



Norton Notice



The Newsletter of the Norton Owners Club

No. 144

Apr. 1990

Powerful But Dirty: the Norton Rotary. See "Alan's Wrench" for the On-going Saga on One Man's Attempt to Clean it Up.

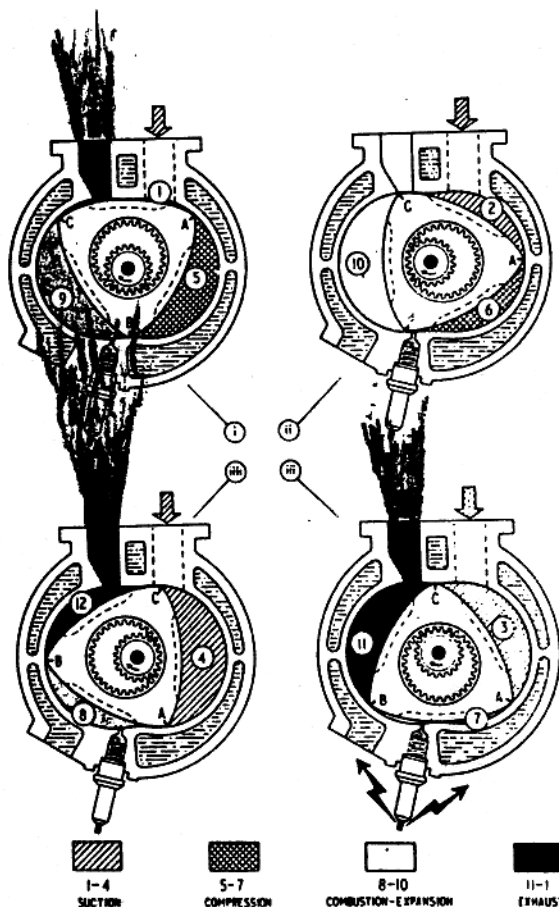


Figure 5.2 A planetary rotary engine (Reprinted from "The Wankel RC Engine" by R. F. Ansdale, A. S. Barnes & Co., New York and Butterworth & Co., Ltd, London, with permission.)



The Newsletter of the Norton Owners Club



Norton Notice

is published by the Northern California Branch of the Norton Owners Club. Its purpose is to inform and entertain members regarding all aspects of the Norton motorcycle, including history, technical advice, and preservation of the marque.

NORTON NOTICE is a reflection of its readership, who are encouraged to submit any article, technical tip, photograph (original or otherwise) as long as it is in good taste, so that other Norton enthusiasts may enjoy it. For Branch members who cannot attend club meetings or club rides, the **NORTON NOTICE** affords an opportunity to share experiences and information with the membership of the Branch, and to bring the Branch members closer together.

The deadline for items to be submitted for publication is the 15th of each month.

Membership in the Northern California Branch of the Norton Owners Club is available for

\$15.00 per year

Membership dues are payable to the Branch Secretary/Treasurer.

Renewal dues are payable at the end of the individual's membership year, that month being designated by the last number of the individual's membership number as located on the mailing label of the **NORTON NOTICE** or the membership card. For example, 745/2 denotes member 745 with dues expiring on the 1st of February.

All changes of address should go to the Branch Secretary/Treasurer, not the **NOTICE** Editor.

Subscription to the **NORTON NOTICE** only is available for \$15.00 per year. This does not include membership in the Northern California Branch of the Norton Owners Club, nor does it afford any of the rights or privileges of membership in the NOC.

Membership in the Northern California Branch of the Norton Owners Club entitles a member to monthly issues of the **NORTON NOTICE** and bi-monthly issues of **ROADHOLDER** magazine, which is sent directly from England, keeping members informed of Norton owners' activities worldwide. Membership provides voting privileges at all NOC and Branch meetings, and allows one to purchase Norton spares directly from England, at significant savings, through the NOC Spares Program.

CLUB OFFICERS

PRESIDENT-EDITOR: Allan Goldwater, 1780 Chanticleer Ave., Santa Cruz, CA 95062. (408) 475-7505

VICE PRESIDENT: Maya Lal, 1370 McKendrie, San Jose, CA 95126. (408) 241-4615

SECRETARY/TREASURER: Harry Bunting, 1163 Crandano Ct. Sunnyvale, CA 94087. (408) 736-6492

RECORDING SECRETARY: John Covell, 1183 Alemany Bl., San Francisco, CA 94112. (415) 334-1183

NOTICE PUBLISHER: Marick Payton, 301 W. O'Connor, Menlo Park, CA 94025. (415) 321-5083

RIDE COORDINATORS: Lynn Miller, 639 Mangels Ave., San Francisco, CA 94127. (415) 334-2042; Don Danmeier, PO Box 594, Novato, CA. 94948 (415) 898-0330

PARAPHERNALIA: Stan Beneveds, 36646 Darvon Ct., Newark, CA 94560. (415) 793-0704

NORTON OWNERS CLUB

Important!

