



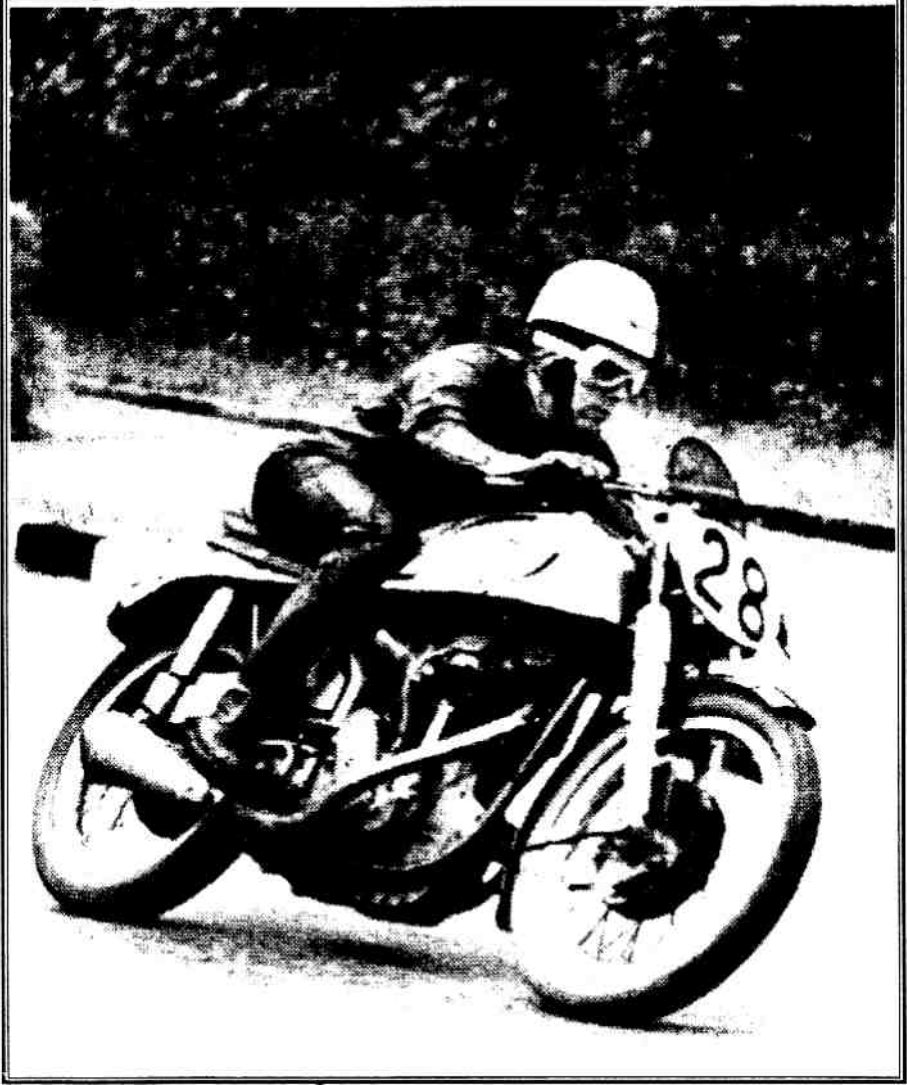
# Norton Notice

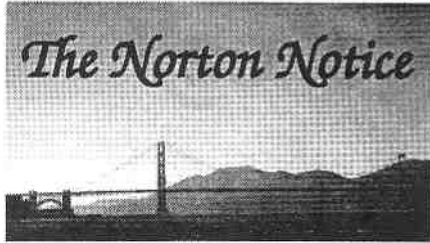


The Newsletter of the  
Northern California Norton Owners Club

No. 221

January, 1997





is published by the Northern California Norton Owners Club. Its purpose is to inform and entertain members about all aspects of Norton motorcycles, including history, technical advice, and preservation of the marque. The *Norton Notice* is a reflection of its readers, who are encouraged to submit any article, technical tip, or photograph (original or otherwise) in good taste for other Norton enthusiasts to enjoy.

**The deadline for submitting items for publication is the 20th of each month.** The *Norton Notice* welcomes contributions submitted electronically, preferably in MS Word, MS Works, Word Perfect, or Rich Text Format. The *Notice* is produced using Aldus PageMaker 5.0.

Membership in the Northern California Norton Owners Club is available for \$20 per year. Membership dues are payable to the Branch Secretary/Treasurer. Renewal dues are payable at the end of the individual's membership year, in the month designated by the last number of the individual's membership number as listed on the mailing label of the *Norton Notice* and on the membership card.

**Send change-of-address information to the Branch Secretary/Treasurer, not the *Norton Notice* Editor.**

The Northern California Norton Owners Club is affiliated with the Norton Owners Club of England and the International Norton Owners Association. Interested persons can join these organizations per the terms outlined on the Branch membership application form.

## Club Officers

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## Honorary Members

**Brian Slark**  
**Jodi Nicholas**  
**Bill Knight**

**Words to live by. . .** *The objective of the Northern California Norton Owners Club is to promote, encourage and develop motorcycling activities. The Club's members are owners of Norton motorcycles and often submit technical tips pertaining to Norton motorcycles for publication in the Norton Notice. Technical tips 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 its members for any problems resulting from use of these technical tips. The Club assumes no responsibility for the acts or omissions of its members in connection with Club activities. Norton Notice articles 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. Club activities and membership are subject to standards established in the Club by-laws. Advertising published does not imply endorsement of products, goods or services. Now you know.*

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## 1997 Calendar

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*Rides are on Sundays, and kickstart at 10 a.m., unless otherwise noted. Be gassed-up, fed, and ready to roll!*

### ■ February

- 16 Sweetheart Ride**  
Bring your sweetie! Meet at Dino's Restaurant, 1350 E. 14th, San Leandro. Call Jim Carton at (510) 483-2045 for info.

### ■ March

- 8 All-British Clubman's Show San Jose Fairgrounds**
- 9 The Morning After Ride**  
Meet at 9 a.m. at Roadrider, 2897 Monterey Highway, San Jose. Call Alan Goldwater at (408) 475-7505 for info.
- 30 Easter Morning Ride**  
Call Lynne Miller at (415) 334-2042 for info.

### ■ April

- 6 Rallye di Milani**  
BSAOC and NOC joint event. Meet at Milani's Bar, B Street, San Rafael. Call Ed Meagor at (415) 459-9947 for info.

### ■ May

- 9 - 11 Cambria Weekend**  
NCNOC and Southern California NOC joint event. Call Alan Goldwater at (408) 475-7505 for info.

- 16 - 18 1997 California BSA Rally Visalia, California**  
Call Don Danmeier at (415) 898-0330 or Barry Smith at (805) 273-7005 for info.

### ■ June

- 26 - 29 Norton Rendezvous (with Northwest NOC) Lake Selmac, Oregon**

### ■ July

- 13 Santa Cruz Ride**  
Call Alan Goldwater at (408) 475-7505 for info.

### ■ August

- 15 - 17 Dardanelles Weekend?**

### ■ September

- 7 British Singles/Pre-Commando Twins Ride**  
NOC and BSAOC joint event. Call Stevan Thomas at (415) 923-1662 for info.

