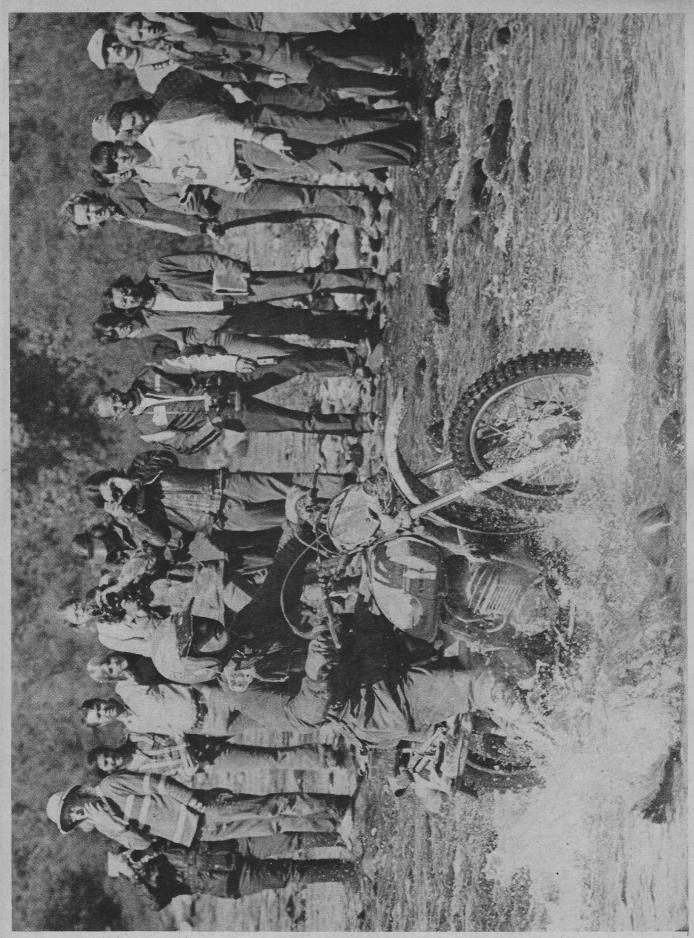


No.15 June-July 1974

Trials star Carl Cranke.



Paul Danik on his way to a Gold at the U.S. ISDT. Paul has rode his 125 to 5th spot in the Qualifiers and looks like a Trophy Team member for Italy September.

Fred Veator racing his Penton to top speed at Daytona.



# Carburetion



Here awhile back I made a couple of comments on carburetion. The first comment pertained to the importance which we believe carburetion is, with regards to the performance and reliability of the competition two-stroke.

The second comment was that I would write something about carburetion in the next issue of "Keeping Track".

Ok, on the first comment we could write volumes, because the two-stroke has so many more variables then does the four stroke. 1. Crankcase pressure relevant to carburetion. 2. Unique breathing and transfer relevant to carburetion. 3. Lubrication relevant to carburetion. 4. Firing intervals relevant to carburetion. We believe carburetion to be most important to our two-stroke's performance.

The next question everyone will ask is why the hell don't the factories get the carburetors proper from the beginning. That is simple to answer. The factory spends weeks and years setting carburetors, adjusting and etc. (on the dynos). The dyno to a factory is their life's blood and the biggest shortcoming to testing a good Moto-Cross, Cross Country and mud machine, unless you are next to a genius at reading the dyno for the specific application. I know of only two or three people in the world who can use a dyno on a twostroke to an advantage for the purpose of setting up dirt machines. (That is with the exception of the Dirt Bike technical staff.)

At any rate the interesting thing about a dyno is that it doesn't take the engine up a hill and tumble it down then try to start it. Nor does it take the engine through deep swamps, get stuck in 100° weather in a peat bog and a million other things that we mud runners do with our motorcycle engines. That's why the factory many times has the carbs executed improperly.

The second reason is that generally the carbs are manufactured in some production plant in some urban or industrial area by a group of people looking for quitting time and payday and could care less about a motorcycle. Then the carburetor technical sales and service man representing the carb company probably has a sail boat or yacht on some beautiful Bavarian Lake and his interests are in getting his honey out there on the water for a 4 day extended weekend about 50 weeks out of the year.

This is from past experience John Penton has had, that is why so many bad and crummy carburetors have come on our motorcycles these past 10 years.

At any rate we Americans and the Japanese have got them thinking and we are now getting better carburetion. For this we can thank critical magazines like Dirt Bike, etc.

We here at Penton have completely updated our specs., components and adjustments of the 1973 and previous Bing and Amal two-stroke carbs.

We have made them, performance wise, best in the business, completely controllable and adjustable under all competitive situations. We have gone this route because our total experience has always been a greater top performance over any other carburetor in the business.

Any Penton owner having carb problems who can and will execute the following carburetion information or have his dealer perform this work, will definitely be pleased with the results. Last, but not least, I would suggest that if you are not a technician in the carb field be careful, this is not an amateur cure for a sledge hammer mechanic or a fourteen year old hot dog. Have fun but I suggest consulting the experts.

#### BING

During the past months we have been doing extensive testing and work on the Bing carbs in all the ranges of sizes. We have come up with valuable and additional information, settings and adjustments for the various sizes of Bing carbs for given engine sizes and applications.

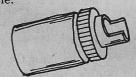
First let's clarify the three common and distinct executions of Bing Carbs.

1. The 27mm size body. This can be found in the executions from 22, 24, 26, and 27mm. (Hereafter referred to as the 27mm Bing.)

2. The late style center float carb body cast of aluminum known as 30mm but this body comes to us in execution from 28mm (found on some new 125cc's) through to the size of 32mm. (Hereafter referred to as per size such as 28, 30, or 32mm Bing).

3. The late style center float carb body cast of aluminum known as 36mm but can be found in the execution of 34, 36, and 38mm. (Hereafter known as per size 34, 36 or 38mm Bing).