(Please take note of the following fine print.)

The object of the Northern California Branch of the Norton Owners Club is to promote, encourage and develop all motorcycling activities. The Club's members are owners of Norton motorcycles, and they often submit for publication in the **Norton Notice** technical tips pertaining to motorcycles of the Norton marque. Technical tips so published have been reviewed for technical content and are believed to be both acceptable and workable, but no guarantee is made or implied that they will work correctly, nor is any liability assumed by either the Norton Owners Club or the authors for any problems resulting from use of these technical tips. The Club also assumes no responsibility for the acts or omissions of its members in connection with Club activities. **Norton Notice** articles or other material express the authors' views only and not necessarily the official policy of the Norton Owners Club or its Northern California Branch. The editor reserves the right to accept, reject or alter all editorial and advertising material submitted for publication. Advertising published does not imply endorsement of products, goods or services. Now you know.

Upcoming Events

Club Rides

April 15 (Sun.) Easter Morning Ride
Mt. Tam
(See article in this issue by Mean Marshall,
ride leader. This will be the last Easter
sunrise ride lead by Mean, ending a 15-
year tradition.)

May 13 (Sun.) Delta Ride (Locke)

June 16-17 (Sat.-Sun.)
Sierra Ride/Chili Cook-Off
(Jointly w/ BSAOC)

July 15 (Sun.) South Bay Ride
(tentative)

Aug. 11-12 (Sat.-Sun.)
Dutch Flat Overnighter

Sept. 16 (Sun.) Old-Timer's Ride
(Meet at Alice's)

Oct. 14 (Sun.) Pumpkin Ride (tentative)

Nov. 3 (Sat.) Northbay All-British Ride
(Members only) w/ Ariel, BSA,
& Enfield Owners

Dec. 16 (Sun.) Mt. Hamilton (tenta-
tive)

Meeting Schedule

The club meets on the 2nd Thursday of
each month, at 7:30 PM. The location
rotates between Peninsula, South Bay,
East Bay and S.F.

April 12 -- Peninsula
The Prince of Wales Pub on 25th Ave in
San Mateo offers a wide selection of beers
and a private meeting room with dart
boards!

May 10 -- South Bay
Harry's Hofbrau, El Camino near Cas-
tro Street, Mountain View

Jun 14 -- East Bay
Gino's Pizza, 2629 Ashby (near College
Ave), Berkeley, CA

July 12-- San Francisco
Lake Merced Boathouse. Off Skyline
Blvd. Great food, nice room with big-
screen cycle racing videos and a lingere
show!

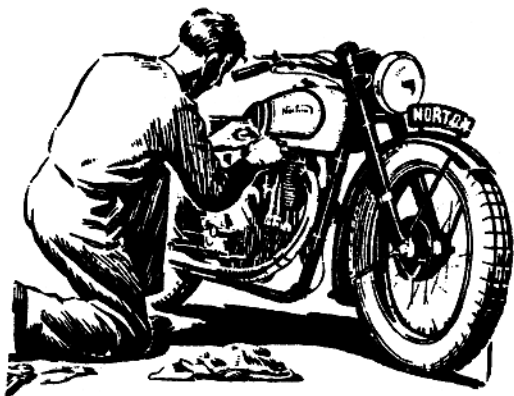
Special Events

Antique Motorcycle Show and Auction in
Tulare, April 28.

Monterey Rally of European Motorcycles,
Sunday, April 29. Poker run leaves Mon-
terey Fairgrounds at 9 AM. Contact Rick
Nagle (408) 336-2344 or Gerry Reynolds
(408) 373-8197.

Alan's Wrench

Tech Tips and Gossip from the Editor



After six months of work and thousands of dollars invested, I've finally realised that the Norton Rotary, as designed and built by the factory, does NOT meet US EPA requirements. While the factory has never publicised this fact, they are surely aware of it. In a recent Cycle World article on the F1, an unnamed factory representative said "we hope to meet US requirements in the near future."

I'm convinced this is the main reason for their shipping two or three bikes to Harley Davidson in 1987 "for evaluation", and their subsequent failure to publicise or import the machines here. The plot thickens though. Pat Munroe (owner of Munroe Motors in S.F.) recently got a call from someone claiming to represent Norton's import interests in the US. Pat was told that dealerships were being established, including Seattle, San Francisco, Los Angeles, and several in

the Midwest and East. Pat was told that each dealer would have to purchase five machines plus parts, and that the machines were "50-states legal". Being a smart guy, Pat said "I'll think about it", and did some market research by running a classified in the Sunday Chronicle. I don't know how many responses he got, but as far as I know, he's not running to the bank yet.

