE

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GOODBYE, FOREVER

I'd like you to go down to a corner drug store and buy a copy of ———magazine and compare it to MiniCycle. The first thing you'll notice is that MiniCycle doesn't have any color action shots. I've enclosed the typical pictures from both magazines. Doesn't the color make it look better? Your action shots are great but they need color. Because of your stupidity, I've cancelled my subscription to MiniCycle and have ordered ———. If you change, I'll subscribe again. Otherwise, goodbye.

ANON

"Chicken." You should have signed the letter. Anyway, the "typical" pictures you sent are of a 400cc Husky and a 500cc Yamaha. You'll never find those bikes between these pages. Likewise, Brand "X" won't run any machines under 250cc. Their format is considerably different and they don't offer the How-to articles. Brand "X" is not giving you those pictures. Their mag retails for a dollar. They also save money with less pages and copy. All magazines are going thru a crisis period now as the cost and availability of paper becomes critical. We're holding out and are trying to maintain our current issue price. One way we can do this is to increase the number of subscribers. You'll notice that the quality of MiniCycle has improved considerably since we changed publishers. We're "Number One," in our field, but we still try harder. Others may come and others will go.

PEDAL PUSHER

This letter is an inquiry to something that has been on my mind since my 11-year-old son has brought home a

copy of your July issue of MiniCycle magazine.

I am 40 years old and can remember during the late 40's, after World War II, that there were motors made that mounted on regular bicycles. They cost between \$75.00 and \$100.00; averaged about 130 miles per gallon. If the going got harder you were still able to pedal. I believe they were called Whiz motors.

My question is, do you know of any company who manufactures that type of motor today? I believe that, due to the gas shortage and everyone being in a cycling mood, they would be a fairly good seller. Not that they would give mini-bikes and motorcycles tremendous competition. I think there would be a market for them. Any information you can give me about those motors would be greatly appreciated.

Matthew Karaffa
Bethlehem, Pa.

You're right, they were called Whiz motors. We are told these are still being sold (not Whiz) in Japan for their domestic market. The idea won't work too well in this country though because of the narrow-minded laws regarding registration. The addition of a small engine, regardless of size, on a bicycle turns it into a motorized vehicle in the eyes of the law. You would need to add sealed beam lights, reflectors, suspension, etc. Just to register the beast. Honda makes a bicycle already equipped with these items and you have a built-in choice of pedal or gas power. The machines are very cheap and a lot of fun.

PUDDLE JUMPING IN PANAMA

I thought I would write you a letter and tell you about some of the activities going on down here in the Canal Zone. We have an MX track on the Pacific side, and on the Atlantic side of the isthmus, we have a TT/flat track course. At the present time I have a Yamaha GT-MX 80, but I am planning on getting a Yamaha 100. Down here in Panama, (Canal Zone), you are allowed to ride your bike in the streets as long as you stay in your neighborhood. In the rear of our neighborhood, we have a

construction site in which we can ride. This is where we can legally have our local races. One problem: I have had no success in obtaining a 14-inch knobby tire for my rear wheel, and would appreciate your help.

Albert Joyce
Balboa, Canal Zone

The 14-inch knobby won't do you much good if you buy the Yamaha 100, but if you plan to keep the GT-MX 80, we know a couple places you can find the tire. Try writing to one or two of the companies which sell racing equipment by mail. They sell a wide variety of parts and accessories besides the stuff featured in their ads. Two that come to mind are J&B Racing Equipment and Hacienda Honda.

WELCOME ABOARD

I am writing in reference to the Editorial column in the July '73 issue of MiniCycle. I can't thank Mr. Price enough for what was said about mini-cycling. I fell in love with mini-cycles the first time I ever rode one, but couldn't get my parents to let me get one. A few nights ago, I read this issue and bought it. I asked my mother to read the Editorial and we later talked about it. To my surprise she said okay and I bought one. Thanks again for the fine job you're doing for mini-cycle riders everywhere. I hope you can print this letter for all who like mini-cycles but can't get one. The Editorial did what I couldn't do. If any of your readers want a mini-cycle tell them to keep trying.

Evan Ellis
Evansville, Ind.

Glad the article helped so much. We're aware that many adults are afraid to buy a machine for their children. Some may not be in a position to do so even if they wanted to. If you do want a bike, don't pressure your parents too much. You don't want to create friction in an otherwise good home. Keep their wishes in mind and try to be as understanding as you want them to be. In most instances, kindness is contagious. □

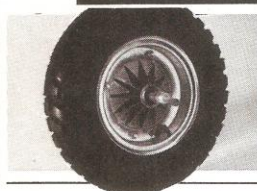


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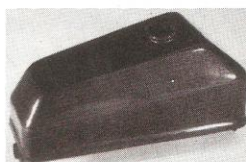
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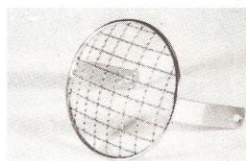
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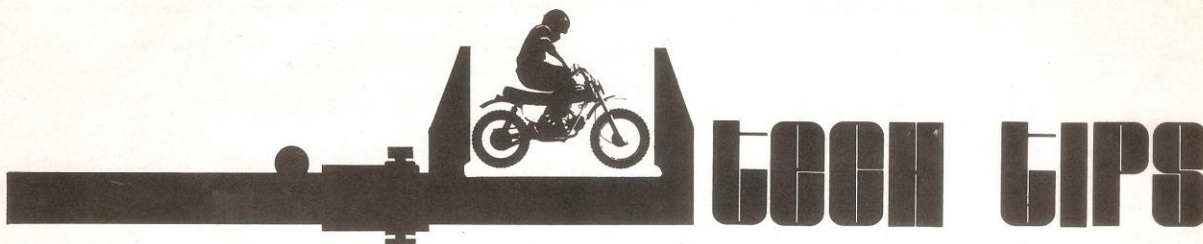
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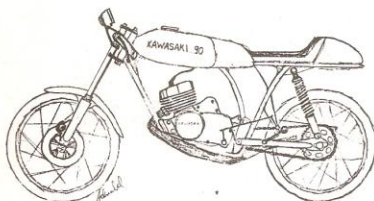


CRUISER

Q Everything I've added to this Kawasaki MC-1 90, is available! I read your gripes about not being able to find parts to build your Mini road racer.

I spend my holidays in Italy, and that's where these parts are abundant. Everything marked with an * is modified, and everything marked ** is available at one of three companies in Italy. I also think that the parts marked ** are the hardest to find in the U.S.A.

Tires**	Racing pegs**
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Clip-ons**	Gas Tank**
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Carburetor*	Gear Ratios*



If you'd like to show these companies address' please contact me. I can also help you in buying (if you decide to do so), I write Italian perfectly and with a flare.

I enjoy your magazine very much. I only wish that mini-road-racing would be as popular as mini-Cross. Keep up the good work.

David Schnabel
Rowayton, Conn.

A Far out looking bike Dave. How about some photos of your bike (and those names) to be included in our letters section? I appreciate the help. Can anyone else supply us with names?

GROOVIN' WITH 'THE CAT'

Q I saw your article of those two guys who ride from Detroit to L.A. on Dunecycles, Groovy! I was wondering how much such a

trip might cost and if it could be done with a Dune Cat. If so, how much would it cost me to set up?

Keith Murray
Wenatchee, WA

A Our wandering heroes had to study the law carefully before they made any plans for the trip. Some states require helmets, special lighting, special registration, etc. Write to all state motor vehicle departments prior to making the conversions on the Cat and before making any plans.

You'll also have to consider weather. The AAA or Chamber of Commerce can help in the cities along the way. A simple letter can net a lot of literature. Some areas are easier to ride through in different seasons because of snow, winds, heat, etc. We once made the mistake of riding through Texas in the height of the rainy season. Flash floods and motorcycles don't mix!

Even the grade (steepness of hills) of the road along the way should be considered. It's no fun trying to make it over the Rockies on a 50cc Suzuki unless you like getting a boot from angry motorists.

The cost of such a trip can vary widely depending on the degree of comfort desired and your ingenuity in preparing the machine. You can sleep out at night and prepare food to take along.

Proper gearing is a must for such a trip. The Dune Cat isn't geared for highway use and is too slow. Change to higher gearing for highway use.

A trip like this could be quite an experience. If you make it we doubt that it'll ever be forgotten. Use the machine to advantage and travel on back roads when possible. We've done this on a bike and it is a gas. Most tourists miss the most interesting of sights. We prefer to ride where no post card has been before.

COWHANDS

Q I need help with a mini-bike problem which may be unique to your magazine.

I need a soft tire to use with low pressure for riding through corn fields to round up cattle. Does anyone make such a tire and where can I buy it? Is there more to the problem than I realize?

Henry Gavel
Roxbury, Conn.

A Your problem is not unique even though the application is. Most racers run their tires low to soften the blow of rough terrain. The trick is to lower tire pressure to a point where the tire will deflect without striking the rim. If the tire runs on the rim it will be destroyed.

Pressure can be anywhere from 3 to 8 pounds depending on your weight and the roughness of the terrain. Check the tire for deflection at different pressures.

The problem with running tires at these low pressures is that the tire can spin on the rim and tear a valve stem loose. Most riders use rim locks to keep the tire in place. Since your tires are so small you may need to borrow a trick from the drag racers and screw the tire to the rim. Drill several small holes in the rim and through the bead. Be careful to avoid the tube. Use self-threading screws just as long as the tube and rim are thick.

BRANDS X, Y AND Z

Q I'm having problems with my bike, a Yamaha 100 Enduro. It was using NGK B8HS plugs but I thought American plugs might be better. I bought the equivalent Champion plugs and these only lasted 50 miles each until they reached the point shown in the picture.

The head leaks or something and

there is oil on the cooling fins near the junction of the head. I'm sure the gasket is good since I had the bike in for a tune-up less than a 1,000 miles ago.

You should get some kind of award cause yours is the only magazine I read entirely.

Keith Raihala
Floodwood, Minn.

A Wowwww! Have you got problems if those pictures are accurate. The two champions are the worst looking plugs we've



ever seen. First of all, the gap looks to be way off. Normal gap should be set at .025" or at factory specs. It appears as if the electrodes have burned off all but the NGK. This would lead us to believe that the engine is running far too lean (too much air mixed with the gas). The Champ on the extreme left has the tip burned away. If you haven't burned a hole in the piston yet, be prepared, you will. The heat is far too much. It's a miracle the engine is still running as you write.

The lean condition is caused by the cylinder/head leak. Even if the gasket is new it could have been installed wrong or it could have torn. Another possibility is the head could be heat-warped and allowing air in under pressure. Get it taken care of immediately.

BUCKING TRAILBRONC

Q My brother and I own a five-horse Trailbronc with a torque-converter which has been acting up lately. The bolt which holds the front clutch part has been working itself loose and the two sleeves jump and overlap. It's impossible to get the bike in low range when this happens. We've tried a

(Continued on page 16)

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PUBLISHER'S PAGE

It's about that X*X!!X readers poll

This column really took its knocks in that readers poll we ran in the August issue. Apparently, the Publisher's Page is one of the most unpopular features in the magazine. How's that for an ego buster? And it's no consolation that the Editorial didn't do much better. Bummer! The trouble with asking for honest answers to honest questions, is that, sometimes, you don't like what you hear.

These two columns are "free-expression time." All journalists need a little corner where they can scribble to their heart's content about anything that comes to mind. It's kind of psychological therapy. Or, if you want to be unkind, an ego trip.

After the dismal showing of the Publisher's Page and the Editorial in the readers poll, the question is, should we put the space to better use? Devote it to Tech Tips or something else that gets high readership? Before you answer a resounding affirmative, give us a chance to rescue ourselves.

Perhaps there's something we can do to get people to read these columns. Sometimes, really meaty stuff goes into them. At least, we think so.

Consider! The Publisher's Page is written by a guy who runs a national magazine. Like any other publisher, I get around. Talk to a lot of people in the industry. And, usually, when I want to talk to somebody, they listen. Over the course of the nearly six years that this magazine has been in existence, I've been able to help a

lot of people, first as editor, now as publisher. So a few reciprocal favors are in order.

The Editorial is written by Brick Price who is responsible for filling the magazine with stuff you want to read. He also pulls a lot of weight because of the publicity he can offer.

Now, wouldn't it be nice to have this couple of guys working for you. Maybe what is wrong with our columns is that we're not writing about things that interest you. Although, how that could be, I don't know.

Brick and I split the column chores (fun?) up loosely with Brick covering the sport of mini-cycling, in all its ramifications, and I took the various things that were happening in the industry. These are fairly loose definitions because the two areas are interwoven.

All our readers have got to have problems, bitches, uncertainties, lack of information in both these areas. There must be something you'd like to change, if only it was in your power. Why don't you write about what's bugging you, or about something you want to praise, and let's see what the MiniCycle guys can do? Write to Brick about the sport, me about the industry. Don't worry if you don't know which is which. We'll sort it out. If it's something that could benefit by exposure in our columns, we'll write about it. Anyway, we'll do our best to help, anyway we can, but don't expect miracles. Then, maybe, we'll get our readers back.

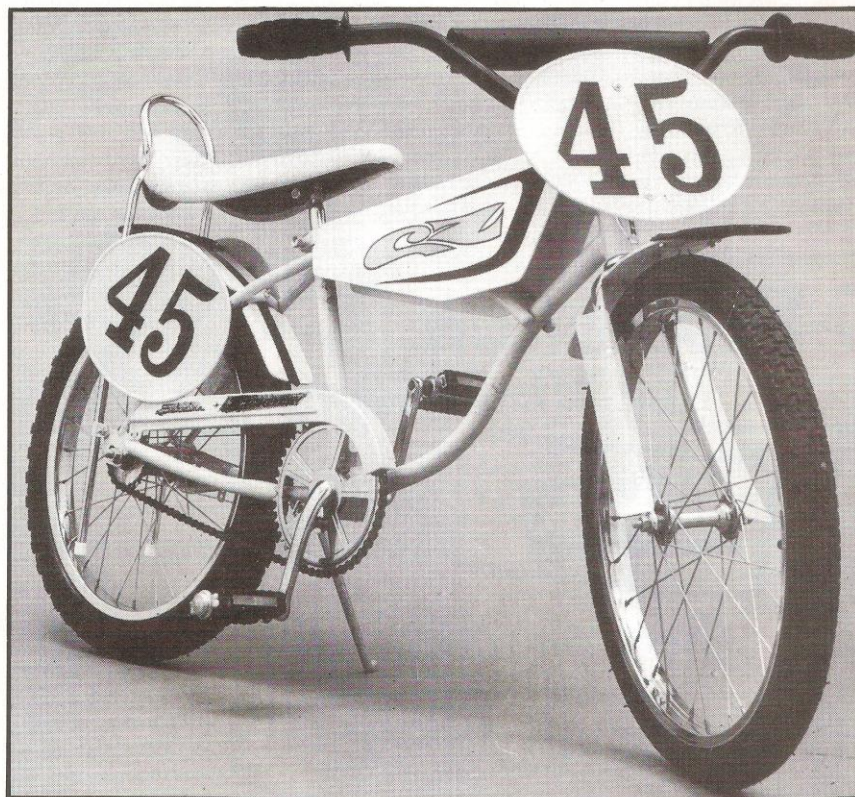
KNOCK ON WOOD

'Tis the season to be jolly because all

(Continued on page 14)

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the new models (at least those from Japanese manufacturers) are being introduced. It is not marketing magic that it just happens to coincide with Christmas. For the next few weeks our readers will be hopping around looking at all the 1974 goodies and dropping broad hints to anybody who maintains a bank account. Some of you are bound to get lucky, but we in the motorcycle media are luckier yet.

We get to see the new models a few months before they are revealed to the public. It's arranged that way so that our issues with the news of the new models hit the newsstands about the same time they are available at the dealers. These press showings are usually fun and the manufacturers go to a lot of trouble to get everybody from the media to attend. Whether this is necessary or what is the best format for a press showing, is a matter for argument. Still, it's usually done and we appreciate it.

For instance, Suzuki, this year, invited all the press guys to a mock "Let's Make a Deal" run by TV personality Monty Hall. This is the show where they give you something and challenge you to deal it back on the chance of improving the deal.

Our lucky so-and-so editor, Brick Price, walked off with the top prize, Suzuki's new 250cc trials machine. They had this gleaming beauty out under the flood lights and we could almost taste the way it would feel, going over a four-foot boulder. Brick was ready to hop on and ride off into the sunset.

Good job he didn't try it. The RL-250, as it's known, was mostly wood.

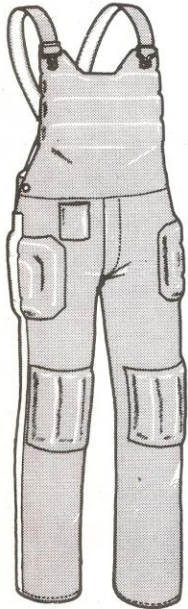


What's amazing about this is that the thing looked so real. The early photographs you're going to see of this machine are probably going to be of the wooden mock-up. Bet you can't tell which parts are metal and which are wood. Even close up, it was tough. Whoever does this wood modeling is an artist.

It takes a long time to develop a machine like this, especially when it's in an area new to a manufacturer. Fifty million combinations of geometry, parts and styling are tried before the design is finalized (even though our wooden bike looked finished, we're willing to bet some minor changes will be made in the production units). Then the marketing guys want to get out their publicity as soon as possible. But the only machines they have are dinged and scratched, cut and re-welded, generally not the kind of thing you'd call beautiful. Because they don't have time to wait for a production model, the above-mentioned wood-carving artist is put to work.

The result is a thing of beauty, even if Brick is mad because he couldn't ride it away. □

BIG Protection for Mini Riders

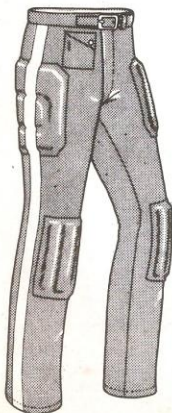


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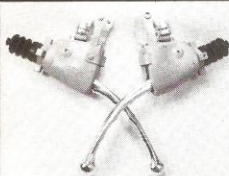


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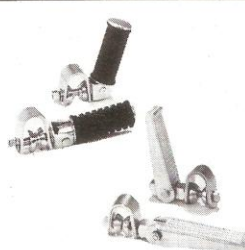
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Tech Tips

(Continued from page 11)

lockwasher but it doesn't help at all. When we accelerate hard in high range the cover rattles violently causing gouge marks. How can we solve these problems?

J. Storey
Philadelphia, PA

A You could try Loc-Tite on the threads of the screws, but we doubt this will help considering the amount of vibration and loading.

Loc-Tite with a lockwasher would be your next best bet. The best method is one which we use on our racing bikes. Take a pair of diagonal cutters and place them on the bolt as if you were going to cut the bolt lengthwise. Put an indentation in the threads down to the main body of the shaft. This will spread the threads and cause them to bind in the mating threads. The effect is similar to cross-threading a screw. If this has ever happened you'll know how hard it is to even deliberately unscrew the bolt.

Some surplus hardware stores carry bolts and nuts, intended for aircraft use, with eccentric threads. These work well enough for most bikes since they're intended to keep jets in one piece at 600 mph!

UNSAFE AT ANY SPEED

Q I own a J. C. PENNY Duster mini-chopper and I recently heard that these are the worst riding and most dangerous type of mini-bikes made. I also heard that the front forks bend easily. Is this true? What can I do to correct it?

Charles Hopkins
Phoenix, Ariz.

A We're sorry to say that it is all true. Choppers are designed for aesthetics only with little regard for safety. A new organization dubbed NCCSI is trying to establish standards of safety for full-size choppers before the Federal Government decides to do so. Unfortunately, no such organization exists for the smaller machines.

If the forks are raked and extended, steering is radically changed

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JANUARY 5 & 6 1974

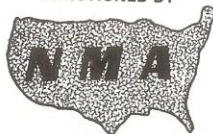
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and slowed. The bike displays a tendency to track in a straight line and resists any attempt to steer around corners. Conversely, a trials-type bike has nearly vertical forks for quick, precise steering.

Extending the forks negates suspension travel and places undue stress on the steering head and fork tubes. If a good grade of flexible steel isn't used, the forks will bend under the strain. The problem becomes worse if the forks are chromed. Chrome plating tempers steel and makes it more brittle.

Stay away from the mini-choppers. They are not made as well as many other machines available for the same money. We intend to run a story on a mini-chopper project someday but our rig will be designed with safety in mind. Most of the good choppers we've seen have been for show only.

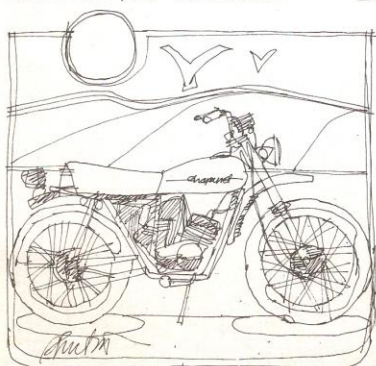
TACHY PROBLEM

Q My Honda has a hole on the right side which is the tachometer access hole. Would it be possible to mount a tach from an SL100 or SL-125?