First off with these Bing carbs we have discovered that for two-stroke application and off road dirt riding, all, all, all, all, all carbs should be fitted with our new (Atomizer or Vaporizer) No. 40-404. This can be identified because it has a full shielded lower body with one small 1mm hole drilled in the body and the top has the half cut-away vaporizer nozzle.



All Penton 175 and 250cc bikes produced after January 1, 1974 are fitted with our new atomizer. I might say that all 250cc bikes have been fitted with them. Older 175cc bikes with Bing Carbs should be checked and updated to these specs.

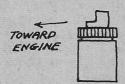
Now the catch to this and the great part is that none of the 27mm carbs have this part in them and believe us this part does miracles for these 27mm carbs.

We have just made available a new brass neoprene tipped float needle Part #40-405. That really allows superior float level control in turn offering better carburetion, idling, and gas mileage. This fits all Bing carbs.



There are two important things to know when installing these atomizers.

1. Always install so that the cutaway part of the nozzle is toward the intake of the engine.



2. Always 100% of the time go higher or richer at least one size and one notch on the needle and needle jet. Example - (From 2.73 Needle Jet to 2.76 and from middle notch to third or fourth down from top of needle.)



All I can say is that it works like a charm with the 27mm Bing and this carb makes the engine perform as well as any 28mm or 30mm will do when using this execution.

Last thing to remember is very important. Doing this you have finally leaned out that miserable low end that we have had rich for so many years. Don't be mislead with thinking your carburetion is rich when 99 times out of 100 you will now find that the bike will run better by richening it up.

Now you should find the carb more controllable and conventional to the teachings you have learned about, slide type carbs.

We are attempting to have these modifications on our new bikes and in most cases you will find these settings on the latest bikes we are building.

Basic executions and settings for Bing carburetors when fitted to Penton motorcycles:

All executions and settings are subject to change at any time due to various reasons—climates, altitude changes, engine specs. Such as hop ups, porting compressions, etc. also any advanced knowledge and tricks we may learn to improve carburetion to our Penton motorcycles.

These settings are on our serial production units as of March 1, 1974.

If improper carburetion is experienced on any Penton models purchased prior to March 1, 1974 we

would advise a thorough check on carburetion.

All settings were taken at 800 to 1000 above sea level and will probably function successfully, but, maybe a little lean at sea level.

Special attention should be taken that all Bing carbs must be fitted with the latest (Atomizer or Vaporizer Part Number 40-404), full shielded body type.

There is one thing that is very important, quite interesting and also unique about the interchangeability of parts with the three Bing carbs.

PLEASE NOTE:

All parts are interchangeable in the three carbs sizes.

Now it must be remembered that these are three different sizes (Example, Needle Jets.) There is a 2.76 Needle Jet for each size of carb and etc.

But all main jets, floats, idle jets, etc. are the same.

1. Carb body	4. Needle Jets
2. Slides	5. Slide Springs
3. Needles	6. Body Top

#### 27mm Bing fitted to 100cc

CI: J.	щт
Slide	#1
Needle	#4
Main Jet	#130
Needle Jet	#2.76
Pilot Jet	#45 or 35
Atomizer	#40-404
Air Adjustment Screw	

Approx. 1 to 1½ turns out, Needle in third notch from top

#### 27mm Bing fitted to 125cc

Slide	#1
Needle	#4
Main Jet	#140
Needle Jet	#2.76
Pilot Jet	#45 or 35
Atomizer	#40-404
Air Adjustment Screw	

Approx. 1 to 1½ turns out, Needle in third notch from top

# 28mm Bing fitted to 125cc

Slide	#1
Needle	#1
Main Jet	#135
Needle Jet	#2.76
Pilot Jet	#45 or 35
Atomizer	#40-404

Air Adjustment Screw

Approx. 1 to 1½ turns out, Needle in third notch from top

30mm Bing fit	ted to 175cc
John Ding in	ica to 11occ
Slide	#1
Needle	#1
Main Jet	#150

Needle Jet #2.76 or 2.80 Pilot Jet #35 or 45 Atomizer #40-404 Air Adjustment Screw

Approx. 1 to  $1\frac{1}{2}$  turns. Needle all way up #2.76 - all down #2.80

The above settings are for the paper Crossland air filter element.

Listed below are the settings for the Twin Air oiled foam air filter unit.

It is highly advisable to check and update your carbs if fitted with foam air filter, as the first Penton 175cc's with foam filter were fitted with 2.76 Needle sets. Please rejet these machines to 280.

Main Jet #150 to #155 Pilot Jet #35 Needle Jet #280 Needle Position #2 (middle)

#### 36mm Bing fitted to 250cc

Slide	#1
Needle	#1
Main Jet	#165 or 170
Needle Jet	#2.83
Pilot Jet	#35 or 45
Atomizer	#40-404
Air Adjustment	Crow

Air Adjustment Screw

1 to 11/2 turns needle middle notch.

The above settings are for the paper Crossland air filter element.

Listed below are the settings for the Twin Air oiled foam air filter units.

Main Jet #265 (Resp. #170) Pilot Jet #35 or 40

Needle Jet 285

Needle Pos. #2 or Middle

It is highly advisable to check and update your carbs if fitted with foam air filter, as the first Penton 250's with foam filter were fitted with 2.83 Needle Jets. Please rejet these machines to 2.85.

#### 38 mm Bing fitted to 400cc

Slide	#1
Needle	#1
Main Jet	#170 to 180
Needle Jet	#285
Pilot	#45
Atomizer	#40-404
Air Adjustment Screw	

Approx. 1 to ½ turns needle in middle position.