- 14 Old Timers' Ride and Picnic**

### ■ October

- 12 Mount Hamilton Ride**

### ■ November

- 2 Don Danmeier's Annual 50th Birthday/All-British Ride**  
Call Don at (415) 898-0330 for info.
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## Alan's Wrench

by Alan Goldwater

Writing this column, I feel like I should be singing "Back in the Saddle Again". During my term as Editor and then President, from 1988 to 1991, I came to enjoy the monthly opportunity to share my Norton experiences with the Club. As in the past, I will be concentrating on the nuts and bolts of Norton riding. With the early and wet winter we're having, I don't expect many riding opportunities for a few months. This is the perfect time for maintenance of our bikes.

Over the next few months, I will be doing a complete winter service on a 1974 850, and sharing what I learn with you. The February issue of the *Notice* will feature the clutch and primary drive, in March the carbs and cables, and in April the front forks and brake. I like to get some of your input on these topics, both tips and questions, so don't be shy.

Our turnout for the Christmas Party was 26, and everyone seemed to have a good time. I'd like to repeat my acknowledgement of the hard work by the retiring officers in organizing this and other Club events. And since this is Stevan's last issue as Editor, I'd like to especially thank him for the long hours of hard work he has given to the Club.

We have about 10 Rally Shirts left for sale at \$15. A Rally pin is

included at no charge-what a deal! We also have a few Club shirts in red and lots of embroidered NOC patches and pins. I'd like to see new artwork for the next order of Club shirts, so if you have any ideas, please let me know.

The ride schedule for 1997 is almost complete. We still need a host for the November ride, but we're otherwise set. We have a busy schedule for the spring, so let's hope the early rains give us a break this year. Best wishes to all, and keep the rubber side down.

### Club Meeting Schedule

#### January 9

Fremont Brewery  
3350 Stevenson Boulevard  
Fremont

#### February 13

Harry's Hoffbrau  
399 W. El Camino Real  
Mountain View  
(415) 964-8455

#### March 13

Connecticut Yankee  
100 Connecticut Street  
San Francisco  
(415) 552-4440

## Upon the Avons

by Stevan Thomas, *Outgoing Norton Notice Editor*

I agonized for quite a while before I realized that 1997 had too many other challenges and commitments for me to be able to do the *Norton Notice* for another year. I stepped into the Editor position when Andy McKerrall was functioning as Editor-Under-Duress, partly to relieve my friend from having his brain sucked into his computer again, but mostly to fill an important role in the Club in a time of need. I did improve my computer skills, though not as much as I would have liked, and I found out that I actually like writing technical articles about, of all things, the Norton motorcycle I've been riding for almost 20 years! So you haven't heard (or seen) the last of me, but I'm not promising to write every month. Quality articles take not just time, but also inspiration for me to come up with something worth reading and posting on the Web.

Having been the Editor and lived through the necessity of needing your contributions, I can only say that anything at all that pertains to your Norton experience, even if it seems irrelevant, is interesting to someone, somewhere. Please write it down and send it in to the new Editor, Alan Mueller. If you don't, he may do re-runs of that popular favorite, four-stroke theory. Who can get enough of that?

For those of you who haven't heard, Pete Kogut is giving up the Editorship of the USNOA *Norton News* after 20 years at the helm. The *Norton Notice* is now going into the capable and experienced hands of Alan Mueller and Alan Goldwater, but at some future date it, too will pass on to another. Pete expressed a few thoughts in

*Norton News* #105, *Rally '96* (received by members in December 1996), on what he feels it takes to be an Editor for the Club.

"For a history of how the Editorship was passed, check out the *Norton News* #100, *Reflections*. In brief, Frank decided he no longer could do everything for the Club, *NN* included, and put us in a sink-or-swim situation. We did survive, but that is not how this changing of the guard is going to go. The Editorship is going up for bids, the Staff is composing a letter that will go out to all the chapters for anyone who thinks he would like a stab at the *NN*. You will need references, previous work, and a sample of what your version of *NN* would look like and cost. This is, by far, the most important post in the Club. It must not be passed to anyone who has anything but the good of the INOA and its membership at heart. *NN* quality is paramount. . .

"Qualifications. For those of you who think you might like to do the Club's magazine, here is what you will need to think about.

"You must be a Norton rider and *really care deeply* for the bikes and the people who ride them.

"You must be a writer of at least some skill, if you have been published in some manner or otherwise demonstrated that you can compose, that is good.

"You must be an editor of at least some skill, which means you can take what other folks write and make it sound better than it is. This is a different skill than writing and is much more than spelling and punctuation,

(continued)

neither of which I'm particularly good at. You have to be able to take a letter that is poorly written, make it read well and say what the author intended.

"You will need a desk top publishing computer setup. It may be possible to do this on a word processor, but you will end up with a newsletter, not a magazine. A DTP system will consist of a computer, big-screen monitor, page layout software, a scanner, laser printer, modem and FAX, as well as the multitude of software to drive everything. And you will need to know how to use all this stuff.

"You will need to be something of an artist. There are things that will always look good on a page and there are arrangements that never have and never will. You will have to be able to create the former.

"You will have to be knowledgeable about the bikes, the club and the membership. Some of the questions that are asked are asked continually, some are truly one-of-a-kind. You will need to have the answers.

"You will have to be your own photographer in many instances. People have a tough time getting pictures in on time if they take them at all.

"You will need time. It takes, on average, about a work week, 40 hours of computer time, to do the *News*. The Rally issue can take 60 hours. I'm sure there is someone out there who can be more efficient than I and do the job quicker, but that is the sort of time it will take. That 40 hours does not include all the peripherals; phone calls, mail runs, getting supplies, that sort of thing.

"You will need to be a penny-pincher. *NN* has always had to work on a limited budget, and that is probably not going to change.

"You will have to deal with advertisers. Some are easier than others, but

the display advertising in *NN* not only lets the membership know who has what but helps defray the cost of publication.

"Ideally, you will have back-up, someone to work with who knows both the bikes and the production flow of the magazine.

"You will have to really want to do the job."

It's obviously a bigger deal for the National Club, which has 3,000 members, than it is for us, but he makes a lot of good points.

To Pete's comments I can add this: if you don't have the answer to a question, you have to be able to get it from multiple reliable sources, and you have to be able to point out different aspects of it, if they exist. Very little is dogmatically true. A *Chicago Manual of Style* will also be most helpful, for punctuation and format.

On the other hand, we are luckier than Pete, in that we have Gerald Mauricio, who always comes through with photographs when asked.

The interesting thing is always what the new year will bring. It's your Club; what it will be is what you contribute.

I hope you have enjoyed the *Notice* for the past year. Thank you again to all who contributed, and special thanks to my designer, Alycia Sanders, without whom it would not have been possible. Happy new year, and see you on the road!



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## CityBike Swap Meet Report: New Members, New Advertisers, and A Good Time Had By All

by Stevan Thomas

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Once again, former *Norton Notice* Editor Brian Halton very kindly let the Club have a booth at his *CityBike* Swap Meet on December 8. Alan Goldwater and Stevan Thomas manned the booth and signed up fifteen new members, who were given available back issues of our award-winning newsletter, and leads on where to find the Nortons of their dreams. They are:

Don Bondarenko  
Ed Cheney (*famous mechanic  
extraordinaire* at Munroe Motors)  
Charles Floyd  
Xavier Flores  
James Gassell  
Wilton Pudworthy  
Mike Shiro  
Francis Zilveti

all of San Francisco, and

August Barone (San Rafael)  
Robert Fedyna (Daly City)  
Kerry Griffin (San Carlos)  
Ron Halem (Fairfield)  
Robert Hurst (Cotati)  
Steve Thompson (Soquel)  
Jason Weir (San Mateo)

Welcome, all!

Our table was strategically located across from darwin motors'.