There are two possibilities here: 1) Somebody is operating a scam, trying to capitalise on Norton's recent publicity or 2) Norton really has solved or is about to solve the emissions issue and is doing advance footwork to establish a dealer network. Pat has promised to keep me informed of any news about this situation.

Getting back to my own bike and its problems, if Norton does obtain EPA certification, it should be pretty easy to modify my machine to match. Not cheap mind you, but straightforward. But there is no reason other than hope to believe this will happen soon. I am therefore proceeding with my own research and engineering. As an independent importer, I can follow somewhat simpler EPA certification procedures than those required of a manufacturer, but it still comes down to the basic performance of the engine.

Last month I ran yet another preliminary emissions test at the lab in Berkeley. If you attended the meeting in San Francisco, you heard me announce that the bike didn't even come close to passing. Then I was rudely interrupted by

the appearance of two half-naked ladies selling lingerie, so I didn't get to finish the story. From past test results, I learned that the HC (hydrocarbon) emissions of my Norton rotary overall exceed the Federal limit by about 20%. From studying the test printout I can see that the HC emissions under load were well within limits, at least with the engine warm. At idle, however, the HC level was way high. My recent carb rebuild therefore concentrated on making the idle leaner.

What I found in the last test was that leaner doesn't mean better. After talking to a bunch of people who do Cal smog testing, I've learned that there is a null in the HC as the idle is leaned out, and that past a certain point HC starts to rise again. Most vehicles bottom out at about 4-500 ppm (parts per million). Since I have installed oxygen sensors on the rotary, I can find the optimum point quite easily. Unfortunately, even set carefully to optimum idle mixture the Norton rotary still has over 2000 ppm of HC. This is off scale on the usual smog-station testing equipment, so it may be much higher in fact.

This unfortunate result is despite the good design of the carbs and the use of a separate small-diameter idle intake port which should keep the mixture velocity high. I can think of several characteristics of the Wankel motor which might cause dirty idle. Here's my current theory: The combustion chamber of a rotary is a dished out area in the face of the rotor. Refer to the drawings on pg. 7 which show the combustion chamber geometry (reprinted from the book *Thermodynamic Analysis of Combustion Engines*, by Ashley Campbell, John Wiley & Sons, 1979).

As the rotor turns, the combustion

chamber depression is swept across the cool wall of the rotor housing, covering an area perhaps several times that of an equivalent displacement piston engine. When the idle mixture hits this cooler surface, it simply condenses out as a fuel film on the surface of the rotor housing, resulting in incomplete combustion. As the engine speed increases, so does the mixture turbulence and the condensation is therefore prevented or reduced. The temperature of the housing and rotor rise with engine load, which also helps.

Campbell notes that "...the rotor moves relative to the bore during combustion, which is likely to induce more gas movement than will be found in piston combustion chambers." While this is probably true at some engine speeds, it neglects the great advantage obtained in piston engines from modern "squish area" combustion chamber designs, which have proved to be an invaluable promoter of combustion turbulence. The aircooled Norton motors went through at least four combustion chamber shape revisions and probably many more in the various water-cooled and racing versions, so this is known to be a problem with the motor, and is one area where intensive engineering could reduce emissions. Campbell also notes "...When viewed for the first time, the sense of astonishment is not so much that the rotary engine works well but rather that it works at all."

While I'm not equipped to completely redesign the combustion chamber, there are several other ways I might reduce emissions at idle. First, I can change the geometry and even the carburation of the idle circuit. Since there is a separate intake port and manifold (a

piece of 1/4 in. copper tubing) for idle, I can easily fit a tiny auxiliary carb or some sort of fuel injection which operates only at idle. This will be my first step. Some idle-circuit preheat might also prove beneficial, especially with the engine cold. Finally, if these simpler measures don't succeed, I can install a catalytic converter. The unit used on later VW Rabbits is almost small enough to fit in the place occupied by the existing exhaust header. This is a major step though, as the resulting back pressure will surely have a negative effect on engine performance, to say nothing of the expense and fabrication work. The stock header is all stainless, which means expensive tig welding if I use it as a starting point.

In any event, the first step for me is the acquisition of an exhaust analyser capable of reading HC. Many California smog stations need to upgrade their equipment this year due to stricter smog standards taking effect July 1. This should make the old systems readily available but so far I haven't located one for sale. Please ask around, where you have your car serviced and among acquaintances in the industry. I need a working system for \$300 or less. It can even be an old Sun infrared type system with a mechanical meter, but it must measure HC in ppm. Call me if you have any leads (408) 475-7505.

Some quick comments on events: the Clubman show was a low-key success. The parts were plentiful and pricey. The bikes were beautiful. We enrolled 17 new members and sold enough shirts and stuff to reorder, so look for a new club logo to appear in the next few months. Thanks to Don, Andy, and all the other BSA guys for being great hosts.