We especially will point out, that the throttle slide isn't identical with the one of the 250cc carburetor, type 2/36/102. The throttle slide cutaway varies from the 250cc. Also the needle is not the same. As we couldn't get the carburetor 2/38/101 immediately when production began, the carburetor 2/36/102 had been rebored to 38mm diameter by us, and these carburetors are equipped with the old throttle slide and needle. The difference between the old and the new carburetion lies mainly in the transition from lower to half mid-range.

#### AMAL

We at Penton Imports have been working on these damn Amal Carbs, for the past two years with not any real satisfactory success.

Finally after I had my belly full of it and had contacted everyone I knew here in the states, I took it upon myself to visit the factory people and delve into the Archives of the Amal development and service department.

I learned two basic things about the adaptation of the English Amal concentric carb to the two-stroke engine.

One definite thing was that the Motorcycle Companies installing the carb on their engines. We here at Penton Imports, and most other motorcycle aces in the U.S. didn't know too much about the basic origins of the various components in the carb and above all we didn't know how to make it do what we needed on a two stroke.

The second definite thing I learned was that, properly set up for a two-stroke it is probably the best carb in the business today for that application.

Now that I have told you my piece about the Amal, I would like to give you the technical word.

There is a Part No. #622/080 which is a very old part that for the past 10 years has been forgotten. Any of you boys with your old 1960's BSA's and four strokes will recognize this jet hold number.

That is the secret!!!!

Now we start all over again ....

NOTE: there are three basic things that you must change or check to see if your carb has them.

The short old Jet Holder #622/080 overall length about 34''. The one in your carb will probably be about 36'' long.

Short Needle, 3, by now you may find 2 needles in your carb. Check number of needle by number of fine rings around top of needle.

Needle Jet #106 for 125cc and

175cc, with high orifice (NO little hole in the side of it.)

Originally many of these carbs came with the #3 needle and high orifice needle jet that doesn't have the little hole in the side of it, and in these carbs you do not have to change the needle and needle jets.

One other important thing is to check and make sure your carb does not have the internal fixed idle jet. We have found many carbs floating around with this fixed jet and the people did not know anything about such a jet.

There is one very important comment to make in setting up this carb. It has been traditionally rich on the idle and just off idle side. Don't let it fool you into continuing to be rich there now. Because if it shows signs of being boggy or sluggish just off of idle, it is now nine times out of ten too lean and you will think it to be too rich.

In addition to these settings for Amal, there are several conversion improvements which can be made to your 30mm Amal Carb. They are as follows:

These screws make it a little easier to work on the carb. There is also a packet of 2 adjusting screws #622/168/9 which makes it a little more convenient to adjust the carb.

As production progressed with the Amal many of the improvements were incorporated into the carb. So you may find many or even all of the conversion units on some carbs.

Last and most important!!!!

CAUTION, CAUTION - Never use the Long Needle #2 with the high orifice 622/079. This is sudden death to the engine in the mid-range.

#### REMEMBER!!!!!

Short Needle, High Orifice Long Needle, Low Orifice Length of needles can be checked by putting side by side, there are only two needles - long and short.

Specs for 125cc Penton 30mm Amal

Size 25 Pilot Jet Size 230 or 240 Main Jet Size 105 High Orifice Needle Jet #3 Short Needle #4 Slide or 3½ ¾" Long Needle Jet Holder Pilot air screw ½ turn out. Needle starting on about middle position.

Specs for 175cc Penton 30mm Amal

Size 30 Pilot Jet
Size 240, 250 or 260 Main Jet
Size 106 High Orifice
Needle Jet
#3 Short Needle to Match
#4 Slide or 3½
¾" Long Needle Jet Holder
Pilot air screw ½ turn out. Needle
starting in all the way up position.

The Amal numbers on these parts are:

#30 & 25 Pilot Jet Amal 124/026... Specify Size

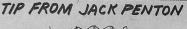
#4 Slide or 3½ .. 928/060 ....... Specify Size

#260 Main Jet Amal . . 376/100.. Specify Size

#105 High Orifice Needle Jet Set Amal ...... 622/079

#3 Short Needle Amal . 928/063

34" Long Needle Jet Holder ...

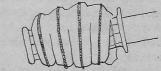


WESTE |

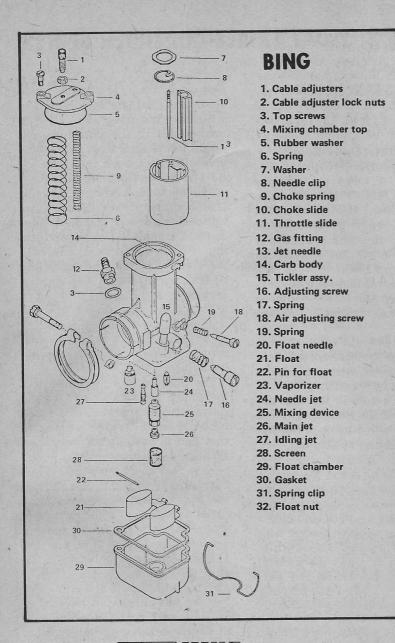
FIND YOUR HANDS FLOAT-ING ALL OVER YOUR GRIPS AND NOT GETTING THE FULL LEVERAGE OF THE HANDLEBARS? TRY THIS... Take a pair of grips f taylor them to your hands.

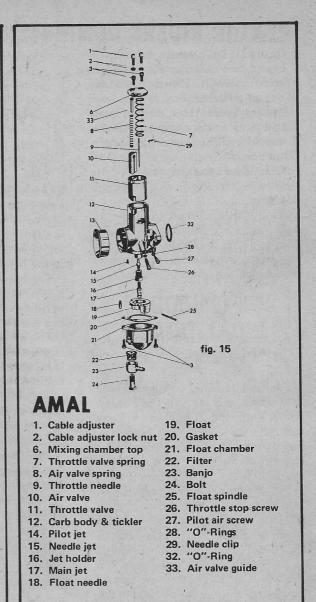


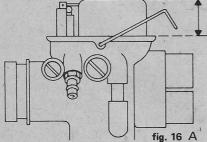
ON THE THROTTLE
YOU WILL ALSO HAVE TO CUT
THE TWIST GRIP TUBE TO
FIT THE NEW LENGTH.