While I was admiring some 35mm clip-on handlebars, Gale Harold said he wanted to run an ad in the *Norton Notice*. darwin is the largest local importer of Davida helmets, classic goggles and Lewis Leathers (Lewis is one of the finest makers of motorcycle attire in England and has been for many years). The staff at darwin are true classic bike and retro enthusiasts, with parts, service, machine work, bikes, gear, clothing and boots for men and women. Even if they lean a little Euro in the bike department, they knew there was a Goldstar lump (sorry, *not* for sale) around the corner at KC Engineering.

darwin (yes, small D) is located on Ritch Street, between Brannan and Bryant, and Third and Fourth. Check it out. Tell them you're in the Norton Club and you'll get a ten percent discount.

Another new advertiser is Kim Williams of Williams Welding. He is a Norton enthusiast whom I met at the dirt track race at the Quincy Rally. His stationary shop is in Alameda and he has mobile capability if your project doesn't! I haven't asked him about this, but his card says he has a "spray booth rental". It sounds like if you are a frustrated painter, he can help you. Leave the cat at home. Give him a call.

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## Christmas Party/Annual General Meeting

by *Stevan Thomas*

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Twenty-six members and guests found their way to Fontana's for the Club Christmas Party/Annual General Meeting. Tim Coburn, John Covell and Dana Muise rode their Nortons. Maya was at her usual well-dressed best, in a stunning black evening gown. The banquet room was spacious, the food was excellent, and the beer was nearly bottomless.

Art Sirota performed a talkin' blues, accompanying himself on guitar and harmonica. His lyrics are on the next page. George Shoblo won the award for the most points for both rides and meetings! He was given a special mug and a year's free dues. If we do points again we should probably call the prize the George Award!

The gift exchange had, well, a lot of exchanges. Exchanging was limited to once per item. While this allowed someone claiming someone else's package a sense of security, in that his new treasure couldn't be taken away from him, it did take some of the more predatory fun out of the game.

By the way, on December 6, I heard about a member in Reno who always comes to the Club Christmas party but couldn't this year because it was on a Sunday. Another member expressed disappointment at the party date because she has to be up bright and early on Mondays, and lives a long way from

where we held the party.

With this in mind, I suggest that in the future we always have the party on a Saturday and that the members remind the planners of this preference, if they are not aware of it.

It was a great party. To those who couldn't make it, I am truly sorry you weren't there.

### The Election

It should be no surprise that our first election by mail ballot went smoothly. Alan Goldwater is the new President, Jeff Gruwell is Vice President, Alan Mueller is Secretary/Treasurer, and Editorship of the *Notice* will be divided between Alan Goldwater and Alan Mueller.

Regarding the other issue on the ballot, we did not get enough responses to publish the results. If you didn't get your ballot (the green thing in the last issue) into the mail for whatever reason, go ahead and send it to Alan Goldwater. If enough come in over time, and a significant number of members respond, the results will be published,





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## Talkin' "First Bike" Blues

by Art Sirota

*This song was written by Art Sirota and was performed for the first time at the Norton Club Christmas Party/Annual General Meeting. The style was a talkin' blues as performed by Woody Guthrie or, if your musical memory doesn't go back that far, Bob Dylan.*

So you wanna own a motorcycle? Here's what you do  
Get a good payin' job, maybe better make it two  
Save up all your money, every single penny  
If your best friend needs a loan, swear to God you don't have any!  
    Break open the piggy bank  
    Learn to resist panhandlers  
    Don't tip the waitress

Then check out all the ads in the biker magazines  
'Cause somewhere in those pages is the cycle of your dreams  
Don't believe owners who insist their bike is stock  
Check to see the speedo cable is connected to the clock!  
    Sure the tires are bald, the brakes are shot and  
    the paint is flakin' off,  
    but that don't matter none,  
    it's got low mileage!

If the wreck you bought is rusty don't you be discouraged none  
And don't worry if she smokes a little on the over-run  
Don't be too upset if oil leaks turn your driveway into scum  
But you better pay attention when your mom and dad say "Son...  
    either that bike goes or we go  
    and we ain't leavin'!  
    Never intended to  
    ...you figure it out!"

Well luckily you've come to learn the value of a dime  
So raid the ol' refrigerator one last time  
then mount the saddlebags you snagged at the swap meet  
and stuff 'em full of chow so you'll have enough to eat  
    Don't forget to pack plenty of Spam!

(continued)

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You're gonna need some tools, a sleepin' bag and tent  
You won't need too much money 'cause you won't be payin' rent  
Now change into your leathers, 'cause you'll need 'em on the road  
Don't worry if your parents can't accept your new dress code  
Dad's so square  
He calls your leather pants "slacks"!

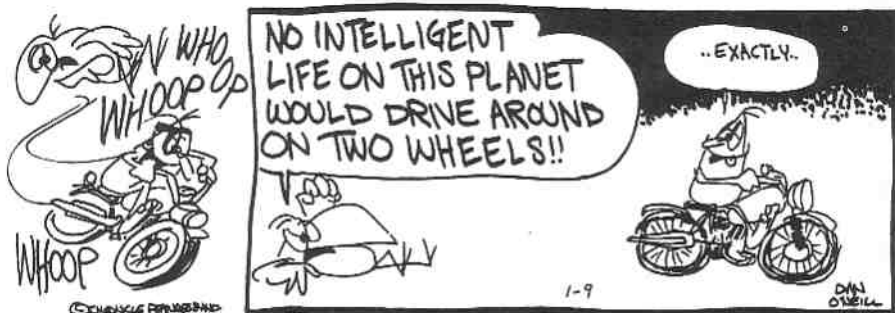
The bike is in the driveway, loaded down with gear  
About a million bungee cords are stretched from front to rear  
She's carryin' a lot of weight, but that's no cause to fret  
The shocks are bottomed out and you haven't sat down yet!

So try to kick 'er over 'til your leg begins to tire  
Why the hell does this infernal bike refuse to fire?  
Then dad comes out and hunches down with a pair of pliers  
and tracks the problem right away to loose ignition wires  
Didn't realize the old goat knew anything useful!

And that's when you discover a long forgotten truth  
Dad had ridden motorcycles, way back in his youth  
Rode across the country in a jacket that was black  
And there's a photograph, looks like mom is on the back!

Now it's gettin' dark and the seat is wet with dew  
Mom's been cookin' dinner, smells like chicken dumplin' stew  
Dad helps push the bike inside and put your gear away  
You took pity on him when he asked if you would stay  
Guess he wasn't such a squid after all!

Art Sirota ©1997



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## **Trials and Trails: On the Way to Quincy for the 1996 USNOA Rally**

*by Greg Reynolds*

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*Minnesotan Greg Reynolds rode to the Quincy Rally with his friend and former NCNOC member Steve Krenz. Steve sent this story to Don Danmeier, suggesting the local Norton rag might want to run it. Here it is, in its entirety. Thank you, Greg for writing it down, Steve for sending it in, and Don, for passing it along!*

We all know that 25-year-old English bikes are not the current choice for long distance touring. Too many things fall off and wear out too quickly. Be that as it may, if you want to fiddle with the radio at 70 mph, take your car. And besides, it's the Norton rally. It was a great trip. Not a lot of traffic, fantastic roads, all the speed limit we could use, and plenty of variety in the weather.

Touring by motorcycle is a lot different from taking a car. You are outside the whole time. You can see a lot more. It is so much easier to pass motor homes. It is about traveling two-lane highways, all the riding you care to do and then some. There are bugs, dirt, rain, campfires under all the stars in the universe, coyotes at dawn, seeing moose, wild turkeys, 100-mile stretches of winding road, blasting past pokies, and living your life a little closer to the edge. It gets into your blood. It must be something in

the insect fragments.