James Fitzpatrick
Summit, N.J.

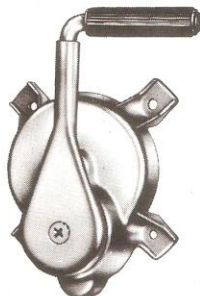
A A tach can be made to work on the XR-75, but we're certain you wouldn't want to use one. We've never known any experts who had the time to look at anything but the track. You'll soon learn where to shift the bike by sound and feel.

If you still want to mount a tach, have it calibrated by an expert and find out (on a dyno) where the optimum shift points are located. To do otherwise would be to have a heavy item as useful as a boat anchor on your handlebars. ☐



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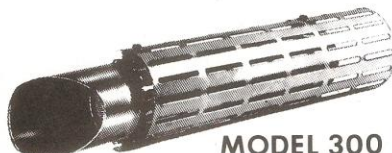
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FREE CATALOG

EDITORIAL

(Continued from page 6)

I'm hooked on trials riding. Normally I wouldn't mention this fetish except that the rest of the world is getting hooked as well. Each year Observed Trials have attracted new enthusiasts. One of the folkheroes of this cult is Mick Andrews, World Trials Champion of 1971 and '72. Mick has been riding and winning in various forms of competition since he turned 15. When Yamaha announced his position in their research department I knew that a super trials bike would be forthcoming. It's a surprise that the bikes he helped develop are ready so soon. It's an even greater surprise that the first bike introduced is an 80cc mini-cycle!

In typical Yamaha style the mini-trials bike (TY80) is a scaled-down replica of larger, proven machines. In this instance, the larger bike is the TY 250 developed by Mick. I'm ecstatic that such a bike exists. The introduction of this model should spur the various sanctioning organizations into developing a special mini class

for the young trials rider. We'll do our part to make it happen.

I'm sure problems will arise but these should be simple enough to overcome. The first problem I can see is that the obstacles will also have to be scaled down to accommodate the smaller bikes.

The method of scoring may also need some revamping. Dabs could be more prevalent because of the shorter wheelbase. At the moment this is just conjecture since there is no actual competition. We were wrong about the MX mini-cycles and could be in this instance as well.

Whatever the outcome, I'm glad mini-trialers are on the scene. It will give our riders a chance to develop skills at an early age and offer competition in yet another area where the Europeans have traditionally dominated. We applaud Yamaha in their decision. For the time being they have the jump on the market (don't forget they were also first with a Japanese minicycle). How about it Honda? Will a mini-trials bike occupy the No. 39 slot in your new model line-up for this year?

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These quality bearings are 1 3/8" O.D. by 5/8" I.D. They are factory-lubed and feature a plastic lip seal on both sides. Two models are available; Standard, and with a snap ring and groove for special applications. See these versatile products in our catalog.



Mini-Bike Axles

Often overlooked item is a new axle. Replace that worn, stripped or bent one with a quality steel axle from AZUSA: (Nuts and spacers available for all sizes).

#8124	5/8-18 x 8, Cycle Axle	 \$1.35
#8180	3/4-16 x 8, Cycle Axle	 \$1.60
#8120	5/8-18 x 10, Cycle Axle	 \$1.60
#8181	3/4-16 x 10, Cycle Axle	 \$1.90



Clamp-on Footpegs

Rubber tread, folding footpegs that can attach easily, firmly and quickly anywhere on frame

#2239	Clamp-on Folding Foot Pegs	 \$3.95 per pair
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Countershaft Sprockets

Replace your worn countershaft sprocket with a tough, heat-treated Aluminum alloy, or quality steel replacement sprockets from AZUSA'S Tabloc Division. We have all the "wanted" tooth counts, 10 thru 19, in spline patterns to fit all popular bikes. Here are a few:

Combat Wombat #420 or 428 Chain	\$4.95
Honda CT-70 or SL-70	 T515 \$4.95
Honda CR-125	 T513 \$4.95



Throttle Controls

Top quality American-made Twist Grip kits including: pair of "sweetcorn" grips, throttle mechanism, aircraft-quality "Wescon" cable and plastic-lined housing . . . all assembled and ready to go. Available in two popular handlebar sizes.

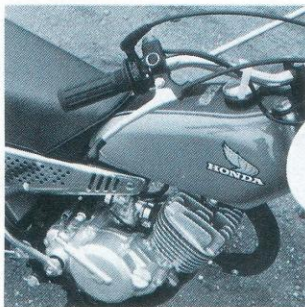
#2352 - 7/8" Kit w/Wescon Cable	 \$4.95
#2352 - 1" Kit w/Wescon Cable	 \$4.95

Also available with integral push button for horn, starter or kill switch . . . Just a dollar more!



These and many more cycle items are pictured and fully described in our catalog, AZUSA'S Bag. For your copy send \$1.00 to Dept. MC-123, AZUSA Engineering, Inc., 1542 Industrial Park St., Covina, Ca. 91722

Honda MR50



A mini-Elsinore

How does a company go about upstaging a fantastic racing bike like the 125 and 250 Elsinores? It's really simple. Take all of the dimensions and whittle them down to fit a growing Pee-Wee rider. The MR-50 looks as if that is exactly how it was conceived. It's almost like watching some type of weird shrink-machine in action in a grade D science fiction flick. As usual, the good guys are going to win. Honda has built what could be the finest, most complete mini-cycle on this globe. Every detail of the diminutive machine shows careful

attention and thorough engineering.

But why was this bike conceived? It's too small for the mini-cycle class and too large for the Pee-Wee class. The only answer must be that Honda is out to create a class and a market where none existed before. The idea really isn't all that far-fetched since Yamaha did exactly the same thing in '68 with their innovative MiniEnduro. Honda has filled a niche that even we weren't aware of before.

Reactions to the MR are very similar to those five years ago when the Yammie was introduced. "Cutesie pie" adjectives abound and the comments we heard usually include a reference as to how much it looks like a "real" motorcycle. Well folks, it is a *real* motorcycle. In fact, it is a real racer. Everything about the bike has been designed with competition in mind. However, the bike is so mildly tuned, it's almost anemic. The horsepower is obviously nowhere near what it

could be if tuned by the right people. This is not the fault against the bike or even Honda — quite the opposite. We have to give credit to Honda for not overwhelming the riders who will be buying the machine. Most young riders lack the experience to successfully ride a strong and peaky-engined bike. Even many older and skilled riders would find it difficult to ride such a bike.

Evidence of the intended market is a clever governing device which can only be adjusted by an adult. Included in the tool kit is an Allen wrench for adjustment. The tool kit is given directly to the parent when the bike is bought. The factory sets the throttle to its minimum position. As the youngster learns how to control the bike dad can slowly adjust it for more speed.

Pee-Wee rider Kurtie Henricksen, cover boy for Sports Illustrated, did all of the testing on this bike and found it to his liking in all respects.



The engine starts easily enough for a young rider not yet familiar with mechanical idiosyncrasies. The engine fired on the first kick without fail except for one instance when the bike landed upside-down and flooded. Even then it took only a few kicks to bring it back to life.

The power band is wider, proportionately, than any other two-stroke we've tested recently. This could be because of the mild state of tune and the odd exhaust system employed. The header pipe is conventional but the expansion chamber area looks more like a box with the front end tapered and the rear ending abruptly. A tiny stinger pipe is tacked on to the blunt end of the box which contains the silencer and spark arrestor. The arrangement must produce considerable backpressure and torque. The muffling system makes this Honda the quietest two-stroke we've ever tested. Proof of this came during our test session. We had inadvertently wandered

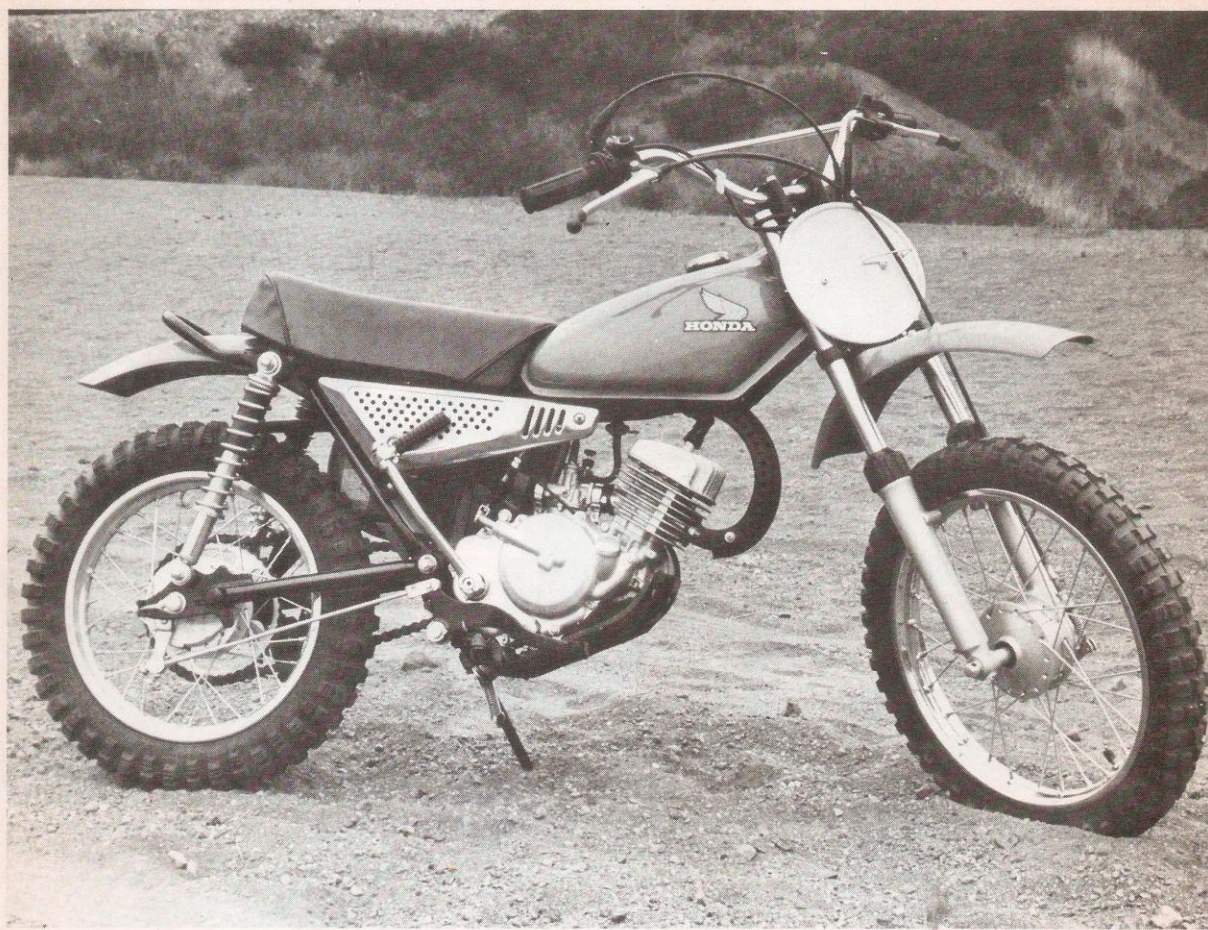
onto private property within L.A. county limits and were promptly busted. The officer said he had received reports from local residents that we were disturbing the peace with our "loud" bike. He asked us to start the bike to determine how loud it actually was. What he didn't realize was that the bike *was* running but couldn't be heard above the din of his own patrol car. He seemed amused and let us go with a warning. We felt as though we had the blessing of the Pope.

With the exhaust so quiet it would be reasonable to expect to hear noises coming from the mechanical workings of the engine. Most two-stroke engines sound like they're on the verge of disintegrating, with various assorted rattles, squeals and pinging noises. The reason is that large fins are needed, compared to a four-stroke, for cooling. The fins multiply any internal sounds as they start vibrating. To counter this, Honda has cast stabilizers between

the fins to support the weight and cancel second-harmonic vibrations. The result is quiet enough to allow you to hear the gears meshing in the trans.

Vibration can also cause a problem with the performance of a machine. It's been proven that vibration causes cavitation of fuel which is a foaming action. The air bubbles prevent proper mixing of air and fuel and cause the engine to run too lean. In addition, heat from the engine can cause the gasoline to expand too much causing further fuel starvation. These problems were readily solved with a rubber manifold between the carb and head to absorb heat and dampen vibration.

Other examples of attention to detail are evident throughout the bike; the exhaust pipe is fully insulated to prevent burn injuries through negligence or in a spill; the point cover snaps in place and is held in position by a waterproof,



dust-proof rubber seal; the kick starter is designed to tuck away when riding for safety and is large enough for an adult to kick through when lending a helping hand; all foot levers are sturdy steel with sharp cleats to prevent slipping when the going gets muddy. Finally someone has the sense to know that rubber pegs are slippery and can be hazardous.

The clutch is designed for ease of operation and can be actuated with one finger. The smooth operation makes selecting any of the three gears a snap. The transmission is a joy to use even if speed-shifted in true MX fashion without the aid of a clutch. The lever is just the right size and is in the proper position for young hands to grasp without letting go of the handlebars.

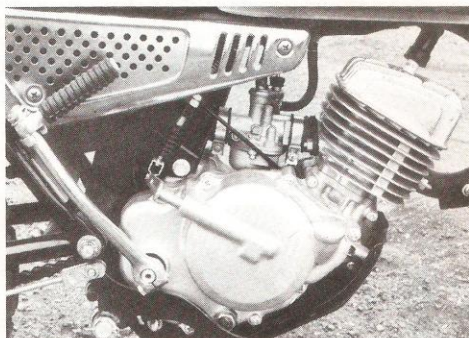
A terse warning is included with the bike which states that no rider over 80 pounds should ride it. The bike is strictly designed for these light-weight riders and no others

need apply. Handling is superb. The front forks have two (count 'em folks) springs and feature honest-to-gosh oil damping. The suspension is ample enough to keep your dentures and kidneys where they belong on rough terrain. When combined with true knobby tires and swingarm/shock rear suspension, the rider has complete control of his destiny.

The knobby tires are mounted on steel rims with 28 spokes each. The rims are 14 inch front and 12 inch rear. The rear rim is wider than the front to give the bike more traction. The taller, narrow front rim allows the bike to traverse large obstacles and keeps the front end from washing out when pushed hard, a trait too common on other machines. The front aluminum hub is cast without any provision for a speedometer. This is good because it means that the bike was designed for this one purpose only and no enduro, dual-purpose machine will

come along to confuse the issue. Besides, who would want to ride something this small on the streets, legal or not?

The frame is the only disappointing feature we could find. The top frame member is a huge tube running over the engine and down in back. The engine is hung onto plates at the rear and is not an integral part of the structure. We can see a possible problem with stress fatigue of the frame if the bikes are souped up to run faster. The skid plate is bolted to the front of the engine and doesn't offer as much protection as it would if it was a part of the frame isolated from the cases. The object of a single tube was probably to keep weight down and to simplify construction. However, we feel that a triangulated frame with smaller tubes could have been substituted for more strength without any extra weight. In every other aspect, the bike is nearly identical to larger, professional racing machines.



Styling of the mini-Elsie is great. The tank is typically Elsinore in shape if not size. The paint scheme is black on orange and looks sharp (could they have picked the colors to correspond with the introduction near Halloween?). We're a little sad that it didn't carry the Elsie silver to maintain the factory identity. The fenders are molded of polypropylene to match the paint exactly. The side covers and number plates are also molded of poly. The front plate is held in place with a rubber band of heavy rubber. It has been our experience that the bands break on other bikes soon after reaching these shores. The atmosphere here causes the natural rubber to deteriorate quickly.

To sum up, the MR is a fantastic machine with very little to fault except for some nit-picking details. With 37 other models in the Honda line, the mini-Elsie may be last to enter the fracas but it is definitely not the least.

HONDA MR-50

Manufacturer: Honda Motor Corporation, Japan.

Distributed by American Honda, P.O. Box 50, Gardena, Calif. 90247.

ENGINE

Engine type	two-stroke single, piston-port	Carb	13mm piston valve KeiHin
Bore	40.0mm	Ignition	flywheel magneto
Stroke	39.7mm	Lubrication	pre-mix, 25:1
Displacement	49cc	Fuel capacity	0.6 U.S. gal
Horsepower @ rpm	n/a	Fuel requirement	low-lead, 91 oct.
Compression ratio	7.5:1		

TRANSMISSION

Transmission type	3-speed, constant mesh	Gear ratios	
Primary drive	square-cut gear	1st	3.08:1
Clutch type	wet multi-disc	2nd	1.58:1
Final drive	3.583:1	3rd	1.13:1

CHASSIS

Frame type	single backbone	Tires	
Wheelbase	40 in.	Front	2.25 x 14 knobby
Overall length	57.75 inches	Rear	2.75 x 12 knobby
Suspension		Brake(s)	4 in.
Front	tele-fork	Ground clearance	6.0 inches
Rear	swing arm/shock	Seat height	23.12 inches
Wheels	14 front, 12 rear	Handlebar height	33.2 inches
		Dry weight	95.0 lbs.

PRICE AS TESTED **\$359.00**



WHY THE 80'S

Simple . . . more power

First off, if you want to race in the Youth Division of the AMA, this is not the story for you. AMA rules require "the same basic design and materials as the manufacturer's model" and that probably puts our subject engines on the outside. What we are doing here is examining some of the kits that are readily available to hop up the Indian 70cc Minarelli engine, the Honda XR-75 (72cc) engine, and the Yamaha 80 (73cc) engine. Our original intention was to bring them all up to 80cc, which is legal for National Minicycle Association racing, and see how close they were in power. Even the non-racer will probably be interested in the new potential of his engine.

We had thought, if there is some way to bring the displacement closer together, they might be more competitive with each other. We would do the work, talk about the kits, dyno test each one, then run them off against each other on the track. A big project. We allowed for a series of articles to run as long as needed. The winter months were chosen so that snow-bound readers could follow the modifications step-by-step, to avoid tying up the riding

months.

The first monkey wrench in the works was the fact that the Noguchi kit for the Yamaha retains the stock displacement. However, Dirty Distributing, who handle the Noguchi products in the U.S., are confident that this kit will hold its own against the J & B kit for the Honda and the Allied Cycle kit for the Indian. So we went ahead and used the Noguchi kit.

The kits we selected are, by no means, the only ones available. We intend to have a listing of as many available kits as we can find, probably in the next issue of the magazine. Nor is our selection of these kits meant to imply any endorsement. The manufacturers have offered to stack their products up against each other and that's the only encouragement we needed. In the final analysis, we can only resolve the question of which one is best, out on the track. Even then, the conclusions might not be final.

Most engines from large manufacturing companies arrive at the dealer with much less than optimum power. The primary reason is reliability. It's possible to build an engine capable of producing maximum power but not without making a few sacrifices. A large company, Honda for instance, has built a reputation around bikes that are relatively fast and extremely reliable. Horsepower is a function of rpm, compression, valve timing, carburetion and displacement. An increase in rpm places harsh loads on all moving components. The optimum engine will be running at an rpm point nearest its' self-destruct limitations. Such an engine could ruin a company's good name if

placed in the wrong hands. Racers are aware of the limitations and the consequences if they exceed them but the average rider probably wouldn't buy a bike if he's heard that "it's fast but won't last."

Mass production is responsible for our low-cost bikes of today. To build a machine this way requires reasonable construction tolerances. Machinists can hold critical dimensions to two ten-thousandths of an inch if necessary but this requires time and patience. In the business world, time computes as money and any extra costs are passed on to the consumer.

An old adage is, "Cubes mean speed," referring to the cubic displacement of an engine. It's possible, and relatively inexpensive, to simply bore out an engine to the legal limit and let it go at that. However, to realize the most power, more modifications than boring out are required. There is no better time to do that then when the engine is out of the frame and dismantled already. This is why we've chosen the experts for each make to show us the correct way to modify an engine. Each machine varies in the amount of work, time and money needed. Kits are available for those who can't perform the work themselves. We'll also include modifications to stock components whenever possible to save you money. It amazes us how so many components from other bikes can be swapped for stock items. The expert tuners are ingenious and are always looking for ways to improve the breed with a minimum of effort. Our sincere thanks for all who are helping us make this a comprehensive article by divulging their "trade secrets."

Some simple precautions can save time, money and grief

GENERAL SHOP INFORMATION

Anyone accustomed to twisting wrenches and tweaking engines for a living takes certain measures for granted and does them automatically. Safety is of primary concern. Insurance can pay for hospitalization, but it can't make up for certain injuries or lost time. Working with machinery can be the easiest and safest of occupations, or it can result in serious injury. The precautions can be likened to looking before you cross a crowded highway. Once learned they will come naturally.