NOW YOUR HANDS WILL FIT LIKE A GLOVE AND THE FULL LEVERAGE OF THE BARS WILL WORK FOR YOU.

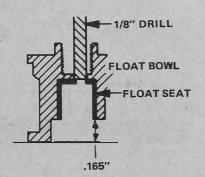






#### Checking the Float Level of the Bing

Before reassembling, the float level should be checked. Place the carb on a level surface as shown in fig.16 A.Be sure the float needle is at the bottom of its seat. The level is correct if the float is parallel with the carb body as shown in fig.16 A. The brass float tab must just be touching on the spring loaded needle ball. The needle ball must not be pressed down. The level is corrected by bending the brass tab on the float.



#### Checking the Float Level of the AMAL

Before reassembling, the float level should be checked. With the float in the bowl push down on the float tab. The float level is correct if the distance from the float to the top of the bowl is .118" - 3mm . If adjustment needs to be made with a 1/8" drill move the seat till it is .165" from the top of the float.

# PENTON RIDERS DOMINATE U. S. 2-DAY TRIALS QUALIFIER SERIES

FLASH, AMA Headquarters, Worthington, Ohio

Penton Sportcycles were chosen for the U.S. Trophy Team machines to the 49th ISDT this September in Camerino, Italy.

This makes the 4th straight year Penton will be the U. S.'s leading 6 day team.

With 5 qualifiers finished and only 1 more left-Bad Rock in Oregon on June 22 & 23. Penton riders and machinery have nearly totally dominated the qualifier series.

## FT. HOOD 2-DAY TRIALS

Ft. Hood Texas, March 30-31

The first qualifier of the year was both sweet and sour for the Penton Team. Jack and Tom chose to miss and ride the Curly Fern National. (but we weren't down on talent). Car Cranke came down and took the overall win on the 250 Hare Scrambler with some scorching test times. Don Stover on a brand new Penton 250 took the second spot behind Carl for an excellent debut on the bike. In the 100cc class only one man made it to the finish, Steve Jones on a 100 Penton. The 125 class saw Desert Star Larry Roesler take a Baja to the class win, Penton rider Joe Barker took the runner up position and Eddie Brashier the 4th place position.

It was a sweet victory for Carl who last year set fast time in the Trials but a check screw-up, robbed him of the overall win.

## PICAYUNE BOAT RACE

Picayune, Miss., April 7-8

The water was so deep from 10 inches of rain the week before that only 27 riders saw the finish line. Ex-Penton rider Bill Uhl took the overall win that saw only 6 gold medals won. At the end of the first day over 75% of the riders were out. Tom Penton took his machine to third overall and a Gold medal. Jack Penton had top special test times but a check screw-up put him into silver. Other Penton medal winners were Joe Barker, Dane Leimbach, John Fischer and Bobby Thomas.

# SHAMROCK'S TWO DAY TRIAL

Barstow, California By Bill (Lump) Groom

The 1974 version of the Shamrock's M. C. Trial will not be easily forgotten. Held in the vast Mojave desert of Southern California, the Shamrocks put together an event that was likened to the Mexican 1000.

The course was laid out with large bikes in mind and totally oblivious to riders who were riding 175cc bikes or smaller.

The event brought together most of the names of trials events, except Malcolm Smith, who must have known what he was doing.

Saturday's course left the impound area at the Holiday Inn and wound 200 miles back to the impound area Saturday evening.

The course took its toll the first day. Many riders found themselves running out of gas or hitting empty at the first gas check and using their 3 minute grace to check through.

Jackie Penton played soccer with a rock and jammed a foot while brother Tom ran into mechanical dilemmas. Dane Leimbach succumbed to the heat. Danny Young suffered a shoulder separation in his desert debut.

Carl Cranke was setting a blistering pace along with Bultaco teamster Cordis Brooks.

As teams began to fall by the wayside, the hastily improvised Penton Southwest team of Bill Friant, Eric Jensen, and Steve Hurd emerged as a possible threat to Bultaco who was the only other team still running intact. As the day neared an end, Bill Friant's 125cc finally succumbed to the demanding time schedule and he arrived at the next to last check 7 minutes down.

Independent Penton rider Joe Barker, had been doing extremely well on his 125cc, as well as new trials rider, Desert #1 Mark Adent on a 175cc Penton.

As the riders left their bikes in the impound area Saturday night or loaded them up, the feelings were running high that the trials was not important enough to continue on, risking serious injury and possibly

destroying their bikes with Trask Mountain Trial one week later.

Sunday morning saw only 38 motorcycles in the impound area awaiting the final day. There were only 4 125cc bikes left, including Joe Barker, still on Gold and Bill Friant on Silver. Mark Adent on Gold and leading the 175cc class, Carl Cranke, Eric Jensen and Steve Hurd on Gold. Hard luck Don Stover leaving with a broken primary case held together by duct tape and epoxy. Jim Sparks leaving with a suspected broken ankle.

The Manufacturers Award brightened up when veteran ISDT rider Dave Ekin's Bultaco came through check #2 dragging the exhaust pipe.

The Shamrocks dropped part of the course for Sunday and all the riders were in approval. The small bikes were to suffer greatly today, as they had to push up no fewer than 11 hills. Joe Barker arrived at the next to last check showing fatigue but still on Gold. Bill Friant arrived. his giant handlebar moustache caked with dust but knowing the end was in sight. Mark Adent arrived. acknowledging that this was the toughest for him. Eric Jensen in. asking for a sandwich. Carl Cranke arriving with time to spare and Jim Sparks hanging on in pain. Don Stover in with broken cases and all. Steve Hurd knowing only a little way to go.