Touring isn't the same on a Honda. My trusty 500 is always willing and is more or less capable, but it has the mechanical charisma of a sewing machine. The Norton grabs your guts and gets the adrenaline pumping. It seems eager to drive out of a corner, pass anything, shorten up some straights, and it makes that great noise. He (mine is definitely a "he") has personality, character, and a mechanical reality that the Honda just doesn't have. Otherwise why in hell would anyone put up with such a cantankerous piece of shit?

The trip to California started in about March when I began getting the Norton ready to travel. There was a problem with a loose valve guide that was acting like an oil pump, and a bunch of other stuff. When it was crunch time, Bill Roseth made the extra effort to get my head back to me (he did a really nice job too) so I would have a chance to get 1000 miles on the bike before I left. It ran terribly when I put it back together. Be sure to check that your new genuine Norton head gasket does not foul the push rods; it'll make the valves float.

The Friday before our Sunday departure, I managed to fall off my

*(continued)*

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Bultaco while showing off. As I was seeing the earth-sky-earth-sky thing for the first time I heard two distinct pops from my left knee. "Oooh, I hope I'm not hurt". Saturday, I could hardly walk. My knee was the size of a volleyball. It really hurt. I was determined to go on this trip, so when I got the Norton started, got my foot up on the peg, I knew I would be alright. As it turned out, I had an authentic-looking biker-style limp for most of the trip.

**Sunday, July 14, 7:15 a.m.**

Steve Krenz and I set out for California. Steve has his under-appreciated 1975 T-160 Triumph triple again. Beginning is always one of the best parts of any trip. Nothing's wrong with the bike, your ass isn't totally flat yet, and there's the excitement of setting out on a long ride. Sunday's riding is pretty uneventful, as we go across South Dakota. We make Gillette, Wyoming (700 miles) by about 8 that night. That's pretty much the end of the Interstates until we pass the Black Hills on the way home.

The next day we put in 90 miles or so of high-plains back-roads and see our first antelope up close. We stop for breakfast in Sheridan. There's a 500/4 Honda sitting in the parking lot, loaded up for traveling. Inside, one of the Harley faithful is sitting in a section all by himself. We are promptly seated next to him.

He is dressed in old Levi's, a black Boothill Saloon (Daytona) t-shirt, and a faded red bandanna, tied over his greasy hair. His face is

a little red and showing quite a few miles. Eventually we take a break from trading stories and order.

He claims to be on the organizing committee for Sturgis, and laments the passing of another great event.

"Too many rich lawyers and 'biker wannabes'. You know when these guys show up with three days' worth of stubble, a new bike, and \$1,000 worth of clothes, they trailered to Rapid City, unloaded and made like they rode the whole way. Last year we made up some 'I rode my bike to Trailer Week' t-shirts. They sold really well."

He is taking the Honda back for his nephew to learn on.

"No sense having him wreck a perfectly good Harley. Besides he needs to learn how to take care of a bike."

Up in the Big Horn Mountains off US 14A, there is a Medicine Wheel. It is so old that the Pawnee who were there when the northern Europeans showed up didn't know who built it. The ranger says that carbon dating indicates it's around 12,000 years old. The wheel is located in the Big Horns, up on the top of a mountain, just off the old Bad Pass Trail. It overlooks a broad valley to the west. Go there early, before any one else is up. It's a pretty powerful place.

Steve's mileage gets worse and worse until his speedo blows up. 105° on US 310.

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**Beaverton Pass**

- views
- snow
- rain
- cold

**Yellowstone**

- views
- rough roads
- Steve's fork seals blow

**US-287**

The big rain storm

**MT-287**

The big ugly rain storm

The third night out, we stop at a USFS campground alongside US 12, about 20 miles west of Missoula. By the time we get our gear packed in the morning, a few logging trucks have started to roll, but the motor homes are still dark.

Highway 12 runs along the north side of the Lochsa River for about 100 miles. The canyon is fairly narrow. The road is entirely made up of 40 - 45 mph corners connected by short straights. The lefts are mostly sweepers, but a lot of the rights are quite blind. Finding a toaster-sized rock, or a moose, in your lane argues for moderation. 60 mph seems fast enough to be interesting, but not too stupid. It is a beautiful road. We see maybe five cars or trucks on the whole run, nothing that can't be passed. This has to be the best run of the entire trip. If you ever get a chance, take your Norton for an early ride down that road. There is a gas station at

Lowell.

Steve's chain guard comes loose.

After we get gas, it's time to eat.

There is a little place next door with a few new Harleys parked in front. The bikes, two Fat Glides and a Bad Ass, are spotless, not a bug on them. Other than that, the place doesn't look too bad.

Inside, it's easy to spot the Harley riders. These rugged individualists are dressed in identical costumes: black H-D t-shirts, black H-D jeans covered by black H-D chaps, and H-D boots. I bet even their socks (black?) have H-D on them. The lead poser, a balding, grey-haired little guy with a neatly-trimmed beard, has this cute little leather Harley cap that he wears everywhere, even inside the building. Of course, Steve and I are nattily attired in our finest English riding outfits - grubby jeans, greasy hair, and bug-splattered jackets.

Pretty soon the Outlaws finish up their quiche and lattés and head for the door. We are sitting there, big as life, give them a nod and wave a piece of toast at them as they go by, but we are invisible. They can't see us. This has happened before, and I still don't understand what is with these people. We look like we have been out-and-about on bikes, and they were sitting by the window as we rode up. It must be we're not really doing the same thing. Maybe they're afraid that we'll ask them about the bikes, and they don't know anything. Maybe they think Knuckle Head and Flat Head refer

*(continued)*

to the rider. KR might even be Kenny Roberts, I dunno. But that's OK, because it reinforces my opinion that the new Harley riders are a bunch of costumed narcissists, hoping that \$15,000 fashion accessories will give meaning to their pointless and shallow lives. Only BMW riders have a worse attitude.

As the proctologist prepares to fire up his bike, he doffs his cute little cap, primps what's left of his hair in the mirror, puts his cap back on, checks the mirror again, and gets out a Harley bandanna. He peers into the mirror to carefully center the lettering, and securely ties on his cap. Next comes the black Harley Davidson™ Motor Clothing® Leather Jacket and gloves. Another quick mirror check and he's ready to put his manly thumb to the starter button.

As they thunder off, Steve mutters, "I wonder where they left their trailer?"

"Huh?"

"Didja notice that the bikes were all from California and not one of them had a helmet?"

I give him a blank look.

"California is a helmet law state."

Edge of nowhere, Idaho  
Steve gets his chain guard repaired.

#### **Middle of nowhere, Oregon**

It has to be 105° in the shade. We spend hours crawling across the map of eastern Oregon. A steady 40 mph wind, blowing out of a distant storm front, is our only

distraction. Mile after featureless mile. This is so boring, what am I doing here? The desert is so dry that the sage brush only grows in the low spots. Imagine the disappointment of the pioneers; 2,000 miles of walking behind a wagon, little food, bad water, death, and then. . .they got to this.

We stop for gas in a one-horse-town, Juntura. There is only one working pump, 85 octane. I get gas, hand the hose to Steve and head inside to pay for my gas and get something to drink. I ask the woman if she has change for \$100 and she does. Steve comes in, gets a Gatorade, and says,

"I've got the rest of the gas. How much is it?"

"I dunno."

The furious woman jerks a note pad off the counter, almost snapping her neck off as she spins around and stomps out the door. By the time she gets back, she looks like she's about to have a stroke.