Sufficient lighting is essential to do your best work without eye fatigue. It's almost impossible to do precision work without good overhead lighting, as well as an adjustable light which can be trained directly on the work area. In our shop we use fluorescents for overhead and an inexpensive high-intensity light for detail work. Fluorescents give a soft, diffuse light without harsh shadows. When working outdoors you'll find that working in open shade is easiest on the eyes.

Never work with your face close to the work if grinding, sanding, welding or when working with harsh chemicals. Safety glasses should be worn at all times to prevent injury. The smallest grain of dust can feel like a boulder under your eyelid.

Keep your work area clinically clean and uncluttered. Dust can do more harm to the guts of an engine than the heaviest racing. Dust is abrasive and can cause premature wear of bearing surfaces. After grinding work, thoroughly clean the parts with unadulterated solvent.

Clean the floors of dirt and grease after each work session. It's no joke

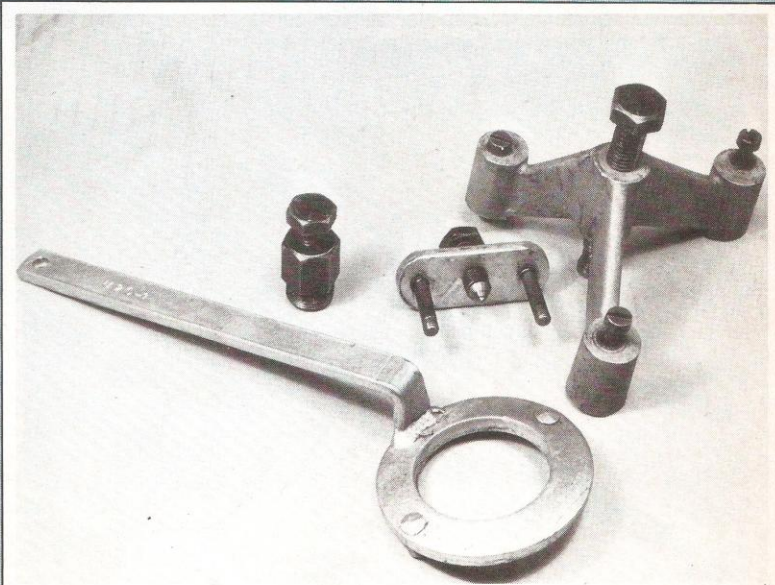
to slip and fall when carrying a 70 pound engine loaded with expensive parts (not to mention the thrill of having those custom parts land in your lap). A cluttered work area can slow up your work and cause frustration. In some instances it can even represent a hazard. We know of a fire started when a torch was placed too close to an oil-soaked cleaning rag. The tragic result was that the careless owner lost his whole shop in a fire. Keep open flames away from gas tanks and batteries being charged. Batteries give off flammable fumes.

Choose as large an area as possi-

ble to do the initial tear-down. You'll find that assembly will go a lot faster if parts are laid out in the order in which they were removed.

Get as many tools as you think will be needed and keep them close at hand. A roll-away tool chest is best but usually too expensive for most home mechanics.

Disconnect the spark plug just to make sure that the engine can't be started accidentally. Any jewelry such as rings and watches should be removed as well as any loose clothing. If you have long hair, tie it back with a bandana or sweatband. Otherwise you may have an early



In some instances a special tool may be needed to perform a job properly. Prior to starting work on the engine, make sure you have the proper tools or can make do with other tools. Special

tools are not too expensive and some, like the flywheel puller, can be used on several engines. Tools last a life time if taken care of properly.



GENERAL SHOP INFORMATION

bald spot.

Keep all solvents in closed containers labeled as to the contents. A tea strainer is handy for cleaning debris out of dirty solvents. Clean up spilled gasoline immediately to avoid the possibility of fire. Never keep gas in containers in, or near, the house. Always work in a well-ventilated area. Engines should only be run outdoors to avoid carbon monoxide poisoning (carbon monoxide is odorless, colorless and highly toxic).

Allow yourself plenty of time to complete a job properly. Hastily done work always results in errors and a needless waste of time. Racing

engines require patience and quality workmanship to perform properly. Try to pick a logical stopping point if you have to pause in the work.

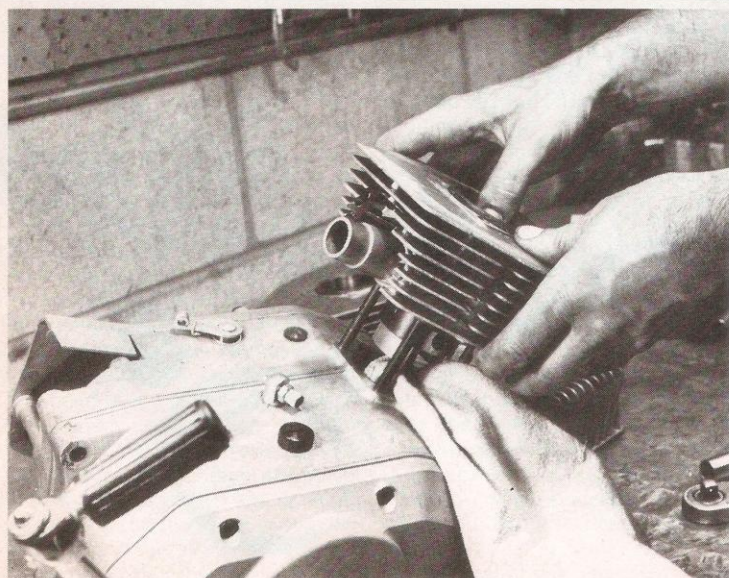
Tools are your most valuable asset for maintaining a racing bike and for the initial building. Good tools are a wise investment regardless of how much work you do in any given amount of time. Cheap tools wear out and often don't perform as well for smooth efficient work. Buy enough tools to do the job before you start. Make sure that you won't need an exotic factory tool which may be unattainable in this country. In many cases, a mechanic will charge you more if you've already

started work and decided to give up. It may not sound right after you've spent so much time on the project but it is more work for him to take over. There is nothing worse to figure out than a basket full of odd parts.

Don't try to use one tool to do the work of another. Too often sloppy workers use pliers in place of a box wrench. This is a bad practice because you could harm the work as well as the tool. Undoubtedly the most abused tool is the screwdriver. We've seen them used for crowbars, can-openers, chisels and for everything but driving screws. Always choose a screwdriver which will fit the screw head exactly. It is extremely difficult to remove a screw which has had the drive area messed up.

Very few specialty tools are needed for the average tear-down. However, we strongly recommend spending a few bucks for an impact driver. This is a device which can easily remove any screws. It is handy for most bikes and a necessity for Hondas where the problem is that the steel screws bind on the aluminum cases to give a stronger bond than Loctite.

An owner's handbook or shop manual may help in some areas but follow our steps and take your time for the best results. The job may look difficult but it's not. Every step is performed in the most logical sequence. Anyone with average intelligence and some spare time can duplicate the racing engines of the experts. No punches were pulled to make sure that you'll get your money's worth. "Let's see now . . . Part 'A' connects to part 'B' and



A clean shop area is a must when working on high-performance engines. A speck of dust can ruin several hours of work. An organized work area can speed work and insure safety by reducing fatigue and confusion.

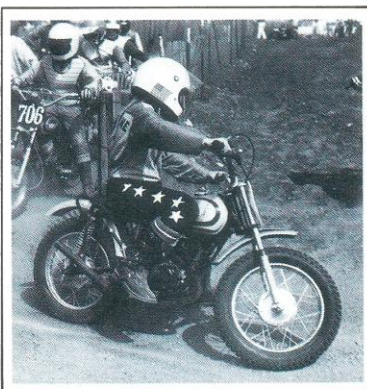


*Possibly the fastest
under-100cc MX bike
in the world*

We had to travel (figuratively) half-way around the world to find an expert on modifying the Yamaha 80. Taneharu Noguchi is possibly one of the greatest living authorities on modifying two-stroke engines. His ideas and efforts are primarily directed to improving the Yamaha line of racing bikes. His work for the research department has been responsible for producing some of the finest box-stock competition bikes in the world. He is also responsible for training talented young riders to become a part of the Yamaha factory racing team. Not all of the riders remain with Yamaha (some take advantage of the training and move on), but so far the program has proved worthwhile. If nothing else, he is grooming the competition to make racing more fun. Much of his time is spent on racing programs as a member of Japan's equivalent to the AMA.

As if these tasks weren't enough, he also produces a line of competition components and modified racing bikes, and owns the largest Yamaha dealership in Japan.

The basis of this story is the Noguchi kit designed for the Yamaha 80. When we first heard of the kit, we assumed that it was a big-bore kit to bring the displacement up to the legal (non-YAMA) limit of 80cc's. We further assumed that the kit would go from there, taking advantage of the greater dis-



placement. We were shocked to find out that it retains stock bore and stroke.

In a rather long call to Dirty Distributing, distributor for Noguchi products in the U.S., Dave Townsley set us straight on several aspects of the Noguchi kits. Dave was *most* emphatic that we should not try to improve upon the kit in any way. Apparently, the kit has been designed and tested by the best technicians Japan has to offer. To modify the components in any way would spoil the kit and possibly Noguchi's good name. Dirty Distributing feels strongly enough about this to offer to run their 73cc kit on a dyno against anything we can come up with for the same bike. The kit was designed to be a bolt-on item and thus it shall remain, period. Somehow we believe him. If these words were spoken by anyone else we would surely have our doubts. The beauty of this kit is that it retains stock bore and stroke making it legal for most race organizations.

The basic, stage I, Noguchi kit is only \$87.45 and includes everything

needed for a mild (?) engine. The best kit, and most complete of any offered, is the Stage II selling for \$230.00. Before you pass out, we should explain that this is *it*. Your money will buy the equivalent of a factory works racer!

Included in the kit are a satin-chromed head and barrel, plus a specially tuned expansion chamber. We don't use the term "special" lightly either. The pipe starts tapering out at the point where it attaches to the head. Most other pipes continue straight until the gases have reached the expansion chamber area. The variable-header pipe allows the gases to expand more quickly for more efficient scavenging and more power.

The carburetor is another innovative idea from Noguchi. He has patent rights to carb designs and works closely with Mikuni in developing special carbs for his racing bikes. The bodies of these special carbs are made out of aluminum instead of common zinc. The result is a carb twice as big as stock which weighs half as much. Internal differences allow for more efficient mixing of fuels and the resultant increase in horsepower.

Even the method for attaching the carb is different. We recently showed how to mount a GEM reed valve set-up on the Yammie. That unit was bolted directly to the head. The problem is that heat and vibration are transferred directly to the carburetor. Vibration can cause cavitation of the fuel (where bubbles form and keep fuel from mixing properly). Heat can cause the fuel to expand, producing less volume fed into the air stream. Heating is fine for fuel economy but not for power.

YAMAHA

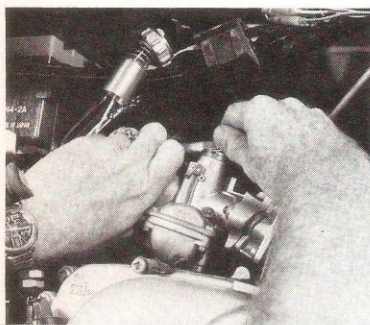
To solve these problems, Noguchi has fitted the carb with a rubber-flanged manifold.

We could go on with the many different, modified parts but it would suffice to say that the kit is totally complete down to the last gasket.

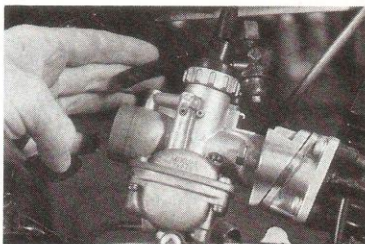
At the time of this writing there are no instruction sheets with the kit since we got the first one out. By the time this is on the newsstands, there will be very explicit instructions—we know from personal experience. As per our usual practice, we've enlisted the aid of the experts in showing us the proper way to assemble the kit. We could do the job ourselves, but there is always something to be learned by watching a master at work.

The first part of this story will deal with installing the Noguchi kit. We will also show how to modify the basic 80 in a simpler manner which will cost a lot less. The end results will be a matter of degree. The ultimate will be the Noguchi, but a simple bore job to 80cc will be at the opposite end of the spectrum (increasing the displacement alone is good for an increase of nearly 10% in horsepower).

During our brain-picking session we also learned how to vastly improve the handling of our project Yamaha. It's really quite simple, all you have to do is.....Well, maybe we'd better go into that later.



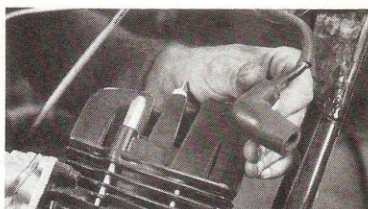
Unbolt the air cleaner and remove it. You may want to grind away the old mounts and use a small Filtron sock for filtering. Bill Butler of Fun 'N' Fast is producing a special can for the Yamie's with larger carbs.



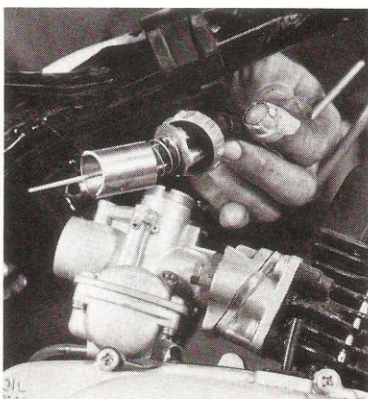
Turn off the petcock and remove the fuel line. You'll also need to remove the oil line and tank. We will be using premix on the racing version to cut down weight.



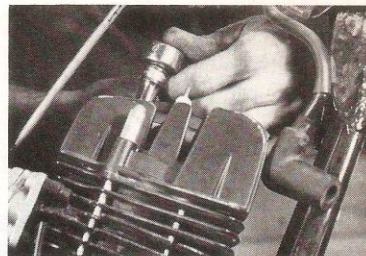
Pop the seat up and remove the tank by sliding it backward.



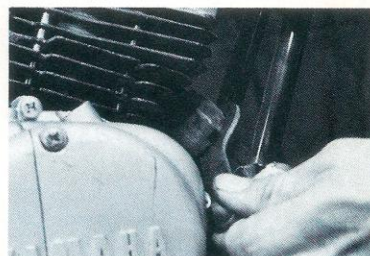
Disconnect all wires, including the spark plug lead, from the engine.



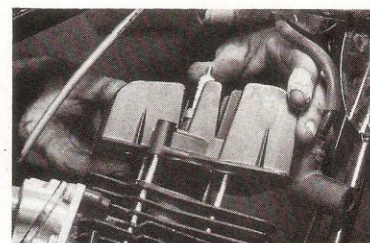
Screw off the top of the carb and remove the slide with its cable. Decide whether or not you'll be using a larger carb. If so, remove the slide from the cable.



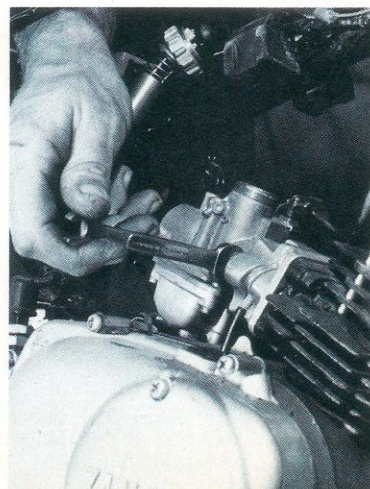
Loosen the nuts on the head one-quarter turn each, this prevents warping. Follow torque specifications for assembly.



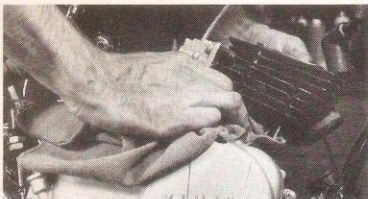
Our mechanic used a special wrench to remove the exhaust flange but a screwdriver and hammer will do as well.



Slide the head off and put aside for now. Leave the plug in place until all work is finished. It will protect the threads during machining work.



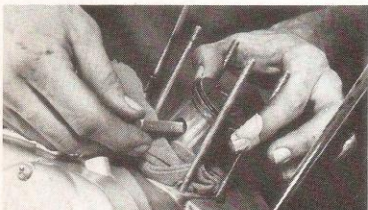
Unbolt the carb manifold and remove the carb assembly.



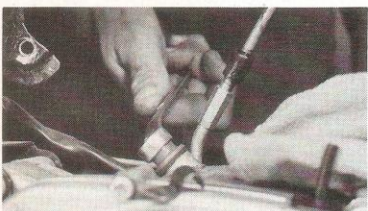
Lift the cylinder up part way and stuff a rag into the case opening. This is to prevent any possibility of debris entering the cases. This doesn't apply if you plan on adding a five-speed kit or if the cases will be split for any reason.



Remove the wrist pin clip with a pair of needle-nose pliers. During assembly, be sure to use a teflon button or a fresh clip. The clips are far cheaper than a repair bill on a scored cylinder wall.



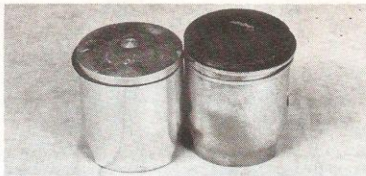
Gently push the wrist pin out with a punch or screwdriver. Don't use force or you'll damage the rod.



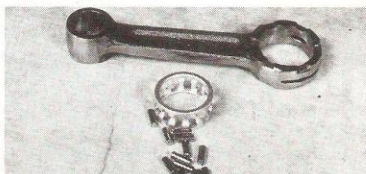
Remove the washer for the transmission detent bolt if a larger carb is to be used. Otherwise, the carb body will rub against the bolt head.



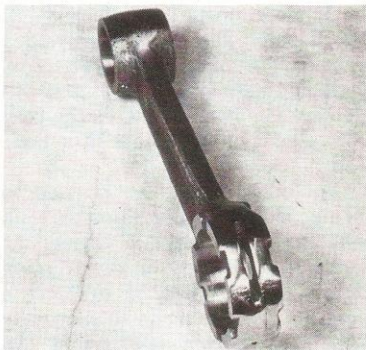
Remove all engine mounting bolts and lift the engine out of the frame. Place the engine on a box, made out of 2 x 4's, to simplify work.



The piston in the Noguchi kit is considerably different from the stock unit. A single Dykes ring, plus scraper, is used in place of the normal ring. A stock piston can be used if you're porting but the bottom ring must be removed or it will break when it strikes the port openings.



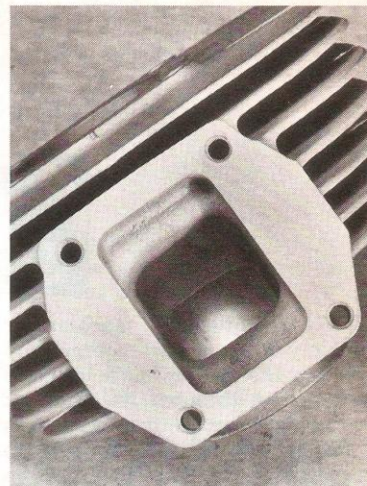
The Noguchi kit contains a special rod and silver-plated bearing cage. Check the kit and make sure it contains 12 roller bearings.



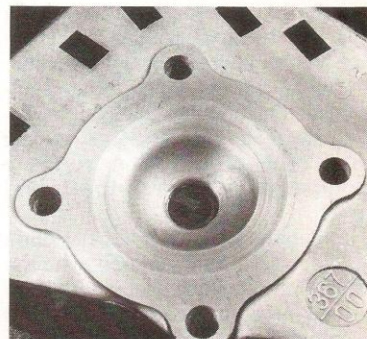
The main differences between this rod and stock are the slot for oil plus lightening and polishing. You can duplicate the rod using a grinder and emery cloth but we don't advise it. The life of the engine is too critical to take any chances at this stage.



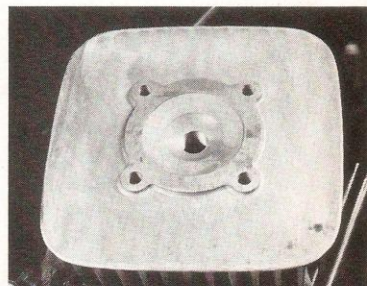
As we mentioned in the text, Noguchi has patent rights on his carb designs and works closely with Mikuni on development work. The result can be seen here between the stock (black) and Noguchi carbs. The Noguchi is considerably lighter and features differences in the orifice design and location.



The Noguchi cylinder is amazing. The size of the intake and exhaust ports look like something out of a 250. Our understanding is that the bike behaves like one when finished.



The stock head may be modified by milling .040" from the "squish" area. If this is done it will be necessary to have the combustion area relieved to allow room for the piston dome. This type of work is impossible without a lathe and milling machine. Any reputable machine shop can do the work.



The Noguchi head is perfect as-is and may be bolted on. Note the large, square shape of the head. Since a down-pipe is used it is possible to have more finning for better cooling. An engine is far more efficient if it can run cool with tight tolerances in the bore.