As the riders checked into the impound area, Joe Barker arrived with a giant wheelie acknowledging finish.

Pentons dominated the results with Carl Cranke the overall winner on a 250cc. Steve Hurd winning the 350 class. Mark Adent debuting with a win on a 175cc. Joe Barker the only Gold Medal winner on a 125. First Manufacturer award, Bill Friant, Silver 125, Eric Jensen, Gold 250 and Steve Hurd, Gold 350. The only team to finish intact.



# TRASK MOUNTAIN TWO DAY TRIALS

MAY 4, 5, 1974
By Dave Duarte

Once a year at this time, the "Motorcycle Activities Club of McMinnville" sponsors the "Trask" which is run in the beautiful Trask Mountain area. Again this year, the Club was blessed with fantastic weather. A bit chilly at night, but in the high 70's during the day.

Riders from various cities throughout the United States came to test the demands of this run with their skill and machinery against two days (417 miles) of bike and body punishing terrain.

Although said to be relatively easy the first day on a 22 m.p.h. average schedule by some of the more experienced riders, close to half of the 180 plus riders failed to reach the finish at the impound area Saturday afternoon.

The end of the first day saw Jack Penton (250cc) on top with five other riders in close contention, with only seconds separating them.

Penton West Team member Carl Crank (250cc) being in that speedy group 21 seconds behind Jackie.

The results of the first day left much speculation as to what the final outcome of this two-day qualifier, the fourth in the series would be.

The 217 mile second day's course was bumped up to a 26 m.p.h. schedule. This would prove to be a Gold thieving day for many of the previous days riders still on Gold. Such was the case of Penton West Team member Mark Adent (175cc Penton), desert rider turned 2-day rider, who had won the 175 class at the Shamrock's grueling Sunland 2day at Barstow, California the previous week. Mark watched his bid for a second Gold medal in a row disappear before his very eyes after becoming lost and having the flip card turned on him just before he entered the yellow flags at check #3 going over his three minute grace by five seconds and regulating him to a Silver where he would remain for the rest of the day. Keep your eyes on this promising 17 year old rider.

Throughout the second day, furious paces were being kept by the top riders. Carl Cranke, knowing the deficit of 21 seconds he had to make up was motoring on the course W.F.O., to finish 3rd overall nine

seconds behind Jackie Penton's fabulous ride to first overall.

Cool and confident Dane Leimbach bringing his 100cc Penton in for the class win and only Gold medal of the two finishers in this class.

Rising Penton star Joe Barker pushing his 125 to first 125cc, beating out buddy Tom Penton by 10 seconds.

Billy Uhl (Can-Am) riding his usual smooth, no mistake extremely fast pace winning the 175 class ahead of Northern California Enduro star Jim Jenkins (Penton) and Dan Young (Penton) out of Kentucky.

Lars Larsson of International fame bringing his Penton (cantileiver suspended) in for first in the 350cc class ahead of Steve Hurd (Penton) former BAJA 500 class winner

The 500 class? Well, this was won by Kens Maahs, a McMinnville resident and fine rider on a Husky. Next year, well, we'll see.

Space limits all of the outstanding individual performances of the Penton riders, who competed in this great event, but hats off to Jackie Penton who made the fourth annual Trask the 4th consecutive time it has been won overall on Penton Motorcycles, and after three years of near misses, the Penton East Team winning the Manufacturers Trophy. A great second place by the Penton Southwest Team, and fourth by the Penton West Team. There were 33 Gold medals awarded in the 100, 125, 175, 250, 350 classes in which Penton Motorcycles won 16. See complete results.

# POTOSI OZARK TRIALS

Potosi, Mo. June 1-2

Probably the finest Trials to date saw all the Trials stars in attendance. Jack Penton, Carl Cranke and Bill Uhl were all dead-locked in a tie for the overall series championship at this point and after the event was over it had really settled nothing and they finished 1-2-3 and were within seconds of each other.

Jack had one of the new 400 Mints and was riding it for the first time. He must have liked it as he was the hi-scorer each day. Jack won the event but lost when he broke his foot after crashing into a ditch a mile from the finish. Carl took his 250 to second overall and the 250cc class win. That makes 2 overall wins for both Jack and Carl to date. Joe Barker took his 175cc to 4th overall. Danny Young and Paul Danik rounded out the Penton riders in the ton 10.

Dane Leimbach again took his 100 to the class win and 12th overall! Paul Danik won the 125cc.

Other Penton riders putting in excellent rides were Don Stover, Tom Shaw, Bobby Thomas, Lars Larrson, Mark Adent, Rod Bush, Vern Street, Bill Friant, Mike McGowan, Ron LaMasters, Brian Farnsworth, Jim Spark and Jess Thomas.

#### PENTON RIDERS IN THE TOP 60

Carl Cranke Jack Penton Joe Barker Paul Danik Tom Penton Dan Young Dane Leimbach Mark Adent Eric Jensen Don Stover Lars Larsson Bill Friant Ron Lamastus Mike McGowan Tom Shaw Bryon Farnsworth **Bob Thomas** Jim Sparkes Jim Jenkins Steve Hurd Vern Street Fred Cameron Harold Wilkes Dan McKinney **Bob Powers** 





Our service dept. has been working on engines from dealers since 1970. We receive engines in all kinds of conditions. You can usually tell how a person takes care of his bike by the condition the engine is in. If the engines come in all muddy you will find that the inner workings of the engine will be in a similar condition. Some of the engines that come in here, by the looks of the inner workings of the motor, such as trans. bearings, needle cage bearings and etc., have had very few oil changes.