"*Three-eighty-five.*"

Frost glistens on the words. Steve pays, and we head out to the shade to make up horrible stories about the woman and the little town.

Steve's choke lever falls off.

#### **Lakeview, Alturas, Adin, Susanville, Westwood**

Darkness, rain, hypothermia, and road construction.

#### **Friday, July 19**

We are closing in on the Rally, riding through the beautiful Sierras, following logging trucks through no

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passing zones to wait for the pilot car in the road construction. As we are sitting in another line, we see two bikes farther up. I can see that one of them is a Norton. They must be going to the Rally, too.

As soon as we start to move, these two guys start passing in the road construction zone. A little on the aggressive side, but that's ok—once we get out of the construction they don't pass anything. They wobble around turns side by side, and slow down and change lanes at random. So we blast 'em, like so many dopey pokies before them. They instantly disappear from our rear view mirrors, and we have a nice run into Quincy.

At the Rally, Steve knows the people working the gate. We sign in and bullshit about riding from Minnesota. Just as we are about to get going again, those two guys show up.

"Did you pass us?"

"Yeah, you were so slow we figured you must be on Harleys."

"What kind of bike is that?"

"A Triumph."

"Oh. We knew the one was a Norton, but the other one didn't sound the same."

"It's a Triumph triple."

"Oh."

### The Rally

- Clean up the bikes
- Change oil
- Wash clothes
- No seals for Steve
- Vintage dirt track

### Saturday, July 20

Part of the plan is to run over to the Carson City swap meet and visit with Lynn Mobley (a Bultaco parts guy). I ride with Rick Simon, a rancher from Chico, California who has a 650 single-carb Triumph. He bought it in England way back when, and toured around Europe with it.

There are more interesting Nortons at the swap meet than there are at the Norton Rally (thank you, Dick Mann). I visit with Mobley for a while, and pretty soon it's time to head back. This time, we head up over the mountain to Lake Tahoe. Everything's going pretty well—we've passed most of the dopey pokies and are having a fine time winding down the other side.

Suddenly, my bike quits. Just like you had shut off the key. No spark. I run power right to the Boyer and still nothing. Shit! As long as it's all down hill, I might as well just keep going. At the bottom is the county sherriff's parking lot, and the town of Incline. Rick gives me a ride, and we get a volt meter and lunch.

Back at the bike, it looks like the coils have soiled the bed. I guess I did this to myself. When I put the electronic ignition on I decided not to use the old Lucas coils, and put on a Hardley Ableson Dreaming Beagle coil, instead. I should have known it wouldn't be suitable for a motorcycle. I rob a coil off Rick's bike. He looks stricken. The Norton fires right up, and it's back to town

(continued)

for a couple of car coils and some electrical tape.

At dinner, Steve steals the Canadian's hat.

### **Sunday, July 21**

The Canadian rides with us across Nevada and gets a \$110 ticket. We catch up to Mort on his BMW. The Canadian's BMW needs a u-joint. We putt through back roads to Delta, Utah.

### **Nine Mile Canyon**

We look for Indian wall paintings. Steve does a u-turn on a dirt road, puts his foot down and topples over. Steve loses a cylinder. Fouled plug.

When we stop to buy supplies for supper (macaroni and cheese) in Vernal, Utah, we get between a woman and her purse, which is in the shopping cart. Panic. She is torn between protecting her kid, staying away from us, and keeping her cash. Luckily, the degenerate bikers move on, and don't cause any trouble.

As US 191 winds its way to Flaming Gorge, it has informative signs to let you know the name of the geological formation that you are passing. The problem is trying to stay on the road while reading the signs at 20 mph over the posted speed limit, which is only 40 mph, for crying out loud! It is 40 miles of great twists, turns and spectacular views up the to the dam and the big-dead-water.

We stop for gas and beer before hitting the campsite. As Steve

walks back out to his bike, he notices a little oil under it. He is careful not to run the rear tire through it. When he starts his bike, he notices a lot of oil under it. The problem seems to be a split sump filter-cap o-ring. On closer inspection, he sees that the threaded filter-cap has become a simple stopper. Steve is looking pretty stunned when I come out with the beer. We try a few quick bodes (where the hell is Meyers when you need him?), but the oil pressure just pushes the plug out. Bummer. The nearest town is 65 miles away, and the closest campsite is 1/2 mile down the road and unimproved. That means there is: no water, no table, no toilet, and a 21-day maximum stay. The Triumph spends the night in the garage and we sleep out in the dirt. Somehow, it doesn't seem right.

When the coyotes sing, I get packed up and make the run to Green River. It's still cold. The antelope are out, and it's another great winding road. The sun is just coming up, and is seriously in my eyes, which means my fun is diminished a little by having to ride with one hand. The views over the Green River valley are absolutely spectacular. I come across a calf that's been center-punched by a pick-up, and a pick-up without any grill or headlights.

My first stop is a NAPA store, for a 1 1/4" expandable frost plug. I decide against dropping the plug in a mail box, get a bite of breakfast, and go looking for some more

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alternatives. The trail leads me to a hardware store, an RV shop, a Honda shop, and finally to a machine shop. At the machine shop, I explain the problem to the owner and ask if he can make a threaded plug. There must be a half dozen KTMs, a couple Yamaha dirt bikes, a few Suzukis, a Hodaka in a Rickman frame. He says,

"We can take care of that, but you'll have to get the bike here so we can see what thread it really has."

Great! On the way out of town I pick up a little five minute epoxy, in case worse comes to worse.

The ride back is wonderful. It has warmed up, the sun is higher, and the livestock has gone looking for other adventures. At 70, the Norton is just coming on the cam and is a real joy to ride. The trip back is over too soon, and I have to wipe the stupid grin off my face. Steve violates the "don't ask, don't tell" policy and relates an amusing bodily function story.

Back at the machine shop, the owner and the skinny guy are welding, grinding, cutting and turning. They pretty much drop what they are doing to look at the bikes. They look at the plug and measure the hole.

"You rode out here from Minnesota?!"

"We're on our way back from California".

It turned out that only the last two threads of the plug were doing anything, ever. The original plug was about .050" undersize. If you

have a bike like this, the next time you change the oil, you might want to take a good hard look at the threads on the filter cap. The hole in the case is 1 3/8" x 12 tpi, unified thread form (1.375" diameter), but the cast cap looks to be 1 3/8" British equivalent (1.321" diameter). Very clever.

The skinny guy takes the cap, centers it on a lathe to within .001", turns the threads off, and then turns on a fine little thread. Next, he gets a piece of aluminum round stock, bores a big hole in the end, turns a fine little thread on the inside, fits it to the thread on the cap, Loctites them together, and trims the o.d. He resets the cap, and turns on a 1 3/8" x 12 thread. It is a perfect fit. All the while, he is smoking cigarettes like a fiend (even Steve turns green, trying to keep up), and moves so fast he breaks a sweat. The guys in our local shop at home look like zombies, compared to this guy! He says he would have been faster, but we were making him nervous, watching him.

The repaired cap fits and holds oil, and at the moment of truth, they say. . . \$20. Steve almost rips his back pocket off getting the money out. When we comment on how fast they worked, and note that they helped us out right away, the skinny guy looks up from his lunch and says,

"It's a good thing I like motorcycles."

We stop back with a case of beer, and hit the highway out of

*(continued)*

town.

### Casper

Steve's side cover jumps off and becomes a pancake.

### Ayres Natural Bridge

- Alternator wire breaks off
- Over-filled oil tank

South of the Black Hills and Home.