HONDA

The time-honored machine for any type of dirt competition was the trusty and reliable thumper. A thumper, for those of you not old enough to remember, is a large, single-cylinder, four-stroke engine. The amount of torque produced by these engines was legendary. In bench racing circles, the strongest were referred to as "stump pullers".

Even when the two-strokes started winning every race in sight, the die-hards continued to praise and ride the four-strokes. Recently any win on such a bike was a fluke, involving a great deal of riding expertise. Fortunately, one large corporation, Honda, stuck by their guns and produced a winning thumper again to keep the legend alive.

The new contender, the Honda XR-75, has only one-eighth the original engine size and is less than half as large physically but it is still a winner. The XR dominates virtually every track where it is entered. Part of the success can be attributed to the engineering brilliance of Honda but the real secret lies with the men building them for competition.

By virtue of design, a four-stroke engine goes into the arena with several handicaps. The engines require far more moving parts than a two-stroke. Each extra component means more weight and friction to steal useable horsepower.

Maximum power is also limited because these same parts have considerable mass which limits rpm. High revolutions, as you know, are critical in producing horsepower. Today's competition does not allow the rider to rely on the torque normally abundant in these engines. The engines are considerably taller to accommodate cam towers and valve gear. This places most of the weight high in the frame, although most XR-75 riders claim that this does not adversely effect the handling.

The extra weight of the engine means that the frame must be heavier. As the weight continues to mount so must the size and strength of all attendant units such as shocks and forks. The cycle (pardon the pun) is vicious and endless. It's a credit to Honda that their machine does so well in stock trim.

It's easy to see that the gremlin is weight. Not just overall bike weight, but all weight including internal engine components. Most expert tuners concentrate on reducing the weight at every possible opportunity. A few grams off of a rocker arm can mean a few more rpm and a fraction more horsepower. Any slight increase in displacement will help transport the bulk of the bike from point 'A' to point 'B' a little faster.

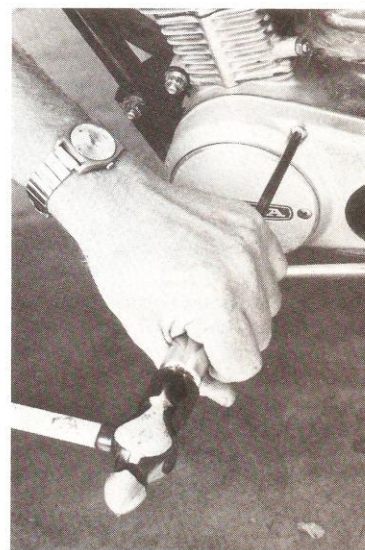
One of the best authorities in racing Honda preparation is Bill Mathison, formally of Speed 'N' Sport, super-tuner for the Mission Honda team. When he prepares a bike the first thing is to place the bike on a strict reducing diet. All non-essential components are stripped off. Any remaining are replaced with light-weight substitutes.

All the components for this story can be purchased, or you can modify many of the pieces yourself. In each instance we will show the difference between stock and modified. Check the rule books for your class to be sure that you don't break out. Some racing organizations allow an increase to 80cc's but the AMA draws the line at a .040" overbore. To realize the maximum from your engine, plan on following every step religiously. If there are any other ways possible to achieve different results we will say so in the captions.

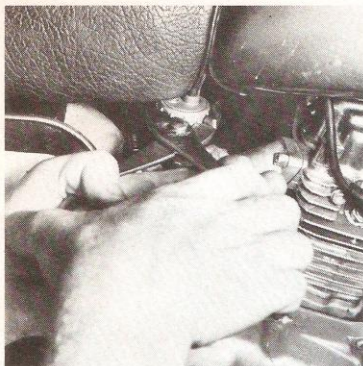
To quote an old phrase, "Weight watchers are losers". This time the loss can net a win. The bike's loss is your gain.



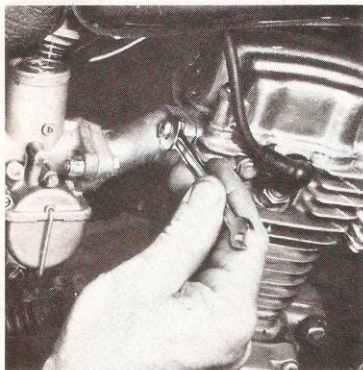
The bike we chose to do the work on already has a megaphone exhaust but otherwise the engine is stock. Start the work by removing the exhaust pipe and megaphone. Two bolts hold the flange in place and one bolt holds the pipe to the frame.



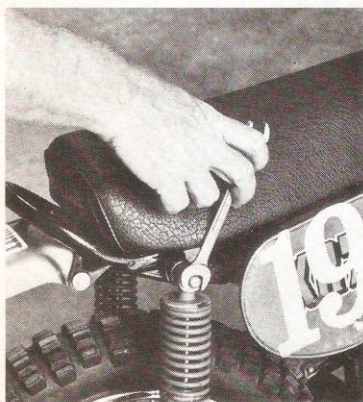
On a stock bike you'll have to remove the side cover and the countershaft sprocket with the chain. Replace the cover, leaving the screws loose, to protect the innards while the engine is taken out of the frame.



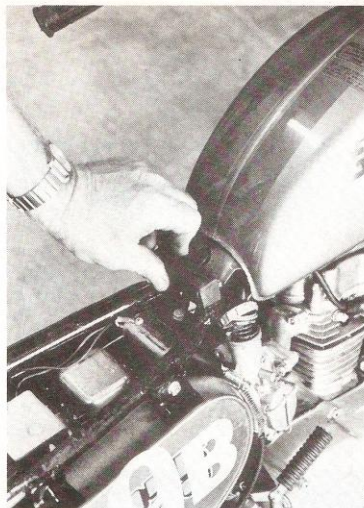
Loosen the top of the carb with wide-jawed pliers or a screwdriver. It will be impossible to remove the slide completely at this point so leave it sitting in the carb.



Remove the air-cleaner housing and discard it. We will replace this unit altogether with a Filtron sock or equivalent item for more efficiency in breathing. Shut off the fuel and unbolt the carb manifold and remove the entire carb assembly.



Unbolt the rear shocks and remove them. This will free the seat so it can also be removed. Believe it or not, this is necessary to remove the tank. It would be a good idea to replace the shocks with Arnacos for better handling.



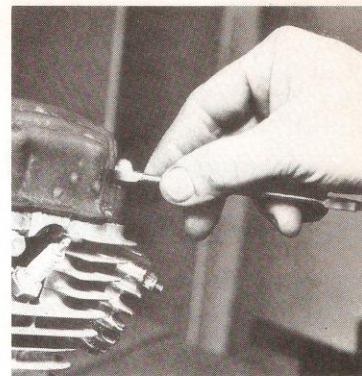
Slide the rubber band off the tongue mount on the tank and slide the tank off.



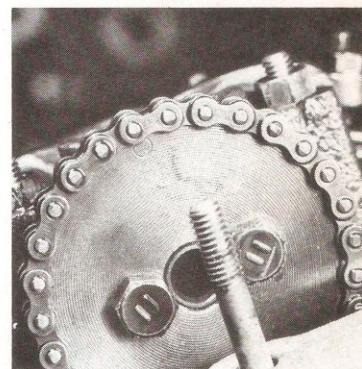
Disconnect the electrical wires, spark plug lead, skid plate and engine mounting bolts. Prop the frame against a wall or frame stand because the lower engine mounting bolts are also used for the kickstand.



Remove the engine and place it in a box like the one shown. These work boxes are easy to make and can speed operations. We showed how to make a substantial unit in the June '73 issue of *MiniCycle*.



Unbolt the head with a 10mm wrench. It's best to loosen each nut one-quarter turn at a time to prevent warping the head. Remove the head. Refer to torque specifications during assembly.



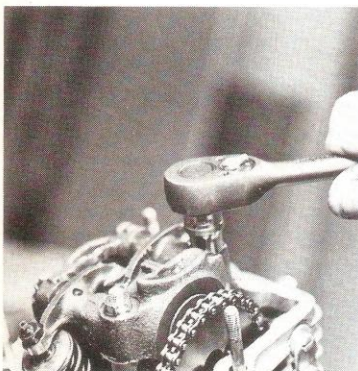
Rotate the timing chain sprocket until the timing mark '0' is at top-dead-center. This is a critical point during assembly because it determines valve timing when the engine is running.



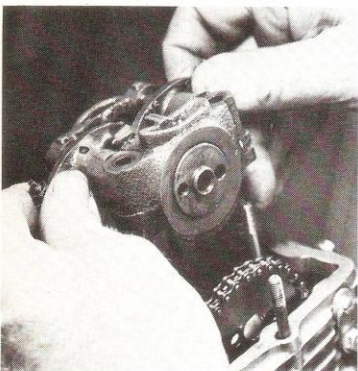
The bolts can be used to help rotate the gear if compression is too great. Loosen and remove these two bolts. Leave the gear in position until later.



HONDA



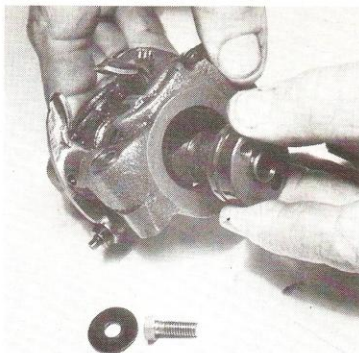
Loosen the cam tower nuts a quarter turn each until they are completely loose and remove the tower.



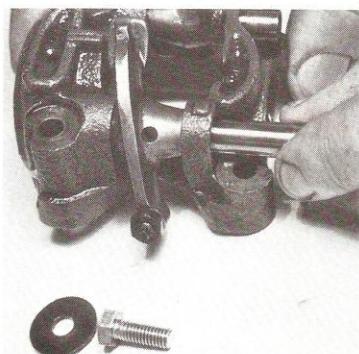
Carefully slide the cam tower off the studs. Care should be taken at all times to prevent any foreign material from falling into the open cases.



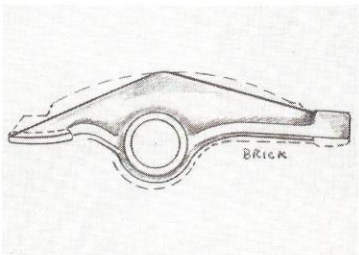
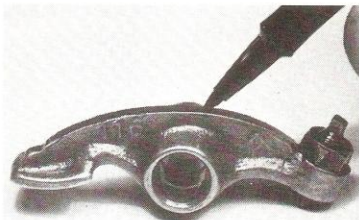
Loosen and remove the cam-retainer bolt and washer.



Slide the cam out of the tower leaving the rocker arms in place for the moment.



Push the rocker arm shafts through the housing and pull them out of the other side.



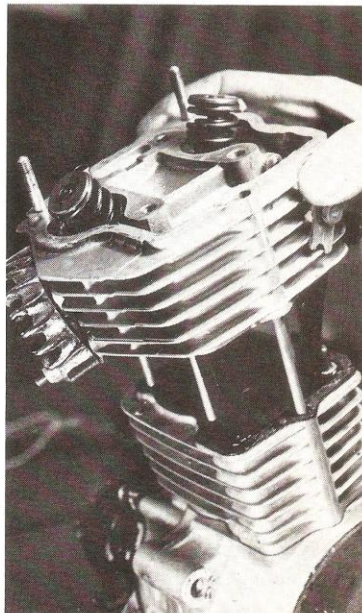
The stock rockers can be ground down to the configuration shown in the photo or you can order J & B's modified unit. Another possibility (illustration) is to grind the rocker into a triangulated shape in all directions. The final step would be to polish and shot-peen for strength.



Remove the bolt holding the chain tensioner retainer clip in place.



Pull the tensioning rod out using a pair of pliers.



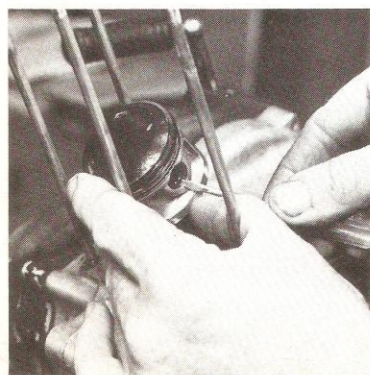
If the engine case is not to be split, care must be taken to keep the timing chain from dropping into the case. Slip a length of coat hanger wire through the chain and proceed as normal. Slip the cylinder head off.



HONDA



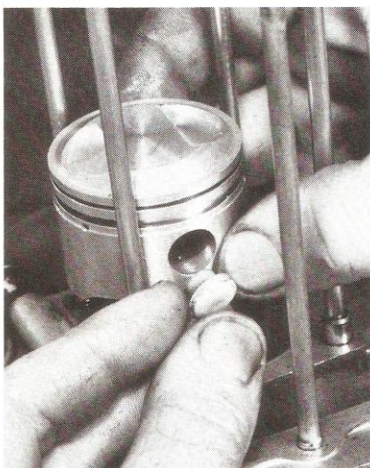
Slide the cylinder part way up and stuff a rag into the cases. This will prevent debris from entering and causing damage. Slide the cylinder completely off.



Use a small screwdriver to pry the wrist pin clip out. Remove the clip with needle-nosed pliers.



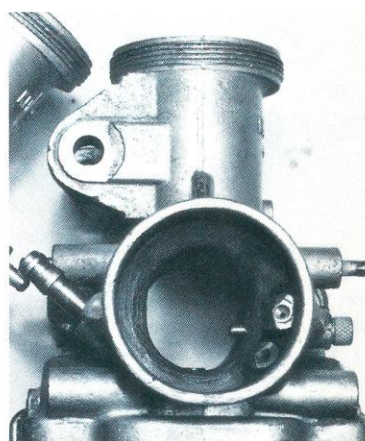
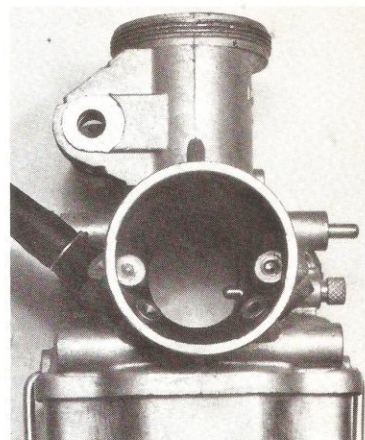
Push the wrist pin part way out with a screwdriver and pull out gently by hand. If the pin binds, use care in removing. It is possible to tap it out with a punch and hammer but be **very careful** or you'll bend the rod.



During assembly it is a good idea to replace the pin clip with a teflon button. The button is a positive way of keeping the pin in place to prevent scoring the cylinder walls. We're surprised more companies don't use these to prevent trouble with their racing bikes.



The difference in the racing piston (left) and the stock piston is obvious in this picture. The short piston weighs less, increases compression and has less friction over stock.



Bill has some clever ideas for modifying his bikes. The picture shows the difference between a stock carb and the modified carb. The object is to increase fuel flow by reducing turbulence in the carb throat (venturi). Start by removing the choke lever and all attendant pieces. Fill the choke area with epoxy and set aside to harden. Grind the epoxy smooth and flush with the surrounding surfaces. Reshape the throat to minimize sharp corners. All internal protrusions can be ground away except the air orifice on the right-hand side.



Next, fill the slide with epoxy and let harden. Grind away the epoxy to the shape shown in the photo leaving room for the cable and slide stop. This one step can do more for the engine than any other carb modification.



INDIAN

Dick Dixon of Allied Cycle in Newhall, California is probably responsible for more fast Indians, of all sizes, than any other single man in the free world. Recently we called on him for help in dyno testing an Indian Bambino and we also ran a story on a special bike made for Gabe Thomas.

The experience he has gained by building so many competition bikes can now be purchased in kit form to transform the stock Indian minicycles into screamers. The beauty of the kit is that it will work on all of the Indians using the same basic engine configuration from the SE-74 to the MX-76R. It's possible to use the kit on four-speed as well as six-speed models but some additional modifications will be needed to keep the latter from breaking.

Indian owners are lucky because the port-timed four-speed engines can be completely modified without splitting the cases. With other, rotary-valved, engines a complete tear-down is mandatory because the induction ports run through the cases.

The only work required on the Indian cases can be done using a high-speed hand grinder and a work bench. The only tedious part will be in cleaning the cases after the work is done.

Be sure to read and heed our section on general information before starting work on the engine. Because of space limitations and the complexity of our hop-up articles, we designed this general information to cover all the engines in our hop-up "special" feature.



The engines from several Indians are basically the same. Any modifications to one will apply to the others. The six-

speed model will require some work on the crank for reliability.



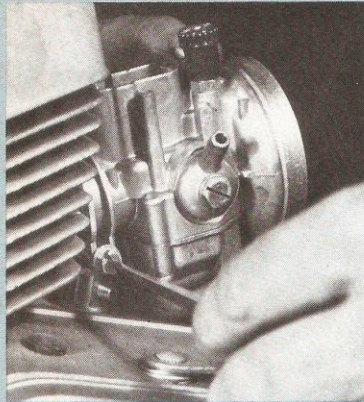
Remove all cables and fuel lines from the engine in preparation of removing it from the frame. Disconnect the chain at the master link. Now would be a good time to soak that chain in oil and clean it thoroughly.



Loosen the head bolts one-quarter turn each until the head can be removed. During assembly, be sure to tighten the bolts a quarter turn each to prevent warpage.



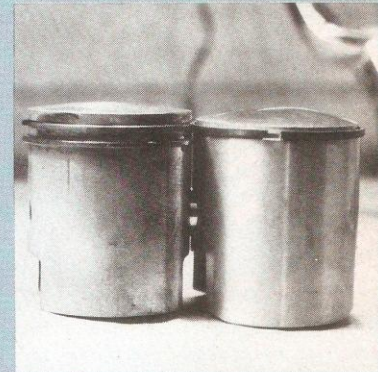
Remove the wrist pin gently to keep from bending the rod. It is possible to tap gently on the pin, but do support the rod.



Disconnect the carburetor at the manifold and remove from the cylinder. If the carb is to remain, instead of switching to a larger carb, then jetting is necessary.



Slide the cylinder part way up and slip a rag into the crankcase hole. This will prevent any debris from entering the cases and hurting the engine.



The hop-up piston has a higher dome and a longer skirt than stock. Notice the single Dykes ring instead of the normal compression and scraper rings.



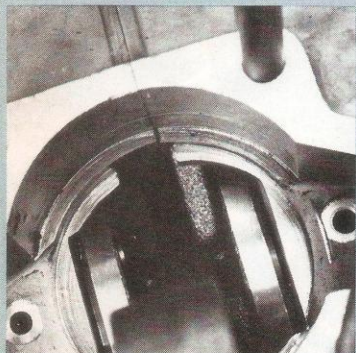
Disconnect the manifold spring and remove the exhaust pipe. An expansion chamber will eventually be needed for maximum power. If the bike already has a chamber, it may work but these are usually tuned for a specific application.



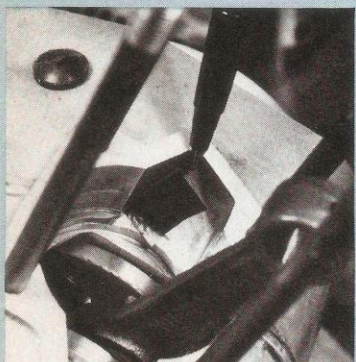
Remove the wrist pin clip with a pair of needle nose pliers. Replace it with a new one during assembly to keep the pin from working its way out and scoring the side of the cylinder wall.



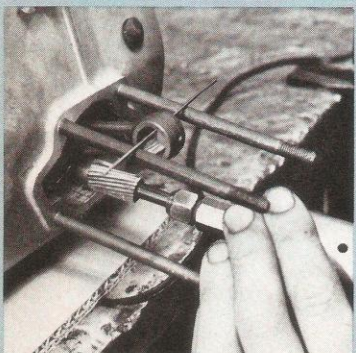
Mark the hop-up piston as shown and cut it to the same length, measured from the wrist pin hole, as the stock piston.



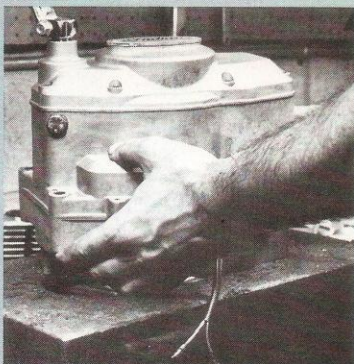
The lip on the engine cases is too shallow for the new piston and will interfere with its travel.



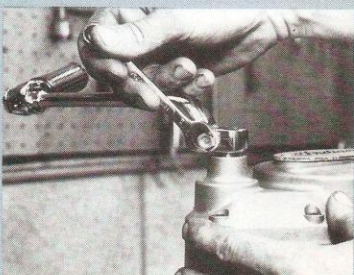
Cover the oil lubrication holes in the cases to keep debris out during the next phase of work. Don't forget to remove the tape before assembly.



Flip the engine on end and support the rod with welding rod or wire as shown. It's possible to remove the lip in the cases without tearing the engine down further. You'll need a high-speed grinder and flat-ended bit like the one shown.