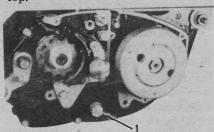
You may have read in some of our past literature that we told you to change oil every 8 to 10 hours. This is fine but if you were to go to a cross country event and ran down a creek for 5 miles, I would then suggest that you pull off your clutch cover and take a look at the oil. If the oil is creamy looking, I would say that it was a nice fresh water mountain stream, on the other hand if the oil is black and sandy it would seem then that you have been riding in the Lorain area and tried out the Black River. In this kind of condition it's going to be hard on all moving parts.

'In our 175 trans. we originally used 1000cc of 20W 40 gear lube or A.T.F. The A.T.F. helps prevent clutch drag. We then went to 2000cc to quiet down some of the clutch noise.

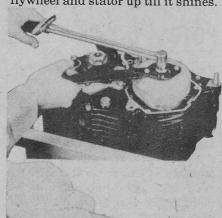
Now that we have a 250 and 400 we re-designed the clutch cover. By doing this it brings up the oil level. Now we recommend 1500cc and 700cc in our Sachs motors.

In draining the oil on the KTM first remove the ignition cover and located on the side at the bottom is the drain plug. Drain all the oil out and refill with the bike on its side through the drain, this makes it easier than trying to get the oil in the

top.



While you have the ignition case off it is a good time to clean that Motoplat ignition. Many people feel because this unit does not have points or moving parts it needs no service. Well they're dead wrong. Corrosion will build up on the flywheel and magnets and your ignition will perform poorly or not at all. It is a simple procedure to clean if you have the proper tools. With a flywheel holder and a 12mm socket remove the flywheel nut (Remember this has a left hand thread so don't tighten it trying to remove it). Place the magneto flywheel puller on the flywheel and remove the flywheel. You do not have to remove the stator or mess up your timing. Clean the flywheel and stator up till it shines.

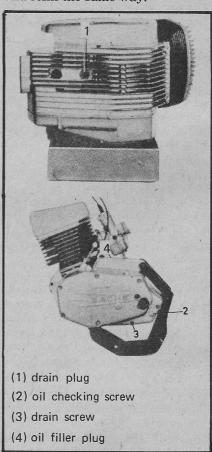


Then spray the flywheel and ignition with a silicone Ignition spray or battery protector spray.

Reinstall the flywheel, be sure the woodruff key is in place, and torque 30-35 ft. lbs. on KTM & 27-28 ft. lbs. on Penton/Sachs.

All the riders here take off the ignition cover when laying the cycle up for the week, this lets the ignition dry off and drain any water that may seep in preventing corrosion. Be sure to clean your coil connection too.

In draining and changing oil in the 100 & 125 Penton/Sachs many riders find it easiest to remove the clutch cover and drain all the oil out and refill the same way.



# TRANSMISSION CAPACITIES

100-125cc - 700cc

175-250cc with black case 1400 — 2000cc

175-250-400 with silver profile case
– 1500cc

Recommend Hi-Point Gear Lube or ½ Hi-Point Gear Lube & ½ ATF.



If you have a question or want to know an answer write Tom Penton, "Keeping Track", 3709 West Erie Ave., Lorain, Ohio 44053.

## **SWING WEIGHT**

A sore spot for us riders has always been the "junk" or "garbage" on an enduro motorcycle. After a moto-cross or hare scrambles, we detest putting the necessary equipment on our bikes for next week's enduro, because inevitably the resulting "Enduro machine" will handle something akin to a Sherman tank.

Actually, that "junk" doesn't weigh all that much, probably not any more than the couple gallons of gas in the fuel tank. The handling difference between the bike with an empty tank and one filled with gas is noticeable, but not nearly so much as a bike with the same amount of weight in enduro equipment. The difference is where the weight is placed.

The problem is that almost all enduro gear is mounted in the most undesirable place: The front end assembly - the part that does the turning. Any extra weight on this part of the motorcycle will rob energy every time you go to turn the handlebars. The further from the fork head the weight, the more energy it takes to swing it, and thus the "heavier" the front end is to handle. The trick is to eliminate as much of this "Swing Weight" as possible.

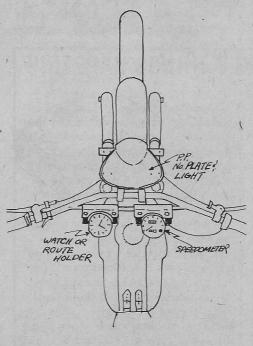
The worst offender is the headlight. Headlights are an item legally necessary to satisfy your friend and mine, the police. However, do they need to weigh half a ton and stick out to the front of the fender? Not at all. Something new

has come from Preston Petty Products which should be a boon to the enduro rider. It is a combination plastic number plate/headlight that keeps swing weight low. Preston had prototypes of these gems a month ago, and I understand production is now well underway.

The speedometer is next in line of offenders of Swing Weight. For enduros all one needs is an odometer. Odometers for bicycles weigh in at maybe a few ounces at most, so isn't there some light little thing we can use on enduro motorcycles? If there is, I'm not aware of it, so presently it is just a matter of putting up with the 'ole VDO. However, I don't let swing weight up front batting at flies. By flipping the stock '74 Penton speedo mount 180° so it is to the rear of the handlebar cross-brace, the speedometer can be positioned very close to the fork head. The watchholder can be mounted opposite the speedo. Personally, I prefer to carry my timepiece on my wrist.

Other incidentals like horn, mirror, etc. should be as light a variety as possible (bicycle) and mounted as close to the fork head as can be gotten away with. Obviously, putting tools and spare parts on the front end is definitely out.

Just a little attention to swing weight will improve the handling of an Enduro bike considerably, and make riding with all that "junk" much more tolerable.