Art Sirota received "best of marque" for his exquisite International, and thereby won an automatic cam chain tensioner donated by Rich Avidano (RMA Engineering). The People's Choice award went to Jason Putris' Featherbed Special (Combat stage-II motor, Lyta 6-gal alloy tank, and many more details). I hope to feature this bike in a future issue of the Notice.

The next event, coming up real soon, is the Easter Sunday ride to Mt. Tam. This is the last year the event will be sponsored by Mean Marshall, and there has been some talk of our club taking over the sponsorship in the future. I plan to definitely be there this year and if lots of you also show up, that will be a good sign that it works as a Norton Club event. If I'm the only one there from the club (unlikely), I probably won't mention it again.

Next is the Antique Motorcycle Show and Swap in Tulare on April 28th, followed by the Monterey European Cycle rally on Sunday the 29th. These two events together make a nice weekend, and so I'm proposing them as an alternate club event. If anyone is interested in making this run, please let me know. If I have some company, I'm rarin' to go.

I'd like to thank all you folks who have been sending contributions to the Notice lately. Varied and interesting material makes for a good newsletter and a happy editor!

Finally, I'm still looking for a set of hard luggage which I can use both on the Rotary and on my MK3. Craven or Krauser saddlebags are preferred, especially if they already have mounting hardware for the Commando. BCNU...

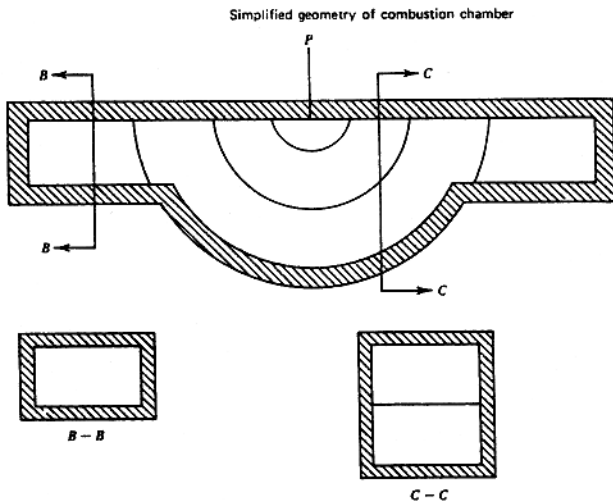
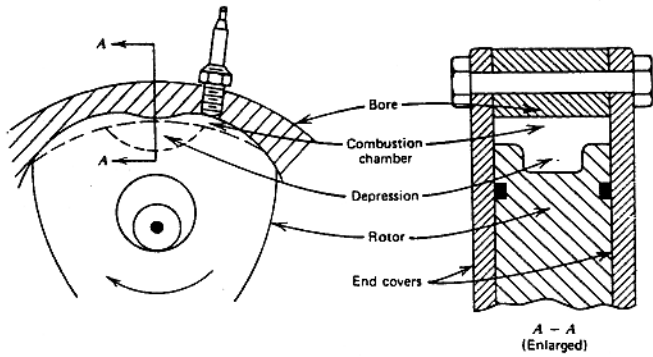


Figure 5.31 Rotary engine, planetary rotation type, showing rotor position near point of ignition, and a simplified geometric model of the combustion chamber.

Mean Marshall's Last Easter Ride

Yes, folks, we've been doing this silly nonsense for fifteen (15) years! Hard to believe, isn't it? Let's see, most marriages don't last this long nor do a lot of bikes or . . . well you get the picture. All good things come to an end at some point, and this is it for the shop sponsoring the Easter ride. Maybe next year some other bunch of maniacs will carry on with it.

OKAY, so here goes . . . for the first time in the history of the ride, the ride number and the date match! It also happens to be the day that you are supposed to ante up to the I.R.S. This is getting weird . . . April 15th . . . it also happens to be the latest day of the year that the ride has happened! Good time to quit.

Fifteen years without a single change . . . if you've been on any of the previous fourteen rides you can quit reading.

Who's invited to attend? Anyone with a "British Motorcycle," (NOT British ancestry), any of our customers or any of our friends. Does that apply to you?

East Bay: the Ashby Bart station (West side) on the corner of Ashby Avenue and Martin Luther King Jr. Way in Berkeley at 4 AM (Yes, 4:00 AM) We leave for the Richmond Bridge Toll Plaza at 4:15 AM, where we meet those folks who are too lazy to meet us at the Ashby Bart. From there, we're off to Tam. Junc-

tion in Marin County to meet up with the rest of the folks.

S.F. and South Bay: the parking lot by the toll plaza of the Golden Gate Bridge at 4:15 AM. We leave at 4:30 AM for Tam. Junction in Marin to meet up with the folks from the East Bay.