A variation on the engine case is this one used at Allied. It has a cut-out specifically shaped for the Indian engines. Class! Lay the engine on its side in your own 'make-shift' box.



Remove the shift lever. We ran into some problems and had to persuade the shaft off with a hammer and pry bar. Don't use force in any one spot. The best method is to apply pressure on one side and tap on the other until it works loose.



A nice touch on new Indians is the use of Allen-head screws to hold the engine together. These are simpler than the standard screws which require an impact driver or chisel to remove. Remove all screws on the kickstarter side and the cover.



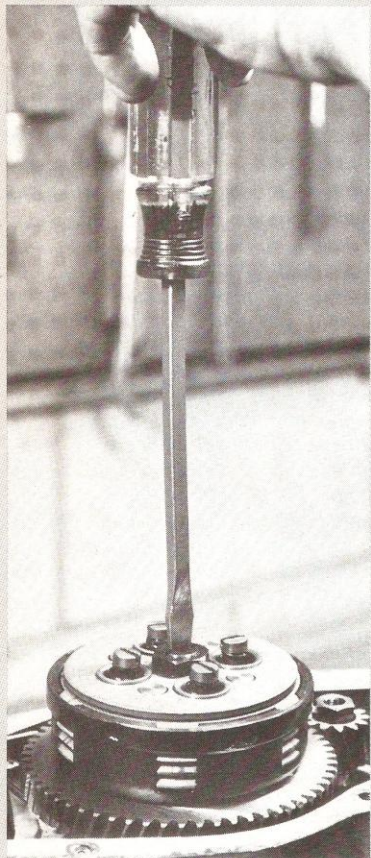
The cases should pull apart but will often hang up slightly. **Don't** pry the cases apart or the seal at the gasket will be ruined. Instead, lightly tap the end of the kick starter shaft with a plastic or hide mallet.



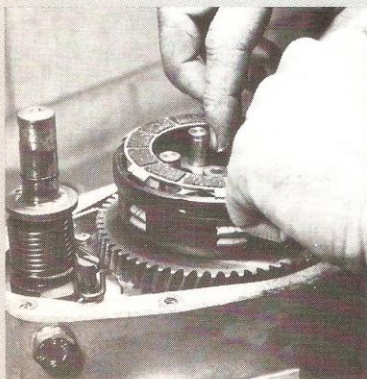
Remove the four screws holding the clutch plates together. During assembly, tighten these down equally to prevent clutch plate distortion.



Loosen the nut on the top of the clutch housing and remove the bolt.



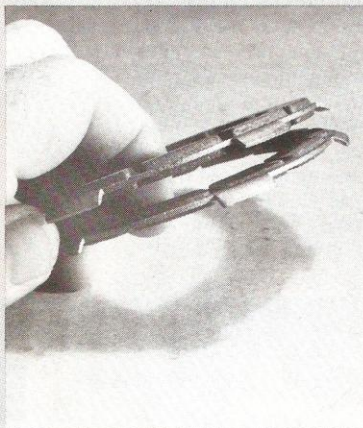
During assembly, this bolt is used to adjust the clutch. Tighten until the bolt bottoms out and loosen one-quarter turn. Secure it with the retaining nut while holding the bolt still.



Remove all of the clutch plates. Check each plate and metal ring for signs of excessive wear or warpage. Any warpage can cause the clutch to grab.



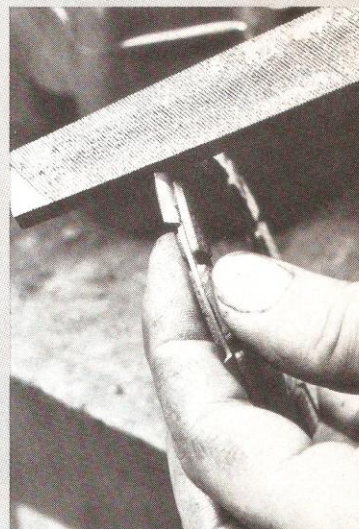
Part of the Allied kit is a heavy-duty clutch plate from a Minarelli engine. The plate is available from any Minarelli dealer but it is easier and cheaper to get it with the Allied kit.



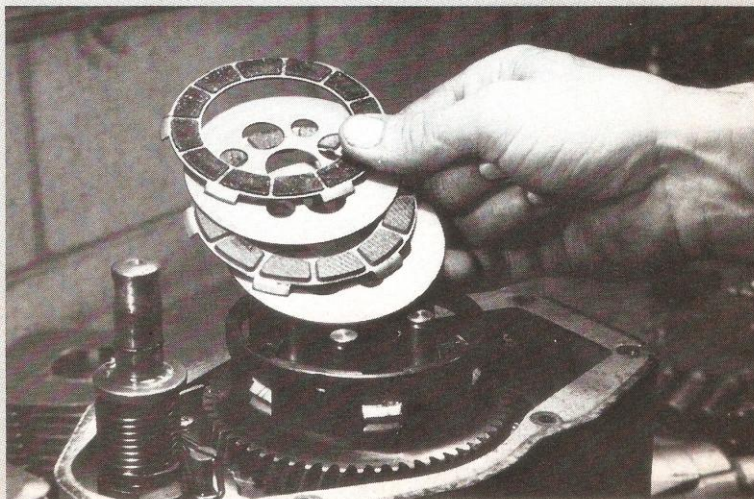
The difference between stock and modified (top plate) is the width of the friction pads. The plate is a cheap investment for the difference in performance and life of the clutch.



PART II of this hop-up series... Next Month



The tabs on the modified clutch plate must be trimmed slightly to fit in the Indian housing. Be sure the plate is free to move.



During assembly replace the clutch plates and steel plates in the order

shown. The last plate installed should be a friction plate.

MID-OHIO MOTO-X PARK, Lexington, Ohio, opened its gates August 25 & 26 to Americas future professional motocross riders—the Youth division of the AMA. Boys and girls, ages 7 to 15, were here to compete in the Mini-cycle National Motocross Championship Race. This was the third Y-AMA National held in the U.S. this year and forty-five beautiful trophies were awarded to the top five riders in each of the nine bike classes. The overall winners of each National race are also awarded points in accordance with their finishing position, the winner receiving the highest amount. The rider with the most points at the end of the year will be awarded the #1 number plate naming him top Y-AMA mini-cycle rider of 1973. Each win also accumulates points for the manufacturer of the winner's bike. At the end of the year the manufacturer with the most points will receive the coveted Manufacturer's Trophy (donated by MiniCycle).

As if these awards were not enough to dazzle the youngsters' minds, the New York NBC television crews were there filming both

MID-OHIO Y-AMA NATIONAL

by J. Zivkoff

days of action and interviewing the boys and girls. This video tape will be shown nationwide this fall, and again this winter and next spring, on a program called "GO."

The young riders were classified into three divisions—Novice, Junior and Expert—based on their riding ability and racing experience. Each division is then divided into bike classes according to engine size. The classes run at Mid-Ohio were 0-60; 61-80; and 81-100cc. The Novices and Juniors competed on Saturday and Experts on Sunday. Each bike class ran three ten minute motos on the 1 3/4-mile track.

In many cases, this was the first true motocross track these riders had ever raced on, and many of those who have ridden motocross said that this was the toughest, most challenging track they had ever tried. Quite a few of the nationally

known riders were unable to complete the race because of equipment breakage. The track is definitely a tough one. This was the first time mini-cycles had raced on it, and S-turns and ditches, etc., were added prior to the event to keep speeds down and insure safer racing. There are a total of 19 jumps on the course, including a 19-foot stairstep jump preceded by a sharp off-camber turn and followed by a steep 50 ft. hill going darn near straight up. Three roller-coaster type hills are located on a wide, sweeping turn and are a mean trick to maneuver. There are S-turns and whoop-de-dooos and washboard-type ditches, all designed to weed out the lesser riders. The whole course has been well planned, and turns and jumps are where you'd least expect them.

The start is from a 150-foot-long mechanical gate located in the track infield. This is a beautiful 4,000 pound device that insures an honest start. The track is dirt, and to the surprise of many, stayed that way—that is it didn't turn to hazardous dust. A new additive had been applied to the surface to keep down

(Continued on page 62)



Start of the Junior 61-80cc class at Mid-Ohio Moto Park at Lexington, Ohio, at one of the Y-AMA Nationals series.

Flyin' high, Gene McCay, winner of two Expert classes, comes off a tricky jump before right-hand jump.





Wheel-to-wheel jump by Greg Lyon (37) and Mike Paulli (111) in Expert 81-100cc class.

Greg Yohn (67) and Larry Lydie (117), Junior 61-80cc class, dice in a corner.



Real motocrossing as Mike Paulli (111) and Jody Stites (87) barrel up a soft-surface hill.

Wild jump by Jeff Hope (37) as he pours it on to catch Cliff Royster (87) in Expert racing.



FLORIDA Y-AMA NATIONAL

Series nears end

Story, Doug Sease

Photos, Larry Gwaltney

Motocross—a world in which the flashing smile of victory can turn to the forlorn frown of defeat overnight. Or just the opposite.

For five hot-shot riders, the Labor Day weekend at Jacksonville's Cycleback Park was an elevating experience. The five topped their Junior classes during Sunday's races. That night they were rewarded with the announcement that they would be eligible to ride as Experts in the big Labor Day races set for the next day. For Gary Hyde, the announcement was a prelude to a victory-filled day of riding that would net him the crown as the top Expert rider in the Castrol Y-AMA National Championship Mini-cycle Motocross.

A lot of luck led to Gary's triumph, and it began with the 61-80cc Junior class on Sunday. The winner of that class was Timmy Timmons of Tallahassee, Florida.

For nearly all of the ten-minute first moto, Timmy fought it out with Wade Browne of Jacksonville. When he finally managed to gain the front spot, Timmy held it without faltering. He lost his padded seat early in the race, but sitting on hard metal didn't faze the hotshoe as he blasted to a first place finish. The second race, after three restarts due to crashes and over-anxious riders, was an easy victory for Timmy, who had replaced the seat and enjoyed a somewhat softer ride.

In the third race apparent tragedy struck the young rider. Timmy and Scott Walkins, too anxious to be off and running, anticipated the snap of the rubber cord too soon and plowed forward. They suffered the embarrassment of being turned backward at the starting line, a penalty few can surmount in a ten-minute moto.

Wade Browne flashed out of the starting chute like a ball of fire, swept around the first curve and managed to hold the lead for half a lap. But Gary Hyde displayed his superb style and left Wade sniffing exhaust fumes on the back stretch.

Meanwhile, back with the pack, Timmy and Scott whirled their bikes around in a cloud of dust and struck out down the track, battling to see who would get stuck with last place in the lineup. Timmy made it clear that the last spot was not to his liking and began powering past the slower bikes, taking the jumps with reckless abandon and diving low into the curves, blasting out of them in great clouds of dust.

From the start it looked like a contest between Gary Hyde and Wade Browne for the final flag. No one suspected that a rider forced to start backwards could even have a chance at a front spot unless all of the leaders suffered mechanical troubles or fell.

Not so, according to the Timmy Timmon's theory of motocross. That theory states that if you've got the guts and the bike, anything can happen. A few short laps from the finish line Timmy pulled into second place and Gary Hyde found himself riding third. The two boys finished in that order, behind Wade Browne.

While Timmy was the hero of that class, Gary Hyde lucked out in a game of numbers. Guy Outland, AMA Youth Division director, had determined that one out of every five entrants in a Junior class could be elevated to Expert status after their races. That meant that the first four of the twenty entries in the 61-80cc class could race on Monday with the Experts. Gary Hyde was the fourth place rider.

Only one rider was advanced to Expert from the 81-100cc Junior class because of the small number of entries. The lucky and talented youngster was Mike Buckmaster of Pearland, Texas. Gary Hyde was in this class, also, but crashes in the first and third motos and mechanical problems in the second knocked him out of the competition.

Earlier in the day, the Hyde name had been heard several times. Gary's two brothers, Kim and Joe, were racing in the Novice classes, and both took home trophies for both classes they entered. Kim won fifth place in the 0-60cc class and

the 61-80cc class. Joe took third in the 61-80cc, a couple jumps ahead of Kim, and settled for the fifth spot in the big 81-100cc class. There must be some proud parents down in Lake City, Florida.

Winner of the 0-60cc Novice class was Craig Duerson, who finished second in all three motos. No one else could put together a consistent performance in all three races, so Craig won it on points.

The 61-80cc Novice class had a sizable number of entries, and everyone was a little surprised when they all made it through the first turn without tangling on the first moto. The smooth start wasn't repeated, however, and the start of the third moto saw a ten-bike pile-up in the first turn. The finish of the third moto reflected the final results, with Johnny Turner taking first, followed by Keith Watson.

The 81-100cc Novice class turned into a battle between two Mid-West boys, Mike Larson of St. Louis, who took first, and second place Mark Barr of Pinckneyville, Illinois (try to say that three times fast). The 0-60cc Junior class had only three entries, not enough to qualify for Y-AMA points, but race director Durham Parker allowed the boys to run their three motos, and awarded trophies. Mike Kelly (Davidsonville, Maryland) won all three heats and the first place trophy.

The two other Junior classes followed, and resulted in the newly-named Experts mentioned earlier. Timmy Timmons, Wade Browne, Darrell Hodge, Gary Hyde, and Mike Buckmaster made the big step into the Labor Day races.

Race directors had to scratch the 0-60cc Expert class. Only two racers were entered. The 61-80cc class looked like some heavy competition, including Rhett Radford and Dee Parker, both from Jacksonville, and both thoroughly familiar with the track. Unfortunately, Dee tangled with another rider halfway through the first moto, and the resultant crash broke Dee's leg.

Rhett had no such bad luck. He took home the 61-80cc trophy, but not without a struggle. First-time Expert Timmy Timmons led the first moto all the way until Rhett passed him with one lap to go. Jeff Hope rode the third bike.

The second and third motos looked like they would repeat the

Continued on page 58



Gary Hyde uses a berm for traction on his way to fourth place in the mid-size Junior class, which led to his competing and winning big as an Expert.



Florida sand created some dusty, slippery corners.

Novice riders on 61-80cc bikes dive into the "groove," which is almost big enough to swallow the machines.



Jeff Hope, who was second in the Expert, 61-80cc class, powers out of a deep corner.

With a cloud of dust and a throaty roar, the 61-80cc Experts leave the starting line.





● YAMAHA TY 80 ● TRIALS BIKE



It's not surprising to see new trials machines crop up lately because observed trials are rapidly catching on in America. Virtually every major company has a trials bike or two with more in the works. Suzuki has their RL, Yamaha now has two TY's and Honda has the popular TL series. We were even ready for Yamaha to introduce their trials machines in the guise of a 125 and 250 when Mick Andrews, world champion trials rider, was hired to do research and development on a "secret" new model. We got the 250 (whoopie) but the shock came when Yamaha showed up with a mini-

trials 80 at their press conference. What a mind-blower! We hadn't even heard any good rumors about the scaled down replica. Naturally we were eager to try the bike and even went to the trouble of slowing this issue up slightly to test it in a trials meet.

Jeff Ward is well-known for his racing abilities and we have used him in many tests for that reason. It came as a surprise to find out that he has also tried his hand at trials riding before and done quite well. This came as a relief since we weren't sure where to find a young, qualified trials rider. There can't be

too many around since there have never been any serious machines built before.

We decided to test the bike in the most reasonable manner possible since we have nothing else for comparison—we ran the TY 80 at a trials meet at Escape Country in California. The International Trials Association has regularly scheduled meets over a special wooded section of Escape Country. The area is rugged and atypical compared to the dry, dusty trails surrounding it. Watching the meet on this terrain is like taking a trip to Europe. Many of the riders are either Scotch or English and wear the traditional garb of the trials rider.

Jeff entered in the tougher Novice class because of his previous experience. It may have been possible to legally run him in the Beginner's class but Jeff felt he and the Yamaha were up to tougher sections.

While watching the other riders practice for a while we didn't exactly share Jeff's confidence. The sections were tough and the riders tougher. One of the competitors in his class was Gary Jones the number one Expert in motocross. Jeff went into this event handicapped by a smaller, unproven machine acquired a few days before. His practice was limited to a few hours and the machine had to be dead stock since it was to be returned to the factory later.

As he approached the first section the crowd was dead silent, a moment later our fears were allayed—he had cleaned the section! The crowd went nuts cheering as he rode by them. And so it went, section after section, until, 30 sections later, he finished in ninth place ahead of 25-30 other riders in the same class (by the way, Jones

had an incredible second place win). Once again our idea of testing a bike where it will be ridden, in competition, was proven right.

The Yamaha trials bike is destined to be a winner even if faced with stiff competition. Our test riders all enjoyed riding the machine over the course after the event. The most consistent area of praise was for the engine. Externally it appears to be the same basic engine as the GT 80, GT MX and RD 60. Internally there have been a few changes made. The GT 80 develops 4.0 foot-pounds of torque at 6,000 rpm while the TY 80 has 4.5 at 5,000 rpm. It may not sound like much but it does make a difference in a seat-of-the-pants feeling. The TY chugs up hills without any hesitation and can be brought to a stop and started again without pulling in the clutch. Even with a 160 pound rider on board the 80 can climb hills designed for 125's and 250's. Anyone accustomed to high-revving, peaky MX bikes will be shocked at the tractor-like pulling power of this little machine.

The side cases and finning are different giving the engine a distinctively new appearance. We didn't have time to tear the engine down, but we suspect that the squish area of the head is of a different design to yield higher compression and to alter the flow characteristics for more torque. The engine starts on the first kick, whether hot or cold, even though the foot pegs prevent a full swing on the starter lever. It's refreshing to ride after coddling high performance bikes. The engine will lug down and run all day at near idling speeds without fouling a plug. Throttle response is excellent.



The proper way to negotiate a vertical wall is to loft the front wheel and place it on the top of the bank. As the frame hits, the throttle should be shut off and re-applied slightly as the rear wheel hits. The momentum will carry the bike over the top with ease. This practice requires skill and a responsive machine. If the wheel hits at the wrong angle, or if power is left on, the bike will loop over backwards. We watched as Jeff practiced this for nearly a half-hour without failing. At times it's necessary to do this after negotiating a section at near idle speeds. A lesser bike might stumble and falter when the throttle is cracked on suddenly. The Yamaha pulls smoothly from any speed and the wheel can be powered up at will.

A special chain tensioner is also a great aid to complete power control over rough terrain. Normally, a chain will stretch even if properly cared for and checked frequently. It

isn't possible to stop mid-stream (literally and figuratively) and adjust a chain during a meet. The tensioner takes up slack and prevents jerking as the throttle is rolled on and off.

The frame is designed very well and appears to be quite strong, possibly too strong. It is of standard design with a single backbone and double downtubes cradling the engine. Considering the source of design it seems odd that the frame is this way. Almost all successful trials bikes have a single downtube which ends at the front of the cases and a flat, steel plate extending back to protect the engine from rocks. This allows at least another inch of ground clearance. The Yamaha has a fair amount of breathing room underneath with 8.7 inches but the more the merrier.

True trials aficionados will probably modify using the engine as part of the lower frame. Trials is not as demanding of the frame as MX so



YAMAHA TY80

Manufacturer: Yamaha International, 6600 Orange Thorpe Ave., Buena Park, CA 90620

ENGINE:

Engine type	2-stroke, Torque	Carb	N/A
	Induction Single 72cc (4.39 cu in)	Ignition	Flywheel Magneto
Bore & Stroke	1.575 x 1.563 in	Lubrication	Autolube
Displacement	72cc (4.39 cu in)	Fuel Capacity	0.7 U.S. gal.
Horsepower @ rpm	N/A	Fuel requirement	N/A
Compression ratio	7.0:1		

TRANSMISSION:

Transmission type	4-speed gearbox	Final Drive	N/A
Primary drive	N/A	Gear ratios	N/A
Clutch	N/A		

CHASSIS:

		Tires:	
Frame type	N/A	Front	2.50-16
Wheelbase	40.4 in.	Rear	3.00-14
Overall length	61.4 in.	Brakes	N/A
Overall width	27.2 in.	Ground clearance	8.7 in.
Suspension	N/A	Seat Height	N/A
Wheels	N/A	Handlebar height	N/A
		Dry weight	N/A

PRICE AS TESTED N/A

it's possible to get away with a weaker, lighter unit.

All controls are excellent for a young rider (some of our older staff members couldn't resist the urge to try riding the TY. It's easy to tell who they are—they walk around hunched over saying, "OOH! My back hurts!") The bars are placed for best control while standing. The foot pegs are placed well to the rear to keep rider weight off of the front wheel. This is the best position for putting body English to good use and for lofting the wheel at will.

The brakes are strong enough to lock the wheel if needed although most riders prefer not to. All levers are tucked in to prevent snagging on brush. The problem is that the rear brake is too well hidden. A toe-hold is about the best you can expect after hunting for the lever. The shift lever is a good distance away from the foot pegs even for a rider with seven-league boots. Again, this is standard practice but we don't like taking our foot off the peg to shift.