#### HOW MUCH LOYALTY DOES AN AMATEUR RACER OWE TO HIS SPONSOR?

By John Francis Cycles Northwest

In this day of everyone seeking some type of sponsorship from their local shops whether it be from the young mini-bike racer on up to the semi-pro and professional riders, it may be logical to assume that quite a bit of trading goes on between this wide range of talent and local shops and motorcycle brands. A young rider who shows promise, for instance, may be lured away from his first choice of a patronized shop to another for a modest discount here and there on a motorcycle or parts. This is both flattering to the youngster as well as the parents who see their offspring as the super, junior-league star and, in comparison to most other/parents at the races, see their motorcycle budget at a slightly lower level, perhaps.

This may be fine but lately I've come in contact with quite a few shops who consistantly sponsor racers as well as a few national sponsors. More and more I hear the same story. They help the kid with not only parts, motorcycles and practical assistance but genuinely get involved in coaching him or her to a point where others begin noticing that there is a potential sales booster there and lure the racer over with slightly better deals.

This certainly tends to sour the sponsors who originally helped the kid get started. From the young racer's point of view he may feel that a switch to another brand may make him that much more of a better rider. To this I'd say - perhaps. An example of a national rider switching brands so often that soon he'll run out, would be Gary Jones. Jones really started coming into his own when he started riding for Yamaha. He rode consistantly enough that year to not only win the overall points lead of the Inter-AMA series but be crowned as the National 250 Motocross Champion. Then this last year, Gary changed to Honda and again we afforded the same honors as the overall 250 champ for '73. This year he has again pulled out of Honda's sponsorship and is riding for the Canadian Can-Am cause. He is again right up toward the top as far as points go but I also suggest that he is at the bottom as far as his past sponsors are concerned.

My point is that whatever brand Jones has ridden on the last few years, he has done extremely well. However, he will soon find few companies around willing to risk the dollars on him in the future.

The local scenes are pretty much the same. Dealers know each other most of the time very well. When one is stung by the local hero, several others will also take the hint and refuse to make any offers. Kids who think of themselves as early super stars are in for a rude awakening and so are their parents. They'll find that sooner or later the only ones who believe in their cause are themselves. Either because of their constant demanding or gripping about machine failure, etc., they'll find that no sponsor will want to deal with them.

Also, often it isn't the racer, himself, who is the problem but a parent or guardian who makes the situation between the sponsor and the rider so intolerable that the racer, himself, loses out in the end. Granted, changing machine brands is beneficial up to a point. From that point on it's strictly riding talent that gets the job done, especially so with today's sophisticated machinery.

Switch brands if you like while you're developing but be careful you don't find yourself switching sponsors too often. Loyalty has its bonds that you'll keep throughout your life. At the same time, sticking to a brand you like enables you, the racer, to concentrate on developing yourself and not looking.



Penton Central's Crew — L to R, Joel Wolfson, Sam Wad, Harold McDaniel, J. R. Horne, Jackie, Eddie Brashier, Mike Terry and Don Parker.



# **BUTCH PATERSON MAKES THINGS HAPPEN!!!**

March 17th, was the day that BUTCH PATERSON, "Made Something Happen." At a Moto-Cross in North Park Cycle Park, Topeka, Kansas, Butch was the only rider on a 250cc Penton. Many of the riders were Kansas' best and it was tough racing all the way. They had all the super trick equipment that has become a "necessity" to be competitive in the Pro Class.

This didn't seem to bother Butch because he just kept the pressure on during the first Moto-Cross, and finished a solid third after a fair start.

The second Moto-Cross was a different story. Butch was first into the corner with the whole world

right on his tail.

Butch was haulin, before long he was in second place. Butch lost the lead late in the Moto-Cross to a Maico who had pulled away from the pack, but Butch regained the lead with about 5 minutes to go. There just wasn't any way he was going to slow down and cool it. He had lapped just about everyone by the time the moto-cross was over.

What made the whole thing so neat was that Butch was on a 250cc belonging to Letko Competition Cycles, the bike was box stock and it hadn't even been jetted. It sure backs up the story that stock Pentons win, no matter what the competition tries to do!

#### PENTON RIDERS WIN 100, 125, 175 and 250 CLASSES AT 100 MILE CROSS COUNTRY RACE!!

Left to right top to bottom.

Terry Stevens 175cc Penton
Berry Stevens 175cc Penton
Jerry Robertson 100cc Penton
Randy Peart 100cc Penton

BIG BIKE OVERALL WINNER
Steve Whitworth 250cc Penton

Steve Whitworth 250cc Penton Jim Sutton 250cc Penton

SMALL BIKE OVERALL WINNER

Matthew Wortham 125cc Penton Charles Pelton 125cc Penton

## MOISSEEV LEADING 250cc GRAND PRIX ON PENTON/KTM



Last year's new 250cc M-X sensation Guennady Moisseev has gotten the Penton/KTM all together and is now leading the 250cc G.P. list.

He put it all together at the opener in Spain where he was the overall winner and his riding partner Pavel Rulev took third overall!!!!

From the opening round he has gathered G.P. points at every event and took the overall win at the Polish G.P.

With the spring series run and 3 more G.P.'s in the fall Moisseev and Penton/KTM have a very good chance of winning the 250cc World Moto-Cross championship. This would be an upset for the Japanese who have dominated the M-X action for the last 4 years and for the tiny Penton/KTM factory to challenge the Japanese and win is a terrific accomplishment.

Matter of fact most of the European M-X factories have scored very strong comebacks against the Japanese thrust. Husqvarnas Heikki Mikkola has dominated the 500cc M-X championship.

In the next issue of "Keeping Track" we will get together some info on the Penton/KTM G.P. stars and the series.

## PENTON RIDERS WIN POST ENDURO

Sun, sand and wide open space, could well describe the Post Enduro. On April 7th, four hundred and fifty eager riders mounted their bikes. These riders came from New Mexico, Nebraska, Oklahoma, Wyoming, as well as Texas, who wouldn't settle for anything but the best. This is how the races went for our Penton riders.