Marin & North Bay: Tam. Junction in Marin at 5:00 AM (Yeah, they get to sleep in), where we all meet up.

We leave for the top of Mr. Tam at about 5:20 AM to enjoy the sunrise and each others company. (This may be moved up to 5:10 AM if the sun is going to beat us.) At this point, we have 2-3 hours to hang out and meet each other, check out the bikes and tell lies. At some point between 8 and 9 AM we head down the mountain for breakfast. Since we have no way of knowing how many people will be attending the ride, it's impossible for us to schedule restaurants. A couple that we have used in the past are:

Parkside Cafe in Stinson Beach,
Station House Care in Pt. Reyes Station,
Mike's Cafe in Pt. Reyes Station.

We are open to any suggestions that you might have. Please feel free to call the shop with your ideas. We'll post a list of any additional restaurants that you might come up with. Breakfast is your responsi-

bility, so make your own plans. Remember, most restaurants don't open til 9:00 AM.

After Breakfast, for the diehards, we'll meet up again in Pt. Reyes Station at about 11:00 to continue our ride up Route 1, heading for the Russian River. From there we'll head over to Calistoga (the Silverado sounds good about now), down through the Wine Country and then back home. If all goes according to plan, you'll be back in bed by 2:00 PM!

Most of you have attended at least one of the previous fourteen rides. We're asking for your help in keeping it all together, i.e., keeping folks on the right roads, keeping our meetings places and the top of Mt. Tam clean of garbage and just helping out in whatever way is needed). Thanks in advance from everyone!

Other interesting side effects: Dress warm. It can be absolutely wonderful at low levels and cold as a witches tit on top of the mountain. (You've been warned). Bring coffee, tea or whatever . . . you'll be glad you did.

NO NINJA MENTALITTES . . .
This is NOT a road race. Many of you have never ridden with this many people before. Don't assume that other folks are as good a rider as you think you are! We don't need the police or ambulance companies getting any additional work. Plus, I'm tired of going to funerals.

There is no back-up on this ride. (That means, no pick-up trucks, tools, parts or related help). Be sure of your machine and/or make arrangements with your friends. NO, I don't want to listen to the noise that your bike is making or answer any of your questions as to why your bike stopped running . . . I'm not working.

In case of rain the ride is cancelled . . . since we have to pay to get a ranger up at that hour of the morning, we won't have time to reschedule for the following Sunday. We may devise some other bizarre event; so check with the shop.

By now you're thinking "This sounds great" or "These folks are crazy." Both thoughts are accurate. It is sounds good, you're welcome. If not, you probably need your beauty sleep anyway.

This last ride is dedicated to John Bannister (my partner in the shop) who passed away on December 21, 1989, of cancer. Though many of you never met J.B., it was because of him that the shop is. I'll always miss my best riding partner.

Thanks to everyone for the previous fourteen years of memories—you folks have been great.

Oh, yeah, one last thing: I'm not buying your gas or paying for your breakfast. GET A JOB!

See you at 4:00 AM—Mean Marshall

Vintage Race Calendars

Virginia City

In celebration of the Virginia City Grand Prix's 20th anniversary running, they are including Vintage Classes in their race program. The race is scheduled for Mother's Day weekend, May 12-13, 1990.

The race will run approximately 30 miles per lap through and around Virginia City's Historic Mining District and into the Nevada desert for at least two hours.

The Vintage Classes will start together after the main body of racers has departed on Saturday, May 12th. The Vintage Classes will run an abbreviated race in deference to the age of both the motorcycles and possibly the riders involved.

There will be expert, junior and novice classes for Pre 1974 4-strokes and 2-strokes.

Motorcycle technical inspections will be held according to AHRMA rules with spark arresters required by the Nevada Division of Forestry. Kill switches are also required. Membership will be required in both AMA and District 36, which may be purchased on race day but will be checked. All finishers will receive a trophy.

Support of this event may insure future Vintage Classes in this and other racing events. For further information and/or entry forms, send a self-addressed, stamped envelope to: W.S.R.A., P.O. Box 7244, Reno, Nevada 89502-7244. Or, call Dana Boyer (702) 355-1602 (weekdays 7:30 AM to 6:00 PM), (702) 673-3276 (evenings 6:00 PM to 9:00 PM).

Lodi

Vintage racing calendar for Lodi Cycle Bowl, Lodi, CA:

April 15: TT Sunday Day Race, Regular and Vintage Classes

April 22: There will be a Classic and vintage Bike Show and a Vintage Class [C] Short Track Exhibition. This will be held along with the Vintage and Regular Short Track Race program. This is the first Short Trace Race of the season and will be held on Sunday afternoon. General admission is \$5.

May 5: Short Track. Saturday night Vintage and Regular Short Track program.