The suspension is better than any

(Continued on page 64)



Pat checks his watch against the official time before the start of the 134 mile enduro.



Clangers and click-clacks

Brian Cochran has a sneaky way of making a rough desert race sound like a garden stroll. Last year, he invited the publisher, Pat Mackie, to enter an "easy" enduro near Barstow. Mackie went, along with two test riders, then cursed Cochran when the race organizer caught everybody with a secret checkpoint in the middle of a bog-down sandwash.

You would think that Pat would have learned not to trust Brian. But when Cochran invited him to enter

another enduro in late August of this year, our dauntless publisher got sucked in once again.

Brian works for Dunecycle now, and he wanted to run three of the three-wheelers in an event sponsored by the California Enduro Riders Association. The Dunecycle-mounted team consisted of Brian, his son Keith, and our own brave boss, Pat Mackie. Cochran had the most powerful machine (naturally) with a 290cc Kohler, while the other two were driven by eight horse Briggs & Stratton engines.

The last enduro Pat entered was on a closed course, with two long loops, both beginning and ending at a single pit area. The CERA event was a different breed, a one-way trip. The course began at an isolated, abandoned house ten miles north of Baker, California, and ended in Lathrop Wells, Nevada. A quick 90 miles as the crow flies, but 134 miles by CERA's navigational checklist. The route paralleled Highway 127 (just outside Death Valley), with occasional foraging loops out into the deep, dark desert.

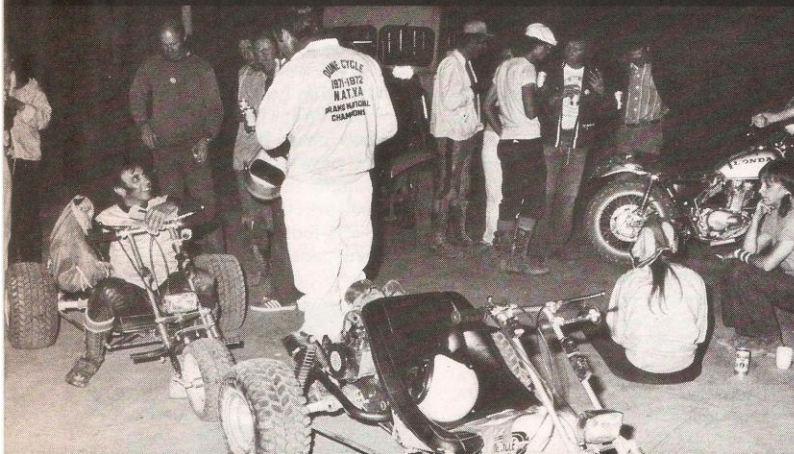
Did he say dark? Yes, friends, this event was run at night. Not only did the riders have to dodge rocks and rattlers and pucker bushes, they had to do it "by the light of the silvery

moon." All the vehicles had headlights, but they seem to lose some of their power in the incredible blackness of the desert wilderness. The desert-wise riders stood around, waiting for the start, talking about the "clangers" (anything that makes the suspension go "clang" and "click-clacks" (off camber drops that cause the front-end to go click-clack, from one steering stop to the other) they were faced with.

The glow of dusk had left the sky by the 8:00 p.m. starting time. A group of five or six riders was flagged off every minute. Projected arrival time at the various checkpoints along the route was determined by the exact time each rider left the starting line. Our trike trio (the only three-wheelers in the race) left on the sixth minute (8:06).

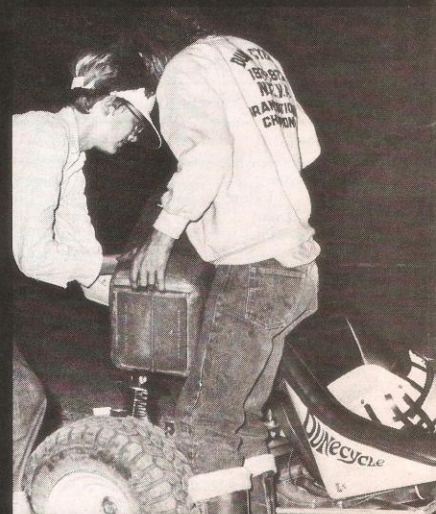
None of the riders expected to travel the full 134 miles on one tank of gas. Two gas checkpoints were established along the route, so pit trucks, manned by family or friends, could meet the riders and gas the bikes. Since the Dunecycles were carrying the smallest gas tanks in the event, their pit crew (led by this writer) arranged for two *extra* gas checks, to top off the tanks before the longest loops into the desert.

When the Dunecycle truck



Brian Cochran, in the Dunecycle sweatshirt, greets Pat Mackie at the finish line celebration.

Loyal pit crew met the riders at several junctions to keep the gas tanks filled.



NIGHT DESERT EN

reached the first *extra* gas check, a few other trucks were already there, thinking it was the first prearranged gas check. A course checker soon set them straight, and everybody took off, except one lady who stuck her pick-up truck axle-deep in a sand-pile just off the highway. Her husband arrived moments later (he was entered in the enduro) and almost decked the good samaritan who was trying to help her out. Must have thought the guy was trying to steal the truck.

Two of the Dunecycles arrived and were gassed up, then Brian pulled in a few minutes later. He had stopped to replace a broken torque converter belt. Fortunately, all three were carrying a few essential spare parts under the foam rubber seat pads. Good thing Brian didn't break another belt. He discovered later that the other spare he was carrying was the wrong size for his heavy-duty torque converter.

When all the bikes were serviced, the three left together, about ten minutes behind the pace.

The support truck went on to the regular first gas stop, which was located at Tecopa. The small, desert resort was asleep, but its central park was populated by a variety of anxious pit crews.

Bikes and riders arrived, filled their gas tanks, and departed. A few took off on the wrong road. A few more packed up and went home, though the race was less than half over. The Dunecycle crew waited patiently.

The wait stretched on: ten minutes...fifteen...a half hour past the expected arrival. Maybe the gas tanks weren't big enough for this long loop. The worried crew talked to a course checker, who offered to carry a can of gas back along the course.

Ten minutes after he left, the supporters heard the buzz of the small engines...from the wrong direction! The three-wheelers arrived along the highway into town, with plenty of gas and a look of frustration.

"We got lost! After we missed the course markers, we tried to follow the other guys' lights, then they disappeared, and we ended up in a gully full of two-foot-wide boulders." It appeared that radar would have been more effective than hand-lights in picking out the four-inch, widely spaced markers.

Mackie displayed his bent forks, the result of an argument with a big rock. When the adventurers decided they weren't going to find the

course, they pulled a Boy Scout compass (Mackie gave a five-minute lecture on steering by the stars), found their way back to the highway, and drove on to Tecopa.

But they weren't giving up! As soon as the tanks were filled and the chains oiled, the Dunecycles went back out on the course. The support truck made a mad dash up the highway to the second *extra* gas check, near the town of Shoshone.

When the three-wheelers arrived, they almost overshot the meeting place. The truck driver honked like crazy to attract their attention. When the tanks were topped, the trio set off on the second, long desert loop.

The second *regular* gas stop was at the end of a lonely dirt road, seven miles east of Death Valley Junction. By the time the Dunecycle truck arrived, the last of the motorcycle crews had already gone on to the finish area.

The first three-wheeler to arrive was piloted by Brian Cochran. He had decided to pour it on and finish as quickly as possible. Brian was on his way again before the other two arrived.

Keith and Pat showed up within minutes of each other, with Pat bringing up the rear. He didn't seem

(Continued on page 60)



The Dunecycle-mounted team of Cochran, Mackie and Cochran waits on the starting line for a signal from the starter.

The first starters wait on the line, equipped with multiple headlights and helmet-mounted miner's lamps.

DURO



Keith Cochran, third member of the three-wheeler team, waits by his machine in the starting area.

MISCELLANY

OIL JOINS ROTARY CLUB

Klotz Special Formula Products, Ft. Wayne, Indiana has announced a new snowmobile oil with a 40:1 recommended mixing ratio. Called Klotz 40:1 Techniplate 2 Cycle and Rotary Snowmobile Oil, this new product meets and exceeds all manufacturers requirements for 40:1 mixing ratios. It also offers all of the advantages of the regular Klotz oils in that it stops plug fouling, and is totally odor free and smokeless. The new Klotz 40:1 also contains the exclusive Techniplate ingredient for maximum film strength to give extra protection against wear to vital engine parts. Klotz recommends this new oil for use with both conventional piston engines and the rotary Wankel-type engines. It comes packaged in handy 16 oz., re-sealable containers and has a suggested list price of \$1.50. It is now available for sale at Klotz dealers across the country. For further information, write Klotz SFP, Dept. MC, P. O. Box 1343, Ft. Wayne, Indiana 46801.

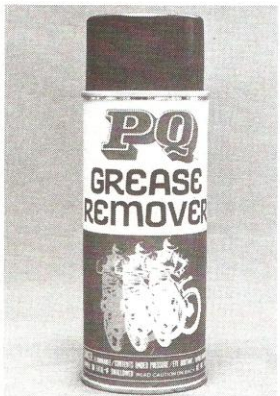


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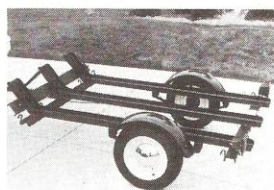


virtually any type of mechanical work. Let PQ do the dirty work, so you won't have to.

PQ Grease Remover is available at motorcycle shops everywhere. For information on the full line of PQ Products, write: PQ Products, Dept. MC, 106 East Sherman, Athena, Oregon 97813.

TOTE 'DEM BIKES

If you've been wondering what to do about the bike and the buddy you had to leave at home here's the answer. This new motorcycle trailer by Ladybug Trailers costs about as much as most two-bike



trailers yet it's stronger and bigger with an extended loading ramp for easier loading and unloading.

The Ladybug 3-bike motorcycle trailer rides on 400 x 12 four-ply tires and a Hadco 1000 lb. capacity drop forged axle with cast hubs and automotive type springs. The trailer features a light weight hitch, 12 tie down hooks and a 1 1/8" coupler which is easily adaptable to all stock hitches. The Ladybug three-bike motorcycle trailer can easily be converted to a utility or camping trailer by simply bolting on the optional fiberglass body which comes complete with a hinged top, chrome hardware and has a high gloss impregnated gelcoat finish available in various colors. For more information on the Ladybug three-bike motorcycle trailer write: Ladybug Trailer, Inc., Dept. MC, 32981 Calle Perfecto, San Juan Capistrano, or call (714) 493-0711.

PAPER LUBE

After years of research, testing and development, K&N Engineering has just

released their new Air Filter Oil. It is formulated specifically for the K&N cloth type air filter elements and is not to be used on foam or other type elements. When applied, the oil sets up a protective curtain which catches and holds even minute dust and dirt particles on the outside of the filter element, while allowing the air to pass freely through. The result is maximum filtering action and optimum performance. K&N Air Filter Oil will not clog or drip off elements when applied as directed. It



has been fully tested under laboratory and competition conditions.

This special formula comes in a 5 oz. aerosol can for easy application. One can treats 4 large or about 12 small filters. Retail for \$1.49 at all K&N Dealers or order direct from: K&N Engineering, P. O. Box 1329, Dept. MC, Riverside, CA. 92501.

The new products section is intended as a service to our advertisers and readers for announcing items of interest. The copy and claims contained here-in were obtained from each manufacturer and in no way represent an endorsement by MiniCycle Magazine. Time and space permitting, we will test any new products submitted to our Product Evaluation department. Manufacturers are invited to send samples to this section each month.

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COMET HAS IT ALL.



Good grief! Honda has 38 different models for '74 and 18 of them are in our category of 125cc's or less. The press introduction was held in conjunction with Honda's wildly successful Expo '74 at Orange County International Raceway in California. The Expo was a circus of events geared for motorcyclists with mini-bike, trials, trails and beginner's riding areas. Included in the festivities were MX races with Honda's finest riders competing against all comers owning Elsinores. Nearly four times as many people showed up for the one day event compared to the 6,000 expected. The crowds over-taxed the system but everything went smoothly regardless. The beginner's program wasn't as good as it could have been but this was a first event and it will improve with time.

The hit of the show for our people was the introduction of the MR-50 two-stroke, 50cc, mini-Elsinore

HONDA NEW MODELS

racing bike. The machine is nearly a carbon copy of the larger Elsie in looks and appearance.

The TL-125 is the same as last year's model with nothing more than graphic changes. Other machines with graphic changes only include the Z-50, QA-50, CT-70, ATC-70, ATC-90, CT-90, XR-75, CR-125, XL-100, SL-125, CB-125, and CL-125.

New models are few in the line. A latecomer for '73 was the MT-125 so it could be called new for '74. The MT is basically an Elsinore with lights. The appearance is nearly identical except fewer of the exotic lightweight components were used to keep the price down. The MT is a

good compromise for the rider who needs a bike for transportation and week-end fun.

The XL-70 and XL-100 look like upgrades on the SL-70 and SL-100. It will be interesting to find out if the bikes have been modified for better off-road performance. When the XR-75 was introduced it eclipsed the SL immediately with style and performance.

Biggest news of the day was the introduction of the CB-550 four cylinder street bike. It is one of the first production bikes to feature emissions control in anticipation of forthcoming new clean-air laws for bikes.

We can't help but agree with Honda and the public on changing little but the color schemes for most of their machines. It's not a bad idea to leave well enough alone when you've got a winner (or winners). If Honda can't satisfy your needs then you're probably too fickle anyway.



MR-50

ENGINE

Type	Two-stroke, single-cylinder
Displacement	49cc
Bore & Stroke	40.0mm x 39.7mm
Compression Ratio	7.5:1
Starting System	Kick Starter
Ignition System	Flywheel magneto
Transmission	Three-speed, constant mesh

DIMENSIONS

Overall Length	57.3 in.
Overall Width	26.0 in.
Wheelbase	38.6 in.

FUEL TANK

Capacity	0.65 gal.
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TIRES

Front	2.25-14
Rear	2.75-12



CT-90 K5

ENGINE

Type	Four-stroke, single-cylinder OHC
Displacement	89.5cc
Bore & Stroke	50.0mm x 45.6mm
Compression Ratio	8.2:1
Starting system	Kick starter
Ignition system	Battery and ignition coil
Transmission	Four-speed, constant mesh, dual range

DIMENSIONS

Overall length	73.6 in.
Overall width	27.4 in.
Wheelbase	48.0 in.

FUEL TANK

Capacity	1.4 gal.
----------	----------

TIRES

Front	2.75x17
Rear	2.75-17



Z-50A K5

ENGINE

Type	Four-stroke, single-cylinder OHC
Displacement	49cc
Bore & Stroke	39.0mm x 41.4mm
Compression Ratio	8.8:1
Starting System	Kick starter
Ignition System	Flywheel magneto
Transmission	Three-speed, constant mesh

DIMENSIONS

Overall length	51.2 in.
Overall width	24.0 in.
Wheelbase	35.2 in.

FUEL TANK

Capacity	1.0 gal.
----------	----------

TIRES

Front	3.50-8
Rear	3.50-8

The Yamaha line-up of new models could have been highlighted by a rotary-engined street bike of a 700cc, four cylinder two-stroke. Instead, the machines that took the limelight were two completely new trials bikes and several up-dated MX-ers.

We pulled a few strings and managed a preview test of the 100MX in our last issue and the trials 80 in this issue. Yamaha could have been satisfied with the line as it was last year but that is not their style. Racing in '73 was practically a Yamaha parade with the two-strokes dominating road-racing and MX.

Apparently the factory has decided to shun the common practice of changing graphics only for many of their machines at new model release time. Smallest of the new machines is the RD 60 street bike. The only difference we can detect is a new paint scheme. Frankly we liked the candy blue with white stripes on the '73. The new paint doesn't accent the road-racer appearance created by the "bread-loaf" tank and "duck-tail" seat. The engine is still the same peppy unit with five-speed gear-box and 55cc's of displacement. Horsepower ratings have been dropped this year from most bike literature but we're sure that it remains unchanged.

Tune-up and conversion artists are buyin' RD's and pulling the

YAMAHA NEW MODELS

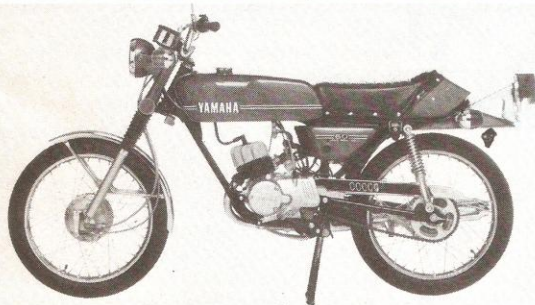
engines out to put in GT MX frames. This gives them a 60cc engine with five-speed for an unbeatable combination in the 60cc class running against old Mini-Enduros.

The GT 80 Mini-Enduro and GT MX have changed little with graphics and different tires as the only changes. We had hoped for some minor modifications to improve the suspension and handling. The Mini-Enduro is a great machine but it comes off second best when directly compared to the Honda XR-75. The purpose of our project bike is to bring out the latent potential of the bike and make it competitive. Fortunately, for our readers, any modifications made to our '73 project bike will apply to the '74.

The MX bikes are beyond belief.

The minute we saw the 100 we knew that it was meant to be ridden hard. Nothing about the bike is the same as last year's model except the name. The factory has finally recognized this class and given the bike the same treatment as larger models with Thermo-Flow shock cooling, in-and-out expansion chamber, magneto ignition, five-speed gearbox and sleek styling. The overall appearance is shared with all MX versions including the 80, 125, 250 and 360. Each model carries the familiar team colors of black striping on bright yellow. Even an expert bike-watcher would have difficulty picking out the different machines if it weren't for the displacement label on the tank.

The Enduro models represent a bit of nostalgia with the revival of the old DT designation familiar to dirt riders around the world since '68. The DT 100 and DT 125 are completely redesigned but you wouldn't know it without drawing a direct comparison with the '73's. The appearance is definitely "Yamaha family." We have the two bikes coming to our offices for testing as this issue goes to press so we can go into detail later. The general feeling we have is that the enduro bikes are geared more to dirt riding now than ever before. The ground clearance is ample, brakes are minimal and suspension is substantial with plenty of travel.



RD60

ENGINE

Type	2-stroke, Torque Induction, Single
Displacement	55cc (3.36 cu.in)
Bore & Stroke	1.654x1.563 in
Compression ratio	6.9:1
Max Torque	3.4 ft.-lb. @ 6,500 rpm
Lubrication system	Autolube
Starting system	Primary Kick starter
Transmission	5-speed gearbox

DIMENSIONS

Overall length	71.9 in.
Overall width	24.8 in.
Overall height	38.0 in.
Wheelbase	46.7 in.
Min. ground clearance	5.9 in.

FUEL TANK

Capacity	2.1 U.S. gal.
----------	---------------

OIL TANK

Capacity	1.1 U.S. qts.
----------	---------------

TIRES

Front	2.50-17
Rear	2.50-17



GT80

ENGINE

Type	2-stroke Torque Induction, Single
Displacement	72cc (4.39 cu in)
Bore & Stroke	1.850x1.654 in
Compression Ratio	6.8:1
Max. Torque	4.0 ft.-lb. @ 6000 rpm
Lubrication System	Autolube
Starting System	Primary Kick Starter
Transmission	4-speed gearbox
Ignition System	Flywheel Magneto

DIMENSIONS

Overall Length	63.4 in.
Overall Width	27.2 in.
Overall Height	36.6 in.
Wheelbase	41.1 in.
Min. Ground Clearance	7.7 in.

FUEL TANK

Capacity	1.3 U.S. gal.
----------	---------------

OIL TANK

Capacity	0.7 U.S. qts.
----------	---------------

TIRES

Front	2.50-15
Rear	2.75-14

puts out five horsepower and only time will tell if it will be a winner or not. Quick-change artists may want to switch engines with the TS-50 Gaucho and run the bike in the 60cc class against Yamaha Mini-Enduros. The little Gaucho engine puts out a very respectable 4.8 horsepower at 8,000 rpm.

Suzuki is very clever, rather than make several different bikes which look alike they make them all out of the same basic machine. This can be

a big advantage to the racer who needs a stable of racing bikes for different classes. It's possible to buy one bike and modify it only slightly to run in a different class altogether. A good example of this is the TM-100L. The new rider can buy this bike and race it as-is in the 100 class. Later he can simply buy the TM-125L cylinder, head and carb. Believe-it-or-not these are the only differences between the two machines. The conversion could be

done at the track in a matter of minutes between motos.

Filling out the line are six other machines with little more than graphic changes. These include the TC-100, TS-100, TC-125, TS-125, RV-90, and the RV-125. We'll have tests on some of these fine bikes as soon as they are available. We're told that a few of them won't even be available to the press until after the first of the year. We can't wait, but we'll bet the opposition can!