Overall Winner — Henry Botick, Dallas.

Powder Puff — 2nd Laverne Phillips, Abilene 4th Jeanette Westfall.

Under 16 — 1st Sandy Cheek, Amarillo, 3rd John Terry, Amarillo, 4th Donny Westfall, Amarillo.

100cc-A Class — 1st Jody Coker, Amarillo, 2nd Greg Williams, Amarillo, 3rd M. W. Flowers, Gainesville. 100cc-B Class — 3rd Glenn Allison, Midland, 4th Kenneth Cheek, Amarillo.

101-125-A Class — 1st Glenn Terry, Amarillo, 2nd Jack Moss, Amarillo, 3rd James Faustlin, Plano.

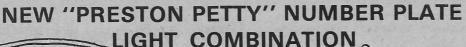
101-125-B Class — 1st Dwain Evans, Midland, 3rd Perry Ellzey, Crane.

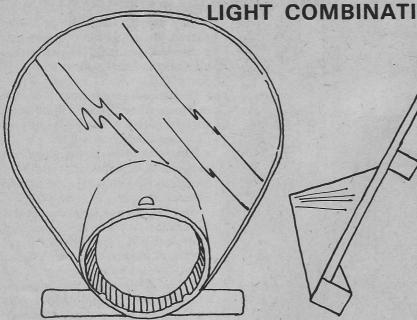
126-200cc-A Class — 1st Jerry Chitsey, San Angelo, 4th Jerald Henderson, Amarillo.

126-200cc-B Class — Joe Godfrey, Amarillo.

210-250cc-A Class — 3rd Eddie Brashier, Amarillo, 4th Terry, Amarillo.





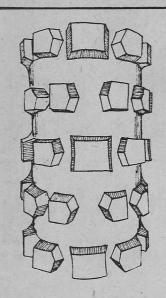


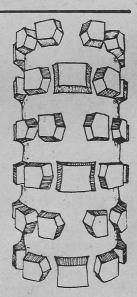
Preston Petty has come up with the best combination in a long time. It can be used for both the Enduro and Trail riders. This unique new item incorporates a 4" sealed beam into its unbreakable headlight cowling. Comes complete with cable ties and will fit any cycle. It comes in white, yellow or silver.

#### HI-POINT KNOBBIES.

Be it Moto-Cross, Enduro, Trials or Hare Scrambles. These tires will give you the performance you demand. Hi-Point knobbies are made from synthetic rubber and are pliable yet very long wearing. The large fast cleaning lugs run deep down the sidewalls for good cornering action. A nylon cord body takes the worst in punishment.

3:00 x 21	M-X, 4 ply
3:50 x 21	M-X, 4 ply
3:50 x 18	M-X, 4 ply
4:00 x 18	M-x, 6 ply
4:50 x 18	M-X, 6 ply





### PENTON "START-FINISH" BANNER





A beautiful 15' long 2-sided Start-Finish banner for your track or special event. Unique in that you can put your name, event or track name on each end of each side of the banner . . . . Made of tough yellow vinyl with red lettering.

# HI-POINT



# TAKES THE BOOT ONE MORE STEP TO BEING THE ULTIMATE

Hi-Point has come up with another feature that the enduro and M-X riders demand. A new stainless steel shin guard, is the newest feature in the Hi-Point line. Along with our many other features, exclusive buckles, padding, steel toe cap and the popular height and light weight.

# Mike Laursen . . . Jersey's Best!





Mike Laursen from Toms River, New Jersey is a tough person to beat, and if you have ever ridden against him you know what I mean.

Mike started riding when he was 16 years old, with his father in the woods. The sport then became important to him and he joined "Central Jersey Competition Riders." Since that time he has won some impressive enduros. Mike received first in his class at Frozen Bird, Competition Dirt Riders, and Scrub Pine Enduros, third at Warren Grove and Delaware Valley Enduros. He has also won Grand Champion twice, once at Leamings Mills and once at Pine Barrons Enduro.

Mike isn't the only Penton rider in his family. Ken Laursen, Mike's father also rides a 175cc Jackpiner and I might add he rides very effectively.

In the future Mike plans to ride more Nationals and try his hand at the ISDT qualifiers. With three years of experience behind him he should prove to be a threat to any rider.

Mike has owned and maintained two 175's and one 250cc Pentons. He has also owned 125 and 175 Hondas and still keeps his 125 Suzuki for M-X racing.

To you, Mike, we would like to say congratulations on some good riding!

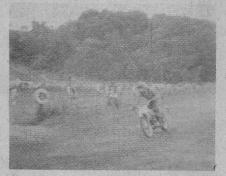
To Keeping Track,

In your "Keeping Track" Magazine, Fathers and Mothers write in and tell about their sons (daughters) who win on Pentons. It's true! They are definite winners. I'm writing about my brother (Holger).

He recently bought a 175cc Penton/KTM 1974 Model. In his first race at Bonne Terre, Mo., he took 3 first places in all heats.

His second race at St. Clair, Mo., he took the same toll on others. Three heats, all first place.

Just last week at Cycle World U.S.A., St. Peters in two heats he took first twice. A Bultaco got him just barely. Another first though.



I'm not bragging on just my brother but how about the shop he got it from. St. Peters Suzuki, owned by Mr. Casper and Mr. Hill. They call it the "Family Shop" and it is.

Excellent service, very friendly, well kept and more. I just bought a Suzuki 125 after a year of racing a Yamaha 100. I won't brag on either one like my brother's Penton. It is fast and fantastic.

Thanks for your time. Just thought I'd write and let you know about another winner. He had been racing various types and sizes of bikes and never won a first place trophy. I thank you for him. He doesn't know I wrote you.

Moto-Cross Forever, Gary L. Graub Pacific, Mo.



## PENTON IMPORTS

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