The aftermath:

Rear tire - worn out  
 Mufflers - broken inlet  
 Alternator - broken wire  
 Choke mount - stripped thread  
 Rear shocks - pooped  
 Kick start rubber - oil soaked  
 Coils - dead Harley parts  
 Needle jets - worn out  
 Clutch diaphragm spring - lifts crooked

It used to be that six weeks of touring was hardly enough. This time, after 12 days, I was really glad to get home. Next time, I'd want another 50 miles of range and 10 more miles of reserve. Anyone have a dented or smashed steel tank for a reasonable price?

I tossed my Norton down the road last Monday morning. About 6 a.m. I was getting on the freeway when I saw two cars and a truck sitting by the side of the ramp. "An accident" I thought. What had happened was that a pail of oil had fallen off the truck, and caused the two cars to slide into one another. When I moved left to go around them, I rode into the oil. I realized

that the bike was sliding about a microsecond before my elbow hit the ground. As I slid, face down in the gutter, I watched the sparks fly off my headlamp ring. When the end of the footpeg rubber burnt through, there was a tremendous increase in the amount of sparks. I fervently hoped that the gas cap would not pick this time to leak, like it usually does. But soon enough, I was distracted by the rapidly approaching post that marks the end of the curb between the ramp and the shoulder. Luckily, it was plastic, instead of a piece of pipe. It only put a scuff on my helmet. Many thanks to the D.O.T. worker who decided to use plastic posts. I ended up on the shoulder, and the bike proceeded to merge onto the freeway. From the bottom, a Norton looks much bigger. Dave would be shocked at how dirty it was down there. The bike started on the second kick, and although it was still rideable, I decided not to go to work that day.



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## Riders Tech Session

by Stevan Thomas

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### ■ SuperBlend Bearing quirk

Be aware that some imported Super-Blend bearings are marked with an M-1. These seem to be a closer-tolerance bearing than the ordinary variety, and can present some problems if your older cases aren't perfectly aligned. One reader had a set and could not get the cases to assemble until he took out the M-1 bearings and put in the non-M-1 type. They went right together after that. Then again, they're probably better if they fit and may work just fine for you.

### ■ Carburetion tips

*The following letter, written by Carl Hokanson of Acushnet, MA, was published in Norton News Number 103, Spring 1996.*

"For the last several years, my '75 Mk 11A 850 (balance pipe exhaust, 932 Concentrics, K&N cleaner, basically stock motor) has had black spark plug readings. It always ran OK, but I had to clean the plugs every 100 miles or so. It always lost clear motor tone and its sharp edge at the end of a day of riding. Despite my attempts to lean it down with new 928/104 4-ring needles, 106 needle jets, 3 1/2 slides and 220 main jets with the

proper float levels and carb sync, I still wasn't happy with low speed (55-65 mph) plug chops.

"Finally I decided to change the 928/107 spray tubes for the older type 622/075 tall spray tubes, like 750's had. (*Note that the Amal listing for the 4-stroke spray tube is 622/074. See below. ed*) With no other changes, I finally got clean, whitish spark plugs, better low-RPM response, better starting (I have to use the choke now) and, believe it or not, as many as 75 miles to the gallon. Acceleration may be a tad less, but the needle clip is in the top groove (leanest), so I could move it down a groove or two to enrich the mixture for power, cold weather or new motor break-in.

"I think the tall spray tube helps to isolate the idle circuit from the needle jet mixture, and gives a better atomization of the air/fuel mixture by getting the mix higher into the air stream, which helps to reduce ping. A clean mixture will also reduce excess carbon build-up that raises compression and builds up on the intake valve heads, blocking flow. Long term carbon build-up makes the motor more prone to ping, exacerbating the problem.

"After 400 miles of testing and a recleaning of the .013 pilot jet (it has to be clean), I'm very happy with the

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new purr of the exhaust, starting and slow speed plug chops.

"I've also tried Autolite AP63 Platinum plugs, gapped at .032". They are similar to BP7ES or N7Y in heat range and burn real clean. I got them at WalMart in a two pack for \$3.88; cheap enough for platinum plugs."

*Editor's note: If the following Amal chart is correct, the 622/075 spray tube is for a two stroke and probably should not be used in a Norton. The four stroke part number is 622/074. Hopefully Carl has the right one and the part number in his letter was in error. The Amal chart was kindly supplied by Raber's Parts Mart in San Jose, California.*

Spray Tubes - Concentric		
622/074	4-stroke	Cut straight across
622/075	2-stroke	Cut at a slight angle
622-123	Trident	Cut straight across
928/107	Norton Mk III (special)	Stepped

I had a conversation with Mean Marshall about Carl's letter, and his first response was that there is a lot it is not telling us. What's the compression on each cylinder? Is the cam chain loose? In other

cases than Carl's, if points are involved, what condition is the advance unit in, are the springs 20 years old, and are the points flat? His experience is that most carburation problems are caused by owners buying wrong components in order to fix some symptom, when they should be looking somewhere other than at carburation to solve their problem. He's found two-stroke 106 needle jets in bikes (they're different and don't work) and other attempts by owners that end up masking or creating problems instead of solving them.

His opinion is that the 928/107 spray tube is matched to the four groove needle and works well if everything else is up to snuff.

I had a similar problem with continually black spark plugs after I re-sleeved the 32mm carbs on my 750. I have the small-port head, with the manifolds tapered (opened to 32mm at the carb end) and matched so there are no inlet port obstructions or steps in the inlet tract. Two-into-one exhaust with a SuperTrapp, K&N air cleaner, Boyer ignition and Dyna coil. On the Chili ride to the Sierras, at about 5,000 feet elevation, I noticed a giant flat spot between about 4,500-5,000 and 5,500-6,000 RPM. Past the flat spot, the bike ran great, so I figured that the main jets were right. It seemed the flat spot was at the far end of the range of the needle clip adjustment, so I went down one size on the needle jet to .105 and left the clip in the middle. At sea level, my plugs were no longer black, and

there was noticeably less soot on the baffles of my SuperTrapp. Two weeks later, on my next trip to altitude, the wicked flat spot was completely gone.

When I first had the carbs sleeved, it was recommended to me that I get the slides done as #3 1/2 instead of the stock #3 cut-away. This may be fine on an 850 (I don't know because I don't have one), but on my 750 it was not ideal. As soon as the weather turned cold, the bike exhibited the classic signs of being too lean. It wanted to die when going from idle to open throttle. A swap back to the #3 cut-away immediately had it running normally.

This brings up the subject of carb adjustments when the weather turns cold. Cold air is more dense than warm air, and makes the bike run lean. Usually, all you have to do is adjust the needle clip to raise the needle (richer setting) and you're fine. Our "new" oxygenated gasoline (leaner fuel), which we get in winter, makes the problem worse, especially if you don't adjust the needle. Obviously, lower the needle back to where it was after the weather warms up or your filling station stops selling you the oxygenated stuff.

Back to needle jets. A friend of mine's Mk 3 (all rebuilt, re-sleeved carbs with stock cut-away, Boyer, 750 headers, Dunstall mufflers) was giving the "black plug" syndrome. We're trying the .105 needle jets and will let you know if it's successful.

If anyone else has any experi-

ence with the spray tubes, either send it in or call me at (415) 923-1662 and I'll write it up for the new Editor(s).

Raber's and Munroe either have or are ordering the 622/074 spray tubes.