TS-50L Gaucho

ENGINE

Type Two stroke, air-cooled,
single cylinder,
rotary valve
Displacement 49cc
Bore & stroke 1.61x1.49in.
Compression ratio 6.7:1
Torque 3.26 ft.-lbs. @
7,000 rpm
Ignition system Flywheel
magneto
Transmission 5-speed,
constant-mesh

DIMENSIONS

Length 72.0 in.
Width 32.7 in.
Height 39.2 in.
Wheelbase 46.7 in.
Ground clearance 7.5 in.
Weight 156 lbs.

FUEL TANK

Capacity 1.3 U.S. gals.

OIL TANK

Capacity 2.5 U.S. pt.

TIRES

Front 2.50-17
Rear 2.50-17



TM-75L Mini-Cross

ENGINE

Type Two stroke, air-cooled,
single cylinder,
rotary valve
Displacement 72cc
Bore & stroke 1.85 x 1.65 in.
Compression ratio 6.8:1
Torque 4.19 ft.-lbs. @
6000 rpm
Ignition system Flywheel
magneto
Transmission 4-speed,
constant-mesh
Starter system Primary Kick

DIMENSIONS

Length 69.3 in.
Width 30.7 in.
Height 38.4 in.
Wheelbase 46.9 in.
Ground clearance 6.3 in.
Weight 165 lbs.

FUEL TANK

Capacity 1.2 US gal.

OIL TANK

Capacity 2.1 US pt.

TIRES

Front 2.50-16
Rear 3.00-14



TM-100L Contender

ENGINE

Type Two-stroke, air-cooled,
single cylinder
Displacement 98cc
Bore & stroke 1.97x1.97 in.
Compression ratio 7.1:1
Carburetor VM22SC Mikuni
Torque 7.69 ft.-lbs. @
8,000 rpm
Ignition system PEI (Pointless
Electronic Ignition)
Transmission 5-speed,
constant-mesh
Clutch Multi-plate, wet disc

Starter system Primary Kick

DIMENSIONS

Length 79.1 in.
Width 36.8 in.
Height 43.1 in.
Wheelbase 52.6 in.
Ground clearance 7.9 in.
Weight 187 lbs.

Suspension, front Telescopic,
oil-dampened, 6.5 in. travel
Suspension, rear Swing arm,
oil-dampened, 5-way adjustable

TIRES

Front 3.00-21
Rear 3.50-18



RV-90L

ENGINE

Type Two-stroke, air-cooled
single cylinder, reed valve
Displacement 88 cc
Bore & stroke 1.97 x 1.77 in.
Compression ratio 6.2:1
Torque 7.09 ft.-lbs. @
4,000 rpm
Ignition system Flywheel
magneto
Transmission 4-speed,
constant-mesh
Starter system Primary Kick

DIMENSIONS

Length 71.1 in.
Width 32.3 in.
Height 39.0 in.
Wheelbase 46.5 in.
Ground clearance 7.7 in.
Weight 185 lbs.

FUEL TANK

Capacity 1.1 US gal.

OIL TANK

1.7 US pt.

TIRES

Front 6.7-10
Rear 6.7-10



TC-100L

ENGINE

Type Two-stroke, air-cooled,
single cylinder,
rotary valve
Displacement 97 cc
Bore x stroke 1.93 x 2.04 in.
Compression ratio 6.5:1
Torque 8.43 ft.-lbs. @
6,000 rpm
Horsepower 10.8/7,000 rpm
S.A.E. net

DIMENSIONS

Length 78.7 in.
Width 33.5 in.
Height 41.7 in.
Wheelbase 49.0 in.
Ground clearance 7.7 in.
Weight 205 lbs.
FUEL TANK
Capacity 1.7 US gal.
OIL TANK
Capacity 2.3 US pt.
TIRES
Front 2.75-19
Rear 3.00-18



TS-100L

ENGINE

Type Two-stroke, air-cooled,
single cylinder,
rotary valve
Displacement 97cc
Bore x stroke 1.93 x 2.04 in.
Compression ratio 6.5:1
Torque 8.43 ft.-lbs. \$
6,000 rpm
Horsepower 10.8/7,000 rpm
S.A.E. net
Ignition system Flywheel
magneto

Transmission 5-speed
constant-mesh
Starter system Primary Kick

DIMENSIONS

Length 78.7 in.
Width 33.5 in.
Height 41.7 in.
Wheelbase 49.0 in.
Ground clearance 7.7 in.
Weight 202 lbs.
OIL TANK
Capacity 2.3 US pt.
TIRES
Front 2.75-19
Rear 3.00-18

What Kawasaki lacks in sheer numbers is made up in quality for '74. Few people realize it, but Kawasaki is one of the largest airplane manufacturers in the world. They also build ships, bridges, buildings and even a robot for manufacturing purposes. To say that the bikes are built with air craft quality sounds like a cheap ad-hype but it is true. The experience gained from other forms of manufacture show in this product as pure quality of construction. The welds are smooth and clean. Castings fit well and have a finished look about them. The paint is even flawless on most models.

We were fortunate enough to have tested the new minicycle (MC-1) a few months ago and it is virtually unchanged at this time since it is so new to the field. An offshoot of this model is the MX version known as the MC-1M. The MX (as we'll call it) is nothing more than an MC-1

KAWASAKI NEW MODELS

with the lights removed. If the specs can be believed, this diet saved the MX 15 pounds! The MX has the same type of exhaust we've seen lately on other (i.e. Honda, Yamaha) two-strokes with an apparently restrictive pipe. We know restriction increases torque but there must be another reason for the design. Candy Lime paint highlights the bike.

Returning this year is one of the few remaining (and probably the best) mini-bikes on the market. Although the little machine looks typical of the breed it isn't plagued by shoddy construction and unsafe handling.

The Enduro line of bikes consists of two 90's, two 100's, and two 125's. The G-3 is a full street bike with 90cc engine, universal tires and large wheels. The G-4 is unusual because it features a ten-speed transmission for a choice of five gears for street or five for trail. This feature alone makes it one of the neatest cow-trailers around. A nice feature for campers is the luggage rack large enough to carry a backpack plus some extras for extended woods trips.

The biggest news for this year should be the introduction of Kawasaki's trials bike. They were as silent as Watergate defendants when we queried them about the machine but we have seen pictures of the bike. It looks fantastic! Code name at this time is "Edinburgh." We like the name and hope it sticks. It certainly sounds better than "New York Steak" (code name for the Z-1).



G-4

ENGINE

Type 2-cycle, single cylinder,
rotary disc valve
Displacement 99cc
Bore & Stroke 49.5 x 51.8mm
Ignition System Magneto
Transmission 5-speed
high-low range
Gear Ratio
1st 2.92
2nd 1.77
3rd 1.30
4th 1.09
5th 0.96

Rinal Reduction Ratio 2.80 (42/15)
Overall Drive Ratio 9.46

DIMENSIONS

Length 76.1 in.
Width 32.7 in.
Height 42.7 in.
Wheelbase 49.5 in.
Ground clearance 8.8 in.
Weight 209 lbs.
FUEL TANK
Capacity 2.2 gallons
TIRE
Type Knobby



G-5

ENGINE

Type	2-cycle, single cylinder, rotary disc valve
Displacement	.99cc
Bore & Stroke	49.5 x 51.8mm
Ignition System	Magneto
Transmission	5-speed
Gear Ratios	
1st	2.92
2nd	1.77
3rd	1.30
4th	1.09
5th	0.96

Final Reduction Ratio	2.80 (42/15)
Overall Drive Ratio	9.46

DIMENSIONS

Length	78 in.
Width	33.8 in.
Height	42.1 in.
Wheelbase	49.6 in.
Ground clearance	9.5 in.
Weight	195 lbs.
Front Suspension	Telescopie fork
Rear Suspension	Adjustable shocks

FUEL TANK

Capacity	2.1 gallons
----------	-------------

TIRES

Type	Trials Univ.
------	--------------



G-3

ENGINE

Type	2-cycle, single cylinder, rotary disc valve
Displacement	.89cc
Bore & Stroke	47 x 51.8mm
Ignition System	Magneto
Compression Ratio	N.A.
Maximum Torque	N.A.
Lubrication System	N.A.
Starter System	N.A.
Transmission	5-speed
Final Reduction Ratio	N.A.
Overall Drive Ratio	N.A.

DIMENSIONS

Length	71.6 in.
Width	33.1 in.
Height	40.7 in.
Wheelbase	45.3 in.
Ground clearance	6 in.
Weight	178 lbs.

TIRES

Type	Universal
------	-----------



MC-1

ENGINE

Type	2-cycle, single cylinder, rotary disc valve
Displacement	.89cc
Bore & Stroke	47 x 51.8mm
Ignition System	Magneto
Compression Ratio	N.A.
Max. Torque	N.A.
Lubrication system	N.A.
Starting System	N.A.
Transmission	5-speed
Gear Ratio	N.A.
Final Reduction Ratio	N.A.
Overall Drive Ratio	N.A.

DIMENSIONS

Length	68.1 in.
Width	30.1 in.
Height	37.2 in.
Wheelbase	43.3 in.
Ground clearance	6.3 in.
Weight	165 lbs.
Front suspension	Telescopie fork
Rear Suspension	Swing arm

FUEL TANK

Capacity	1.6 gallons
----------	-------------



MC-1M

ENGINE

Type	2-cycle, single-cylinder, rotary disc valve
Displacement	.89cc
Bore & Stroke	47 x 51.8mm
Ignition System	Magneto
Transmission	5-speed
Gear Ratio:	
1st	2.92
2nd	1.77
3rd	1.30
4th	1.09
5th	0.96
Final Reduction Ratio	2.57 (36/14)

Overall Drive Ratio	8.68
---------------------	------

DIMENSIONS

Length	65.6 in.
Width	30.1 in.
Height	37.2 in.
Wheelbase	43.3 in.
Ground clearance	6.3 in.
Weight	150 lbs.
Rake/trail	63°/2.9 in.
Front Suspension	Telescopie fork
Rear Suspension	Swing arm

FUEL TANK

Capacity	1.6 gallons
----------	-------------



MT-1

ENGINE

Type	2-cycle, single-cylinder piston port
Displacement	.73cc
Bore & Stroke	46 x 44mm
Ignition System	Magneto
Compression ratio	N.A.
Maximum Torque	N.A.
Lubrication System	N.A.
Starting System	N.A.
Transmission	3-speed automatic clutch

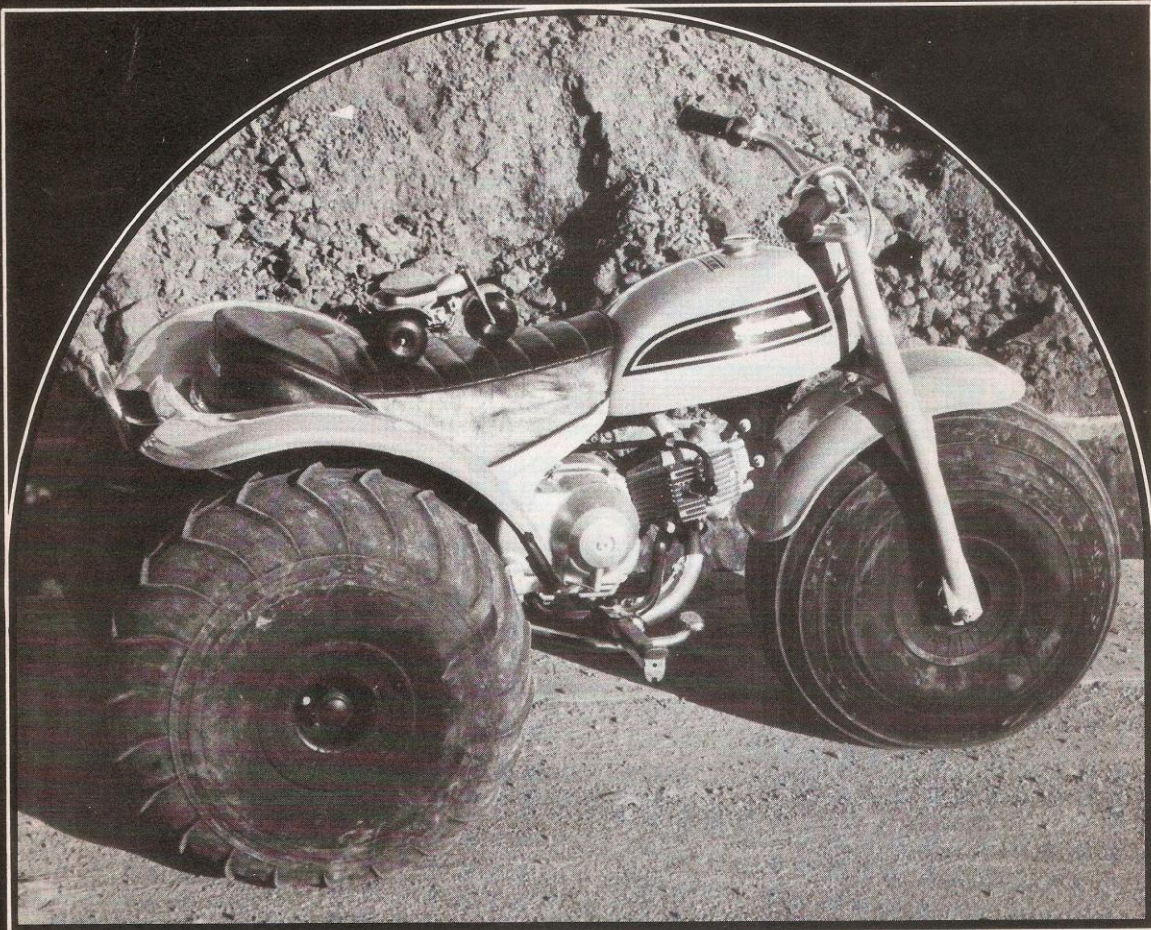
Gear ratio:

1st	2.91
2nd	1.53
3rd	1.05

Final Reduction Ratio	2.54 (33/13)
Overall Drive Ratio	8.92

DIMENSIONS

Length	53 in.
Width	24 in.
Height	34 in.
Wheelbase	38 in.
Ground clearance	6 in.
Rake/trail	63°/2.5 in.
Front Suspension	Telescopie fork
Rear Suspension	Swing Arm



ATC-90 TESTORS

RECENTLY we had tested what we claimed to be the world's smallest three-wheeler, the Honda ATC 70. Well, we were wrong it seems. This month we'd like to do an impression of an even smaller vehicle and a pseudo-Honda at that! Testors, a well-known model airplane and paint company, builds a model of the Honda ATC 90 in perfect 1/8 scale. The only outof-scale item is the .049 cubic inch two-

stroke engine.

When we first saw the model we could hardly believe it. If seen as a photo without comparison to something else, you'd swear that the machine was life-size. The detail is complete down to a separate kill-switch mounted on the handlebars. The tires are soft and compress slightly when traversing rough terrain. As on the full-size trike, these tires are the only means of

suspension. Steering can be preset by turning the forks until they lock into detents in the crown. We found the minimum turning radius too severe for the diminutive machine. The sharp turns cause it to flop over on its back whenever the slightest bump is encountered (surprisingly, this is true of the real ATC's).

Rough terrain has little effect on the trike's progress. The speed remains constant and traction is



Manufacturer: The Testor Corporation, 11500 Tennessee Ave., L. A., Ca. 90064

ENGINE:

Engine type	Two-stroke single	Carb	Naturally aspirated
Bore	.420 in.		reed valve
Stroke	.361 in.	Ignition	Diesel
Displacement	.049 ci	Lubrication	Pre-mix
Horsepower @ rpm	.06 @ 20,000	Fuel capacity	5 cc
Compression ratio	8:1	Fuel requirement	Testors/McCoy Half-A

TRANSMISSION:

Clutch type	n/a	Final drive	Worm gear	Transmission type	Direct
Gear ratios			40:1	Primary drive	n/a

CHASSIS:

Frame type	Monocoque plastic	Wheels	n/a
Wheelbase	6 in.	Tires	
Tread width	4.125 in.	Front	3 x 1 1/2 in. radial rib
Overall length	6 in.	Rear	3 x 1 1/2 in. cleat
Overall length	60 in.	Ground clearance	3/4 in.
Suspension		Seat Height	3-5/8 in.
Front	n/a	Handlebar height	5 in.
Rear	n/a	Dry weight	10-1/2 oz. dry

PRICE AS TESTED \$11.98 POE. L.A., CA

good. Although the gearing is very low, top-speed is still too high for comfort. It's difficult to follow the progress and bumps cause it to tip over too frequently. After some experimentation we found that straight-line races over mild terrain are the most fun. It would be great if a good radio outfit could be kitted to provide the "rider" with proportional steering and speed control. We've seen conversions done on the

Testors dune-buggy and it was a gas. If any of our readers have done this already, we'd like to find out how to duplicate it for an article.

We were particularly surprised at the extreme climbing ability. At one point, the machine got out of hand and tried to climb up the side of our parts box. It would have made it too, except that it tipped over backwards like a dying turtle. Part of this ability can be attributed to the 40:1

gear ratio. The other part is due to the engine's uncanny ability to rev to 20,000 rpm.

At first our test engine was a bit difficult to start, then we read the instructions. Adjust the carb to 2 1/2 turns out from its seat and prime the carb with a drop of fuel. Allow the glow plug to heat up for a minute and pull the starting cord briskly. The engine should come to life almost immediately. Check the glow plug after a few runs to make sure that it's tight.

Once the engine was running we were embarrassed by the amount of noise it makes. It is much louder than any real bike could ever be because of the high rpm. With the addition of the spark arrestor and muffler, the noise dropped by at least 40 percent. Be careful about picking up the trike after running because the head gets *hot*. We've got the red marks to prove it.

In summation, we think that Testors has done an impressive job of duplicating the real trike down to the point of its handling characteristics. The price is *very* reasonable considering what you're getting in the way of enjoyment. We don't know of any aftermarket accessories but we're sure that airplane stuff will work. One thing the machine sorely needs is a larger fuel tank for longer riding. Doubling the capacity should give you plenty of time without over-heating the engine. Check out the specification box for all the details. We think you'll be surprised at the cycle-like information.

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FLORIDA Y-AMA NATIONAL (Continued from page 41)

close battle between Rhett and Timmy, but Timmy's bike gave up both times so he was unable to finish. Rhett easily won the second heat, but got a little careless the third time around. He came off a jump out of shape on the last lap and went down. Only two riders passed him before he was up and moving, but he had to settle for a third behind Jeff Hope and Brian Ward. Rhett still had enough points for the first place trophy.

Young Radford was one of several riders who were entered in both Expert classes (since the 0-60cc was scratched), which meant almost continuous riding. Hopping from one bike to another as the classes alternated motos took its toll. Crashes and mechanical trouble knocked Rhett out of the first and second motos of the 81-100cc class.

Gary Hyde entered the big class, since his transfer to Expert allowed him to enter any two Expert classes, even though he had not done so well in the Junior big bike class. The first moto lead was a toss-up between Gary and Kenny Blissett of Richland, Indiana. Although Kenny led most of the way, Gary wasn't far behind. When Kenny went wide on a turn, Gary dived under him and moved to the front. He was barely able to hold the lead to the finish.

Gary had to battle Ronnie Rice (Macon, Georgia) in the second moto. This time, Gary couldn't maintain the pace, especially when his rear tire went flat. He still managed to hold third place behind Ronnie and Billy Preston.

The third moto looked like a comeback for Rhett Radford. After a bad start, he worked his way through the pack until he was nibbling at the heels of the leader, Ronnie Rice. Then the pair lapped the last place rider. Ronnie got by quickly, but Rhett was caught short. When they went past the start-finish area, Rhett mistook the white flag, meaning one lap to go, for the final checkered flag. He slowed down and lost a lot of ground before an official signalled that the race was still in progress. Gary Hyde, after recovering from two crashes, came barrelling down the straight, but Rhett managed to get going in time to hold him off. Rice finished first, Radford second, and Hyde third.

When the final points were

totalled, the big win went to Gary Hyde, whose fourth place Junior trophy the day before had barely made him eligible to race as an Expert. Gary can thank the "Outland Formula for Instant Experts."

Despite the light entries which resulted in one non-point race and one scratched class, the racers who competed at Jacksonville were probably glad they did. And right now they are probably at home planning their trip to the next event in the Y-AMA series. They'll have to go all the way to Phoenix City, Arizona, for the last Y-AMA National race in November. You can bet they're already checking the road maps.

RESULTS:

Novice, 0-60cc

1. Craig Duerson, Lake City, Florida, Indian;
2. Frank Medlin, Oldsmar, Florida, Yamaha;
3. Kenny Boyd, Orange Park, Florida, Suzuki;
4. Jimbo Ward, Ozark, Alabama, Yamaha;
5. Kim Hyde, Lake City, Florida, Indian.

Novice, 61-80cc

1. Johnny Turner, Maitland, Florida, Honda;
2. Keith Watson, Tallahassee, Florida, Honda;
3. Joe Hyde, Lake City, Florida, Honda;
4. Mark Barr, Pinckneyville, Illinois, Honda;
5. Kim Hyde, Lake City, Florida, Honda.