May 6: This is the AMA 600cc Pro Regional Short Track Race. There will be a Vintage Short Track Class [C] exhibition on this Sunday afternoon program.

May 13: Short Track. Sunday Day Vintage and Regular Short Track program.

June 2: Short Track. Saturday night vintage and Regular Short Track program. This is the first race of the 13-week series for the high point champion, which is based on the best 10 out of 13 finishes. Runs to the night of August 25.

For more information, call the "Head Chicken" at (916) 989-4938.

Club Ride Report

It was a dark and dreary night. Cold, too.

But Sunday dawned clear and bright, with every promise of another sparkling day in the country for those who were up to it. The Nortonites who didn't have to get permission from their mommies were just that, meeting at Mean Marshall's place in Berkeley before finalizing the route plans. The high point of the day was already established, namely, the lunch stop, but getting there was half the fun — or maybe more.

A little Highway 80 scoot led to El Sobrante and thereafter some serious backroad shenanigans. Well, they were serious until just north of San Pablo Dam Road, when Leo's transmission went south. Eric doubled back on his redoubtable Triumph and presumably lifted him back into town for an eventual rescue of the bike by truck, because on my way home I found nary a trace.

At the Royal Oak pub in Clayton we treated ourselves to some English food that was typically un-English: it tasted great. By the way, this location might be the site for more events if we can swing it (anyone interested in meeting there as an East Bay venue?) as the atmosphere is right; it's owned, operated and (when we were there) populated by Brits. Neat. Our host was an ex-Norton owner and he managed to roust out one of the local Vincent lads, who came down to share a pint.

On of these days I'm going to submit a ride report that's a batch of fabricated bullshit, just to see if it subsequently coaxes

out the doubting Thomases to see whether we REALLY have as much fun on our bikes as we way we do. But, as for now, I don't have to. Try it and see.

Remember, rust never sleeps.

—Don Danmeier

March Minutes

Alan brought the meeting to order at 8:20 p.m. at the Lake Merced Boathouse. He reported the sad news that his Interpol 2 failed its emissions test—too dirty. It may be a choice between a catalytic converter and shipping it back to the UK.

Coming events were mentioned: the Clubman's All-British Show on April 1 (booth volunteers were recruited) and Monterey Rally of European Motorcycles on April 29.

The Ride Coordinators welcomed volunteers to lead rides. The ride to the Royal Oak Inn at Clayton was noted for March 11. The National INOA meet was spoken of, too, July 18-21 in Wisconsin.

Art Sirota brought his all-aluminum 1952 500-T engine to show the members, a beautiful restoration job.

Lynn Miller mentioned that a new sponsor may be needed for next year's Easter Morning Ride. Should the NOC become the sponsor?

Alan gave a quick summary of the club's raffle bike, not much progress made yet, more participation wanted to restore it.

Before Alan could adjourn, a matched pair of Acts of God distracted the members. No objections were heard.

—John Covell, Recording Secretary

... Side Trips

... an occasional article dedicated to sarcastic, incisive, hopefully humorous insights into the joys and foibles of NORTON ownership

by Andy McKerral-Belcher

Someone recently observed that I generally spend about one hour of maintenance for every hour of riding time on my Mark III. Actually, this observation is somewhat skewed . . . it doesn't take into account the time spent in meditation preparing for a ride to Pescadero Beach, Pacifica, or Ocean Grove by chanting mantras, kneeling East in the general direction of Wolverhampton, or South in the general direction of Phil Radford's home or Raber's Parts Marts. There seems to be some karmic consistency in the sure knowledge that, should one decide to save 30% on the cost of a speedometer cable by purchasing a generic brand, the goddamn thing will fail (usually at the drive end) after 150 miles, when you know damn well and good that the Genuine Article, while costing \$25.00, would produce chatter-free, accurate speed measurement for the next ten years. The old axiom which states, "you get what you pay for" still holds true

Y'all remember the 750 Commando that the club purchased all those months ago, the one we're gonna raffle off later this year for a Fund Raiser for the Club? Yeah, that one . . . well, it arrived at my humble abode about two months ago and I've had some true religious experiences with it. Having noted the general

comments made about this machine by various people, I decided to perform my own analyses of the little monster.

Initially, I had a difficult time getting it to start. For lack of a choke setup, I tried "tickling" the carbs; while the right jug would fire, the left jug was not responding, even to the most suggestive of touches. Carburetor disassembly and careful inspection revealed a maladjusted float seat, which was corrected through advice given by the INOA Tech Digest. Reassembly and two kicks produced a roar that caused my next-door neighbor to pay a visit for the purpose of inquiring what the hell was going on . . .