### ■ 850 Cylinder removal

Here's another tip from Oregon Engine Builder Mike Farrell. If you are using no cylinder base gasket and the anerobic compound to seal the joint between the cylinders and the cases, how do you get them apart without resorting to a hammer? Even with a rubber mallet, if luck is not your way, you can break a fin, which is expensive to fix, or if you insert a tool between the mating faces to pry them apart, they will be damaged. The solution is simple. First remove your head, and then remove the Allen head bolts that go through to the cases, as well as the nuts to the cylinder/case studs. Instead of using a head gasket, use a heavy grease to make the seal, and bolt your head back on without the push-rods. After installing the spark plugs, you can use the kick start lever to spin the motor and let it do the work for you. The compression will break the seal and evenly lift the cylinders off the cases. Unbolt your head and remove the cylinders as you normally would.

Mike is using sleeved-down 850 cylinders in his 750 race motors. He would like to hear from anyone who has used alloy cylinders (850 type

*(continued on page 27)*

## Unraveling the Mystery: Boyer Ignitions

by Bill Whalen, BSAOC

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*This article has been in the works for some months. As it is appearing in the current BSA Bulletin, we have kindly been given permission to publish it. By the way, Bill does have an 850 Mark II.*

On the BSA Club's recent North Coast ride, a problem came up with the electronic ignition installed on one of the Nortons that invariably tag along with us BSA riders. It seems that the Norton ran fine until we pulled into the motel parking lot in Fort Bragg, where it died and refused to start again. About fourteen of us helpful BSA Club members proceeded to shove the rider out of the way and try to troubleshoot the problem for him. Two things were immediately obvious: first, fourteen people cannot work on the same bike at the same time, and second, everyone had a different opinion of what the problem might be and how to proceed. To make a long story short, we finally reached a consensus that the Boyer electronic unit was faulty and we needed a replacement.

After several calls to the Bay Area, a new unit was located, in, of all places, a Ducati dealership in Ukiah. The only problem was that it was a BSA-Triumph unit. This sparked a new debate among the enlightened: Would a black box from a BSA-Triumph unit work on a Norton? After much discussion and several phone calls, which I under-

stand reached all over the country, the answer came back that, yes, you can substitute the Mark III BSA unit for the one fitted to the Norton. Why, then, do they market the Norton unit separately from the BSA-Triumph unit? Also, why do some BSA-Triumph units turn on with the ignition switch and stay on, while Norton units do not come on until triggered, and then turn back off? Is there a difference in the advance curve?

These questions point out one of the only problems that I have found with electronic ignition systems. They are generally so reliable that once they are correctly installed, we tend to just forget about them, and since their failure rate is so low, we don't get much experience troubleshooting them. In addition, there doesn't seem to be much information available on how to test them if we suspect they may be causing problems.

Well, I decided that I would attempt to correct this problem, if possible. Who better to answer these questions, I thought, than the folks at Boyer themselves? I have talked to them several times over my many years of using Boyer ignition units, and have always found them to be very helpful and friendly, especially when they know that you are knowledgeable in electronics and are interested in their products.

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In order not to waste their time and my money, I decided to make a list of questions that I would like to have answered.

I called the Boyer Company early one morning. As luck would have it, the person who answered the phone was just the person I needed to talk to, a very knowledgeable and helpful Ernie Bransden. Here are the answers to some of our questions, with a little history to boot.

The Boyer Bransden Co. is a small concern supplying ignition systems not only for motorcycles, but for all sorts of pumps, motors, lawnmowers, etc. Yes, indeed, there were Mark I and Mark II Boyers, beginning back in the late 60's. The Mark I was the first model, and was fitted to racing Triumphs in the late 60's. It was considerably bigger than the present units, the black box being about 4" by 5".

Then came the Mark II unit, which must have been very small and compact, as the whole unit fit inside the points housing of a Triumph. This approach was dropped, possibly because of heat and stability problems, and the Mark III unit was the result. I have personally never seen either a Mark I or a Mark II unit. Since becoming a convert to electronic ignition about ten years ago, all my experience has been with the Mark III units, of which there have been several versions.

Ernie informed me that the early Mark III units were different for the Norton. Because of starting problems on the Norton (kickback), the

current to the coils remained off until it was turned on by a trigger from the pulser coils when the engine was turned over. It would then turn back off in a second or two if no further pulses were received.

The BSA-Triumph unit, on the other hand, had current to the coils as soon as the ignition switch was turned on. The later Micro Mark III units are all the same; they remain off until triggered on, and then they will turn back off in a second or two if no further pulses are received. This is what they call a "soft turn off": it doesn't produce a spark at the plugs, it just turns off the current to the coils. A good idea, if the key were left on. All of the Boyer units produced in the last few years are of this type.

All units have the same basic advance curve, which is controlled by the trigger pulses. I'm not going to get into the theory of how the advance is produced, but you will notice when you put a strobe light on the bike during installation of your Boyer that the unit keeps on advancing with increasing RPM, unlike the mechanical advance unit you are replacing. The mechanical advance unit has reached its full advance by about 3000 RPM, whereas you time the Boyer at 5000 RPM. This is not a problem, only a difference between the two systems and how the advance is produced. And remember, that mechanical advance unit was the Achilles' heel of many a British bike.

Now that we know a little more

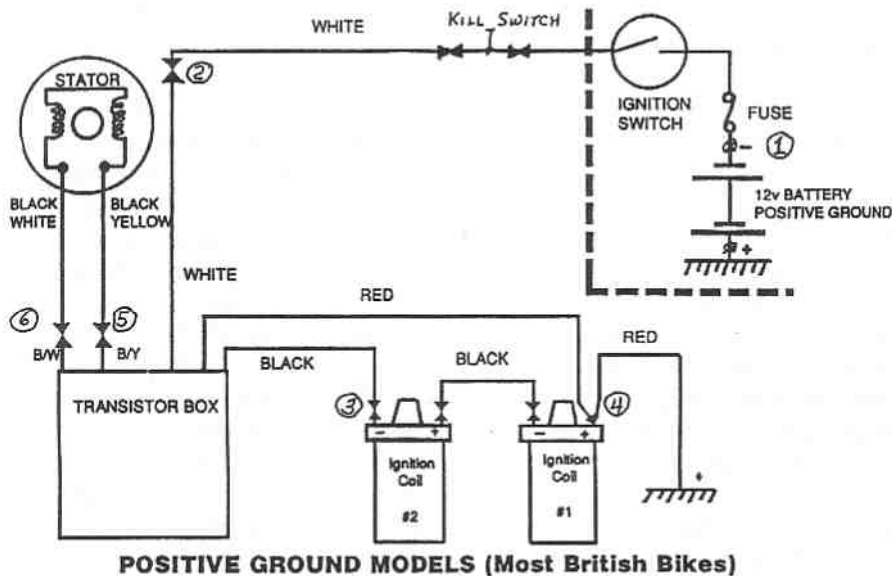
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about how they work, we can talk about how to check them out if we suspect they may be faulty. The first thing you must do is to forget about what's inside the little black box. It doesn't matter. That little black box does only two things: it turns the current to the coils on and off, just the same as the points did in your old system, and it provides spark advance. That's its only job. If it stops doing that, it's bad.

Remember back when I said that once correctly installed, they generally work fine? Well, most of the time when someone has trouble with his electronic ignition, it goes something like this.

"I dunno wha happend, it jus quit! I wus reel curful when I put tha sucker in! I twisted ever wire and even double wrapped it wit lectricians tape, and I smashed ever connecter wit my hammer!"