Novice, 81-100cc

1. Mike Larson, St. Louis, Missouri, Steen;
2. Mark Barr, Pinckneyville, Illinois, Bonanza;
3. Mark Murphy, Fort Myers, Florida, Yamaha;
4. Larry Larson, St. Louis, Missouri, Steen;
5. Joe Hyde, Lake City, Florida, Bonanza.

Junior, 0-60cc

1. Mike Kelly, Davidsonville, Maryland, Yamaha;
2. Mark Duerson, Lake City, Florida, Indian;
3. Dolphy Myrick, Lake City, Florida, Indian.

(Due to insufficient entries, no Y-AMA points awarded in this class)

Junior, 61-80cc

1. Timmy Timmons, Tallahassee, Florida, Honda;
2. Wade Browne, Jacksonville, Florida, Honda;
3. Darrell Hodge, Jacksonville, Florida, Honda;
4. Gary Hyde, Lake City, Florida, Honda;
5. Scott Watkins, Colorado Springs, Colorado, Honda.

Junior, 81-100cc

1. Mike Buckmaster, Pearland, Texas, Chaparral;
2. John Olton, Zenith, Florida, Chaparral;
3. David Burgess, Jacksonville, Florida, Hodaka;
4. Mark Becker, Orange Park, Florida, Chaparral;
5. Johnny Banks, Jacksonville, Florida, Bird.

Expert, 1-60cc

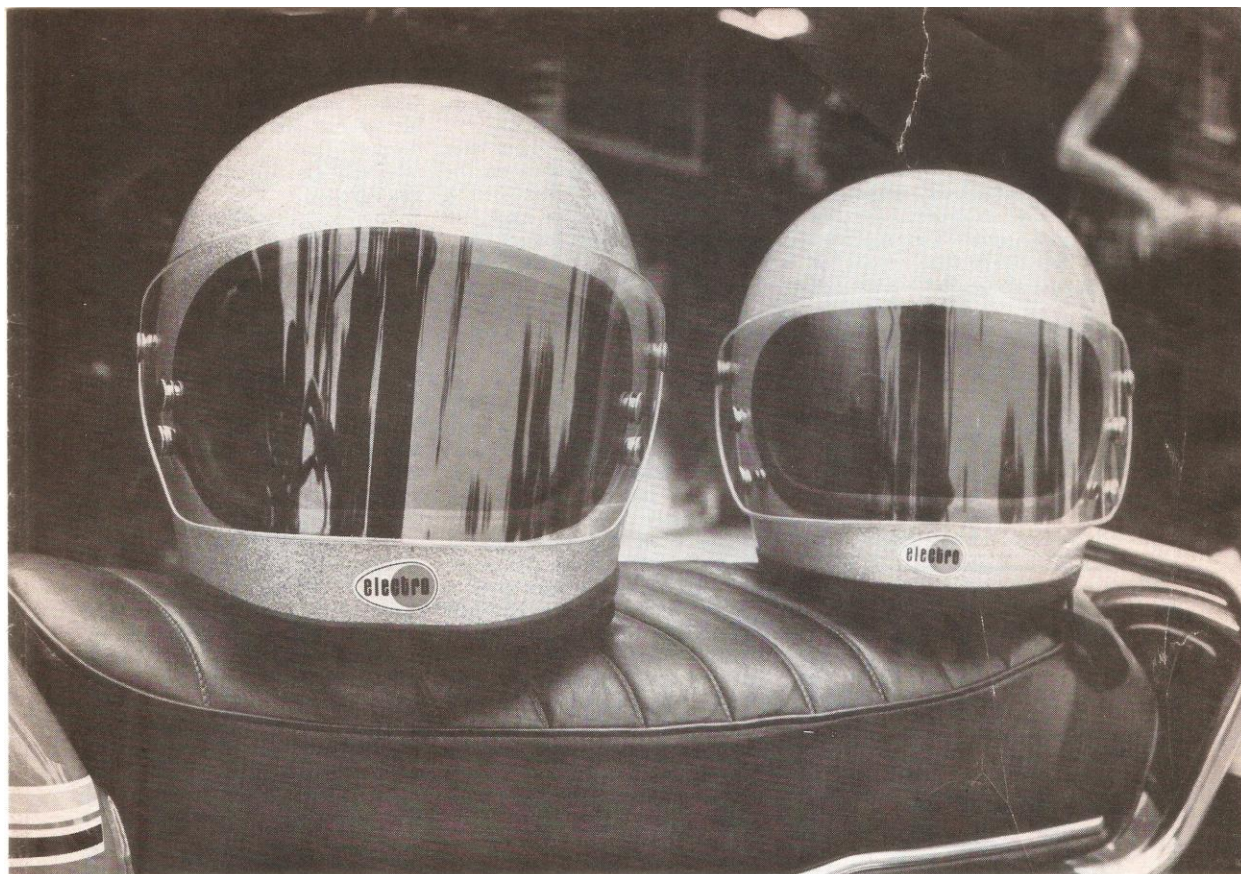
Scratch—Insufficient entries

Expert, 61-80cc

1. Rhett Radford, Jacksonville, Florida, Honda;
2. Jeff Hope, Orlando, Florida, Honda;
3. Brian Ward, Orlando, Florida, Honda;
4. Timmy Baxley, Anthony, Florida, Yamaha;
5. Gene McCay, Lexington, Tennessee, Honda.

Expert, 81-100cc

1. Gary Hyde, Lake City, Florida, Hodaka;
2. Billy Preston, Cincinnati, Ohio, Speedway;
3. Scott DeGood, Paulding, Ohio, Speedway;
4. Ronnie Rice, Macon, Georgia, Chaparral;
5. Will Roeder, Munroville, Ohio, Harley Davidson.



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(Continued from page 47)
to mind.

"I can always tell if I'm still on the course, because the cleanup crew is right behind me."

Keith and Pat set out on the last section of the enduro just as the cleanup crew arrived. They reported that all the riders were accounted for, but one of the pit crews was missing.

The Dunecycle supporters drove back to the highway and headed north. After crossing the border into Nevada, it was only a short drive to Lathrop Wells, a small but active crossroads town with a bar and restaurant, an all-night rock and roll band, and a few slot machines.

All the two-wheel desert rats had already arrived and were celebrating

the completion of their ordeal. Brian Cochran, the first three-wheeler to finish, soon joined the party.

Keith showed up a half hour later and said Mackie was back on the trail replacing a headlight bulb. The pit crew decided to drive back and check on him. They found him racing along about five miles from the finish. Despite the 130 mile journey, he still had enough energy to spin a couple donuts and a figure eight in the sand beside the highway.

Mackie drove on into Lathrop Wells, collecting a "finisher's pin" from the CERA and a...uh...soft drink from Brian Cochran. No matter how late he arrived, Pat could honestly claim that he took third place in the three-wheeler class. And he *did* finish the whole enduro, which is more than some of the motorcyclists can say. Not bad for a publisher whose usual vehicle is a swivel chair.

But if he ever considers entering a race with Brian Cochran again, we'll have to remind him how Brian missed a turn the next day and took the Dunecycle truck, racers and pit crew on a 75-mile detour through Death Valley.

other hand, we just barreled ahead without much worry. The only trouble we had were with deep, sharp ditches that could swallow the relatively small front wheels of the Dunecycles.

Another interesting revelation was the power of the lights that are an option with the Dunecycles. These things really lit up the night. However, the enduro was part navigational test and it was assumed that all the machines had speedos and odometers. Dunecycles don't. We had to rely on the little markers scattered infrequently around. If you ever want a nerve-racking experience, try finding four-inch cards in the big, bad desert at night.

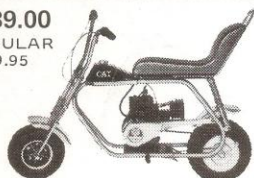
There was one point made in McClintock's report that indicates a failure in design for the Dunecycles. It makes no sense at all to build a machine that can go forever over extremely cobby terrain in the most difficult conditions, and then give it a pint-sized gas tank.

The experience was a lot of fun but the next guy who suggests a night enduro can go fly a kite. At night, preferably.) ☐

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(PUBLISHERS NOTE: Although McClintock does a pretty fair job of presenting this enduro, as seen from the driver's seat of the support truck, he ought to try it from the seat of a Dunecycle. That'd knock his detached viewpoint for a loop, even if he didn't loop his machine.

I'd like to explain how I fell into Cochran's trap. He issued a challenge and that is tough to resist. He said that I'd written, when testing suspended three-wheelers, that they make true off-road, long-distance vehicles. Prove it, he said, by entering this enduro. How could I back away from something like that? It was only after I'd accepted that he told me it was to be held in the dead of night.

We proved the point, pretty thoroughly. Suspended three-wheelers are viable off-road, long-distance machines. For the short period when we were running with the motorcycles (before we got lost, darn it), the little eight-horse three-wheelers were actually chewing up some of the big desert bikes. The two-wheelers had to ride carefully in the dark because an unseen boulder could easily throw them. On the

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Mid-Ohio Y-AMA National

(Continued from page 39)

the dust but track owners are tight-lipped as to what it is. The course is completely fenced and sits in the middle of 360 acres of gently rolling Ohio landscape.

The whole event was very well run. All races started on time and finished according to schedule. There were no hitches or delays. The event was run in the same manner that international races are run on this course. Strict rules of competition were observed. The small cyclists were very professional in attitude and action. They were seen walking the track prior to practice and checking out the course as do their older counterparts. Their gear was the same as the big boys, with the possible exception of jeans and sweatshirts instead of leathers. Their bikes, though smaller, were being fine-tuned by fathers and pit crews in the fenced grid area. They had to pass technical inspection on gear and 'cycles prior to race time.

Saturday dawned sunny and hot! The Junior and Novice motos were shortened to ten minutes from the expected fifteen to compensate for the extreme heat. The first class to race was the Junior, 0-60cc, with Michael Kelly of Davisonville, Maryland, taking first in all three motos. Leon Lewis of Illinois and Steve Burnside of Ohio tied for second in overall points. The second place trophy was awarded to Lewis, who placed higher in the final heat.

The next class at the line was the Junior 61-80cc—with 31 starters. This was a real battling bunch all the way down the line. Mark Barnett (Illinois), Chuck Calkins (Florida), and Joe French (Iowa) were constantly passing and repassing each other in all three motos. As one would slip in a corner or miss a gear the other would be on his way around him with the lead. French had the lead in the first and second motors, and lost it both times in a fall. Barnett took over in both cases on the last lap. His two firsts gave him the overall win. Calkins' steady finishes won him the second spot, with French third.

In the Junior 81-100cc class Jeff Phaller (Ohio) took the lead in the first turn and was going strong until his chain came off and sidelined him. Jody Stites (Illinois) had been close behind Phaller and was more than happy to take the lead. In the

second moto Phaller again had the lead for three laps until Jim Riggle (Ohio) squeezed past him for the win. Riggle took the lead and win in the final moto followed by Phaller and Stites. Stites' overall points gave him the first place win followed by Riggle in second.

The Novice classes were run after the Juniors, with the 0-60 starting first. Frankie Medling (Florida) was the uncontested winner, taking first in all three motos. Jimbo Ward (Alabama) took a straight second overall, and William Pertz was third.

The 61-80cc class was a split decision, with a different winner in each moto. Maryland's John Snyder had the first place points, followed, in order, by Tommy Hawk and Fred Caudill, both of Ohio.

Points were again important in the 100cc class. Rick Marshall (Ohio) edged out John Olten (Florida) by one point to take the top trophy, with Pat Burrowes running a close third.

Sunday, the day of the Experts, was even hotter than the day before. Leading off the action were the 0-60cc bikes, Expert-ly ridden. Gene McCay of Lexington, Tennessee was never headed in this class. He ran away with all three motos and the first place trophy. Closest competition was a consistent Kenny Colpo (Ohio), who followed McCay across the finish line every time.

The next group at the gate was the 61-80cc class. This class was full of nationally known riders such as Gene McCay, Audie Ward (Alabama), Cliff Royster (Florida), Mike Walcott (Texas), Frank Byrd (Georgia), Bill Preston (Ohio), and Kenny Blissett (Indiana). Every one of these kids was convinced that the first place trophy was his. The starts across the gate were really wild as some over-anxious riders reared up on the back wheel and others zoomed out through the pack. The start looked like a 250cc professional line-up roaring toward the first turn. In the first moto, Audie was the leader all the way. McCay, who was riding two classes, was perhaps a little tired and a fourth was the best he could pull. In the second moto McCay had "put it all together" and jumped out into first and stayed there. He also won the third moto and the overall first place trophy, his second of the day. Ward was right with McCay in the third moto,

although unable to pass him. He got a solid overall second.

The 81-100cc class was a real battle between Kenny Blissett and Frank Byrd and Jackie Irons (Michigan). These boys were turning a lap time of 2:17, darn good on this track. Irons jumped into first place right away and was moving toward victory until his bike acted up and put him down in 8th place. Hot on his heels was Blissett, who took the lead and kept it. Mark Weidner (Ohio) was coming on strong after Blissett until his bike also started coming apart and put him out of the running. In the second moto, Irons and Blissett were back at it for two laps. Irons just got around Blissett when his chain and expansion chamber broke and put him out for the day. Blissett took first again and Byrd and Jim Riggle were second and third. Blissett had the lead for one lap of the final moto when Byrd went roaring around him to take the win. However, Blissett's two firsts gave him the overall first place trophy with Byrd second and Riggle third.

The winning Experts' bikes were impounded in the infield after the completion of the final moto. The rider and one mechanic then tore down their own machines for measuring and inspection by the referee. If any bike had been found illegal the rider would be suspended. All bikes were "OK" and the awards presentation began. The smiles on the winners' faces almost out-shined the gleaming trophies.

Of course, their expressions couldn't compare to the look on the face of that Junior rider who almost ran down a flagman in his excitement. Pointing back along the track, he reported that he'd seen "a big thnake, mithter!" The boy won his race. Do you suppose the snake helped speed him up? That's what we would call a breakthrough in racing strategy.

RESULTS

Junior Class 0-60cc

1st—Michael Kelly, Davisonville, Md., Yamaha;
2nd—Leon Lewis, Pecatonica, Ill., Yamaha;
3rd—Steve Burnside, Edison, O., Yamaha;
4th—Jeff Yochum, Barrington, Ill., Yamaha

61-80cc

1st—Mark Barnett, Bridgeview, Ill., Honda;
2nd—Chuck Calkins, Sarasota, Fla., Yamaha;
3rd—Joe French, Cedar Rapids, Ia., Honda;
4th—Rodney Retter, Bloomington, Ind., Honda;
5th—Carl Hand, Mantura, O., Honda

81-100cc

1st—Jody Stites, Henry, Ill., Kawasaki;

2nd—James Riggle, Mansfield, O., Steen;
3rd—Mike Paulli, Rockford, Ill., Kawasaki;
4th—Randy Morrow, Mansfield, O., Fuji; 5th—Jeff Phaller, Cincinnati, O., Hodaka

Novice Class

0-60cc

1st—Frankie Medling, Oldsmar, Fla., Yamaha;
2nd—Jimbo Ward, Ozark, Ala., Yamaha;
3rd—William Pertz, Macedonia, O., Yamaha;
4th—Ricky Hammond, Louisville, O., Yamaha;
5th—Ricky Murphy, Burgettstown, Pa., Yamaha

61-80cc

1st—John Snyder, Bowie, Md., Honda;
2nd—Tommy Hawk, Athens, O., Honda;
3rd—Fred Caudill, Zanesville, O., Indian;
th—Scott Cary, Rockford, Ill., Yamaha; 5th—Ronny Hammond, Louisville, O., Yamaha

81-100cc

1st—Rick Marshall, Solon, O., Hodaka;
2nd—John Olten, Venice, Fla., Chaparral;
3rd—Patrick Burrowes, Dayton, O., Honda;

4th—Mark Murphy, Ft. Myers, Fla., Chaparral;
5th—Jeff Peinell, Ravenna, O., Steen

Expert Class

0-60cc

1st—Gene McCay, Lexington, Tenn., Yamaha;
2nd—Kenny Colpo, Ravenna, O., Yamaha;
3rd—Ricki Mack, Norwalk, O., Yamaha;
4th—Michael Kelly, Davidsonville, Md., Yamaha;
5th—John Dipzinski, Wooster, O., Suzuki

61-80cc

1st—Gene McCay, Lexington, Tenn., Honda;
2nd—Audie Ward, Ozark, Ala., Yamaha; 3rd—Jeff Hope, Orlando, Fla., Honda; 4th—Shawn Kelly, Houston, Tex., Honda; 5th—Scott DeGood, Paulding, O., Fuji

81-100cc

1st—Kenny Blissett, Richland, Ind., Steen;
2nd—Frank Byrd, Lizella, Ga., Chaparral; 3rd—Jim Riggle, Mansfield, O., Steen; 4th—Ricki Mack, Norwalk, O., Steen; 5th—Jody Stites, Henry, Ill., Kawasaki



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(Continued from page 45)

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Trials universal tires give excellent traction over most types of terrain but the tread design doesn't shed mud as well as it should. The mud at Escape Country is like glue and sticks between the knobs making the tires slippery over rocks.

Overall design of the bike is pleasing to the eye even for the spidery appearance typical of the breed. The tank is extremely narrow to allow the rider to move around. The fenders are molded of polypropylene for durability. The front fender is close to the wheel to prevent mud from splashing onto the rider. The seat is typical; it's as hard and comfortable as a billiard table. This really doesn't matter because it's only used between sections or for high-speed sections in Scottish-style trials events.

If you haven't guessed by now, we're fascinated by this bike as we're sure others will be. Cycles are here to stay but styles of riding change as rapidly as any other fad. The first fad was choppers followed by cafe' racers, mini-bikes, scrambles, desert, flat-track mini-cycles, MX, etc. Now there is accelerated interest in speedway and trials. We'd be willing to say that trials will be the new wave of the future with Yamaha riding on the crest. Unlike other forms of competition, trials is within reach of the average rider. The bikes are cheaper as is preparation and maintenance. The sport is safer. Evidence of this is that trials riders are the only ones permitted to ride in competition without a helmet or protective headgear. In the history of the event, there has never been a single death.

The emphasis is on rider skill rather than power. Machines of 80, 100, 125, and 250cc's run in the same class without any difficulty. Only a few dollars separate the best machines from the worst. If Jeff's ride is any basis for criteria, there is little, now, to separate the men from the boys. □

local dealers

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Don's Tires & Cycle, 1108 W. Hoit, Ontario; Montesa, Indian, R.T.S.

Hacienda Heights Honda, 507 N. Azusa Ave., La Puente; Honda.

Auto Cycle City, 851 N. Anaheim Blvd., Anaheim; Indian, Montesa, Tri-Sport, Trailers

ILLINOIS

Midwest Indian, U.S. 51 South, Rochelle; Indian.

INDIANA

Yu Can! Motorcycle Shop, 109 W. 41st Ave., Gary; Indian.

MAJORS' Sportcycles, 727 S. Plate St., Kokomo; Indian, Norton, Guzzi, Ducati.

KANSAS

Santa Fe Trail Cycle Sales, 134 E. Main, Gardner; Indian, Rupp, Cooper Racing Bikes.

MICHIGAN

Williamston Sports Center, 108 W. Grand River, Williamston; Indian, Speedway.

MISSOURI

Gary's Moto Cycles, Box 174, Granby; Indian, Mini-Mini thru SS-125.

NEW YORK

West Seneca Tool Rental, 2845 Seneca St., West Seneca; Indian

OHIO

Bob's Sport Cycle, 200 Branstetter, Wooster; Indian, Jawa, CZ

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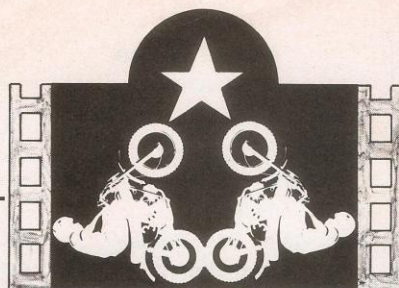
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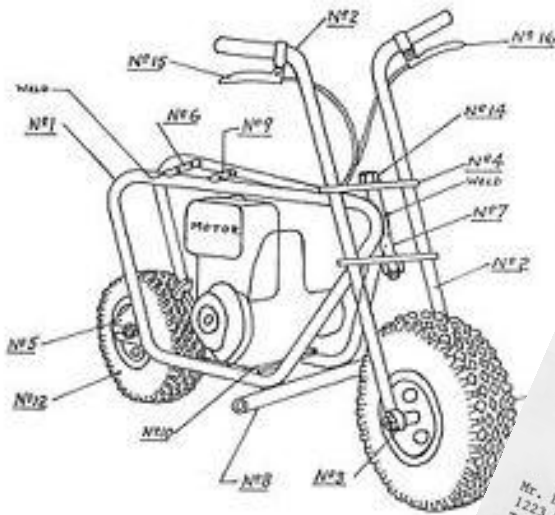
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