Then for the road test. Menalto road to Middlefield, a curvy, flat-tracker style test run in trendy suburbia. Yep, the wobble was there, just as stated. Said wobble also felt familiar, from days when I wasn't paying attention to total machine maintenance, and so at the intersection of Menalto and Middlefield, I paid a brief visit to the Union 76 Station's air pump . . . and 20 pounds of air per tire later, the wobble problem was properly rectified. On to a stretch of brief freeway between Willow and University. Having properly warmed the engine, with reassuring valve clatter between my legs, I took a playful fistful of throttle on the on-ramp and experienced something just short of orgasm; jeezus, this old pig MOVES! After three gears and 5,000 rpm, I'm at 70 and wondering what's waiting for me at Whisky Gulch 25 seconds after getting on the freeway. Alan told me it was a fresh engine. He never heard the innuendos, though . . .

Legal paranoia sets in and I head back to the house. The engine is solid.

There's Bay Road, a small 1.25 mile stretch which runs parallel to 101 through East Palo Alto—a straight, unattended stretch of road that's a useful tool for blowing the carbon out of your engine. Without excessive superlatives, I will only state that I got the front end to lift up in two of the four gears. This bike can kick some serious ass.

My particular assignment, as I see it, is to detail this machine to the point where it SHOWS the same level of performance that it actually PRODUCES. This has been a slow, pains-taking task. The alloys used for valve covers, timing side, carbs and drive side are all of different hardnesses, as was to be expected during that year. This can cause difficulty for those of the polishing persuasion, but I am overcoming most obstacles. Additionally, several rather serious gouges, dings and scrapes require some judicious, careful grinding and filing; but so far, no unsurmountable situations have reared their heads. As the work progresses, the machine is taking on a subtle but clearly pleased aura, and I can only hope that one of the \$50.00 worth of tickets I plan on purchasing will ensure a permanent place in my garage for this gregarious beast. If you happen to want visitation privileges, a simple phone call is all that necessary.

Classifieds

FOR SALE: handlebar, new chrome, flat style, \$12; handlebar, used but excellent cond, slight rise style, \$8; 'S Type' dog-leg silencer bracket, used, excellent cond, \$7; Haynes workshop manual, Commando, used, excellent cond, \$7; Haynes workshop manual, pre-

Commando twins, used, excellent cond, \$7; Clymer workshop manual, all twins '61-74, \$7. Art Sirota (415) 327-3167. /4

FOR SALE: '74 850 commando, raced on a season, not first, not last, but always there. Excellent condition, 18"-inch wheels, steering dampener, Lockheed caliper, Grimeca master cylinder, Bub mufflers, stock pipes, well maintained. Also, to go along with this, one 750 motor and trans and whatever else there is. Make offer, reasonable offer's please. Ken Whitney (415) 540-0421. /4

BUFFING & POLISHING, cut rate. Call for estimates. Brad Green (415) 537-4807 or 581-4882 /4

FOR SALE: Norton Model 50, 1957, 350cc, \$1800; Norton Commando 750cc Roadster, post-combat series (mfg Oct '72) with Dardanelli paint work, \$2500; 750 Roadster tank, \$80; metal side covers, \$40/pair, all in black/gold livery. Walt Moffatt (408) 378-2825. /4

NORTON TRIUMPH
A.J.S. B.S.A.
VELOCETTE

MANX MOTORS

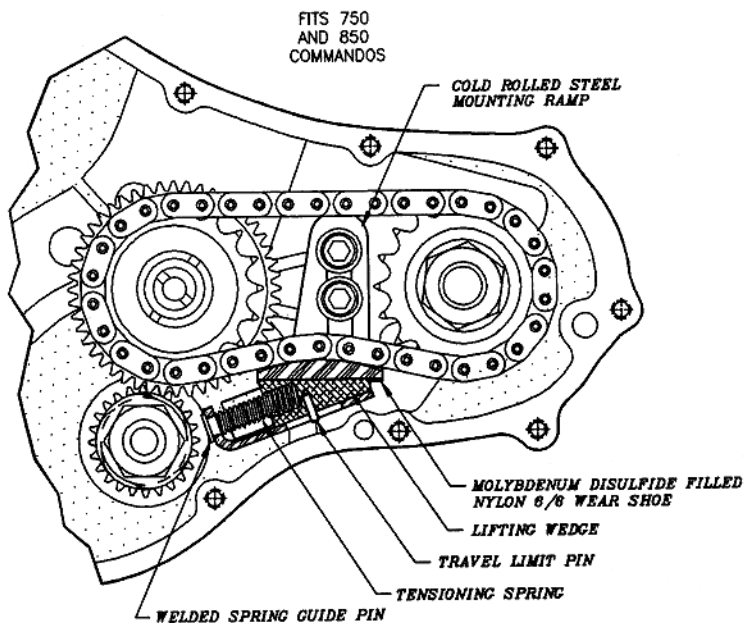
**BRITISH
MOTORCYCLE
SPECIALISTS**

**Repair • Rebuilding • Tuning
Bikes & Parts Bought and Sold**

Fred Twigg
Sebastopol, CA (707) 823-9165

**25 YEARS EXPERIENCE
VERY COMPETITIVE RATES
YOUR NORTH BAY ALTERNATIVE!**

paid advertisement

Norton**AUTOMATIC CAM CHAIN TENSIONER**

HOW IT WORKS: THE CONSTANT SPRING FORCE INSTANTLY MOVES THE WEDGE UP THE RAMP TO MAINTAIN CAM CHAIN TENSION AND PROPER ADJUSTMENT. REFLECTIVE FORCES OF THE CHAIN AGAINST THE SHOE (WHICH OCCUR EVERY REVOLUTION OF THE CAM SHAFT) CAN NOT FORCE THE WEDGE BACK DOWN THE RAMP.

MAINTENANCE FREE: ELIMINATES THOSE 6,000 MILE TEAR-DOWNS OF THE TIMING CHEST. ADJUSTS ITSELF WITHOUT INTERVENTION FROM OWNER.

BETTER PERFORMANCE THAN STOCK TENSIONER!

ENGINEERING PROPERTIES OF MDS NYLON ARE SUPERIOR TO THE HARD RUBBER THAT IS BONDED TO THE STOCK UNIT. THE CONSTANT SPRING FORCE THROUGH THE WEDGE, COMBINED WITH THE EXCELLENT SHOCK ABSORBING CHARACTERISTICS OF MDS NYLON, DAMPEN OUT CAM CHAIN VIBRATION. HOLDS VALVE AND IGNITION TIMING MORE PRECISELY, TO DELIVER SMOOTHER POWER THROUGHOUT THE ENTIRE RPM RANGE.

PRICE: \$65.00 U.S. \$70.00 CANADA, \$75.00 ENGLAND
(INCLUDES SHIPPING AND HANDLING, CALIFORNIA RESIDENTS ADD 7% SALES TAX)

SATISFACTION GUARANTEED!

IF YOU DON'T LIKE IT FOR ANY REASON, SEND IT BACK AND WE WILL REFUND YOUR MONEY.

WANT MORE INFORMATION? SEND \$2.00 FOR COMMONLY ASKED QUESTION AND ANSWER SHEET + COMPLETE SET OF ILLUSTRATED ASSEMBLY INSTRUCTIONS.

REFUNDABLE WITH PURCHASE OF AUTOMATIC CAM CHAIN TENSIONER.

SEND CHECK OR MONEY ORDER TO:

RMA Engineering
4948 RUE LE MANS
SAN JOSE, CA 95136
(408) 972-4267

The Newsletter of the Norton Owners Club

Genuine **Norton** Parts

means

FAIR SPARES AMERICA, INC.

Norton Specialists

PHIL RADFORD P.O. BOX 8224
(408) 292-6563 SAN JOSE, CA

95155

Send SASE for current lists.
24-hour answer phone service.
10% discount for orders over \$200.
Orders over \$250 shipped free.
Mail Order. UPS. COD.

Norton Electric Starters

Made to work as God intended!

Contact **Burton Kranzel**
(415) 261-8252

ADVERTISING RATES

| | 1/4 pg | 1/2 pg | Full pg |
|-------|--------|--------|---------|
| 6 mos | \$35 | \$70 | \$140 |
| 1 yr | \$60 | \$120 | \$240 |

Send ad copy and check to the Editor

You'll find more than
motorcycle parts & service
at Raber's!



At Raber's you'll find an honest, experienced friend with cycle expertise. Ask for Bob or Bill and solve your motorcycle problems today. Raber's supplies parts for:

TRIUMPH

Norton

MOTO GUZZI

DUCATI

MOTO GUZZI

Raber's
European Cycle Works Inc.
1615-C Almaden Rd. (Rear Bldg.)
San Jose, CA 95125

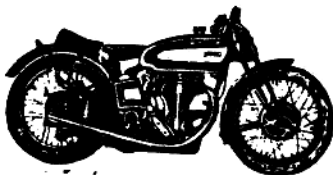
(408) 998-4485
Tue-Fri 9-6
Sat 8-5

TRIUMPH
Norton **MOTO GUZZI** **DUCATI**
MUNROE MOTORS, INC.

MOTORCYCLES
SALES - SERVICE - PARTS

SINCE 1958

Munroe has three mechanics that are familiar with Nortons and have been for a number of years. We can replace exhaust ports with the head on the bike and don't know of anyone else who can. The job looks like original factory! Call for a quote on shop prices. We also have a good Norton parts supply.



412 VALENCIA ST.
SAN FRANCISCO 94108
PHONE 626-3486