No, that's not what I meant when I said correctly installed! Most of the problems I have encountered with Boyer units have been the result of bad connections. Every connector must be clean and tight, and even though the spade connectors that come with the unit are pretty good, after I crimp them on with the proper crimping tool, I solder them just to be sure. Remember, every connection is critical, even the ground connections. So, what I'm suggesting is that if you encounter problems, first, take a good look at all of the connections to make sure they are still in place. Let's take a look at the schematic of a typical positive-ground installation:





Notice that there are only five little wires going into the Boyer unit; two, B/W and B/Y, are used for the trigger circuit, white is the 12v supply, red is ground, and the black is the switched 12v to the coils. Pretty simple, huh? But take another look at the white lead. The power in the white lead goes through *11 different connections* getting from the ground side of the battery to the Boyer! It must also be capable of carrying between 3 and 4 amps of current! A bad cell in your battery or a bad connection anywhere along this path can cause you problems.

In order to understand why a bad connector has such an adverse effect on the circuit, again take a look at the schematic. Notice that the only resistance in the path from ground through the coils, the black box, the kill switch, and the ignition switch to the battery, is the resistance of the coils themselves. Each 6v coil has only about 1.5 to 2 OHMS, so the total resistance should be 3 to 4 OHMS. Remembering that  $I = E/R$ , this is where we come up with 3 to 4 amps. Put a few extra OHMS in there and you can see what happens. That is the reason that all the connectors must be in good condition.

Enough about connectors, I'm sure you got the point by now. Let's get on with some troubleshooting.

Again looking at the schematic, we can break it down to four basic sources of trouble. (1) The black box itself, (2) The 12v supply to the box, (3) The coils and plugs, and (4) The triggering circuit. Here are

some troubleshooting hints recommended by Boyer that may help isolate a problem.

#### ■ Simple tests on Boyer Mark III Ignition Units for British Motorcycles

1. Switching on the ignition switch and turning the engine over should produce a current through the coils, (a voltage at point (3)). No current through the coils could be caused by:
  - No voltage to the white wire at point (2). (Battery voltage low, less than 9 volts.)
  - Bad connections, anywhere in circuit.
  - No earth to red wire at point (4).
  - Coils or link wire between coils open.
  - Black wire shorting to ground, or one of the coils shorting internally. Black box very hot.
2. Wires can rub through to frame. Check for any shorted wires.
3. All battery cells should be in good condition, as a poor cell will produce a high resistance in the 12v supply to the ignition unit. A bad battery cell can cause the ignition to produce a spark on switching the lights on or using the horn. A bad battery cell can also cause a continuous stream of sparks to occur.
4. A simple test of the transistor box can be made with the box still in the circuit by disconnecting the yellow/

(continued)

black and the white/black wires at (5) and (6), and with the ignition on they can be touched together and broken. This should produce a spark at the plugs. If it does not, the box is faulty.

These are some pretty good suggestions, but I would add a couple of my own gained through my own experiences. The first thing I do if I suspect I have a problem with my electronic ignition system is to either pull one of the spark plugs, or one of the plug leads and connect it to a spare plug. I hold the plug against the head while someone else turns the engine over. I should see a spark at the plug. If not, I need to isolate the problem further.

Luckily, you don't need any fancy tools or equipment to troubleshoot your ignition system. You can do a lot with just a piece of wire and a 12v bulb. If I had a VOM things would be simple, but let's assume that I left my meter at home. I usually carry one of those little 12v test lights with me, but you can also use any 12v bulb and a piece of wire.

A simple way to eliminate all the wiring, switches and connectors in the 12v feed to the box is to take a piece of wire and connect it between the (-) negative side of the battery at (1), and the white lead to the box at (2). This will eliminate the ignition switch, the kill switch and any other connectors in this line. If this solves your problem, and you now have a spark when the engine is turned over, you have a bad ignition switch,

a bad kill switch or (what else?) a bad connection!

With this same piece of wire, you can test your coils and plugs. Simply disconnect the black wire from the box to the coils at (3), and then, with one end of the wire connected to the battery at (1), touch the other end to the (-) negative coil terminal (3).

When you break this connection, you should see a spark at the plugs if your coils are good. If this does not produce a spark, check the coil wiring and (what else?) the connections, all the way from ground to point (3)! If all connections are OK then you probably have a bad or open coil.

If tests 1 and 2 don't solve the problem, try the Boyer test #4 above. If you now have a spark, then you probably have something wrong in the triggering circuit, a broken wire or (what else?), that's right, a bad connection. Also, check to make sure that the magnet behind the pick-up plate is turning. Don't laugh, I saw it happen once when the bolt holding it in the cam came loose.

In conclusion, let me say this about working with electronic circuits. If the circuit fails, it is usually fairly easy to find the trouble. The tests above will probably be sufficient to identify your problem. In practice, however, life is seldom so simple. Most of the time the problem comes and goes intermittently and can be very difficult to identify. One of the easiest ways around this is to substitute parts, one at a time, until the problem goes away.

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The problem with the Norton on our ride was that it would produce only a very weak spark at the plugs. It required a voltmeter to determine that the box was turning on and off all right but the output was only about 6v instead of 12v. Replacing the box solved the problem. I think we all learned a little from this one.

Boyer has recently released an improved version of its electronic ignition. It uses a microprocessor-based digital ignition unit. It is claimed that the triggering circuits are more stable, especially at low speeds, giving better idle characteristics. Starting should be improved, and the advance curve can be precisely programmed. I have one myself, but I haven't installed it yet. When I get the time to install and test it I will let you know if it really lives up to these claims.

If you have any questions, comments or suggestions, send them in. That's what the newsletter is for, to spread the wealth of knowledge our Club has.

*(continued from page 21)*

with through-bolts) as supplied by several after-market companies. The only negative reports he has heard involve a set that had no flange on top of the liners to hold them in position within the block. If you have any experience with alloy cylinders, positive or negative, please call either Mike at (503) 637-3410 or me, Stevan Thomas at (415) 923-1662.

## Boyers and All That

*by Jim Bush*

*This article first appeared in Good Vibrations (August/September, 1996). It was reprinted in the January, 1997 BSA Bulletin and appears here courtesy of Don Danmeier. Thanks, Don!*

Boyers seem to be the hot topic recently. I installed Boyers on my T140 and T160, and came through the exercise a little more aware of how small things can upset the works. Often the Boyer is deemed to be the culprit of poor or erratic running, yet more likely it is another problem within the electrical system.

In the BMOC I know of two Boyers that have been installed and running for 15 to 20 years, so far. These are on Fred's 1973 T140 Bonny, and Paddy Mahaffey's 1969 T150 Trident. Paddy is a great believer in "If it ain't broke, then don't mess with it!"--he last checked his timing 15 years ago on the side of the road in the African bush, just because his friend had a strobe out and it seemed like a fun thing to do.

My first Boyer installation was on the T140 and didn't go too well. I made two mistakes: due to the age and discoloration of the wires, I mistook the black/white wire for the black/yellow, and connected the points plate backwards. A call to Ken: "I can't get this thing to run, must be the Boyer." (Of course, it couldn't be my fault.) After checking

*(continued)*

and rechecking, I corrected the fault and away she ran.

The next problem was found at higher RPM. Under load, the bike seemed to start missing and hesitating, something it never did before. (Must be the Boyer, eh?). During the next two weeks, including a trip to Saltspring, things seemed to settle down, until I disturbed the wiring under the tank. Then it really ran poorly--fouling a set of plugs on Denman Street (while trying to show those HD guys at Starbuck's that British is still alive and cool. . . NOT. . .with the BBBRB . . .BRP. . . BRP. . .BBURB. . .BANG!). With a new set of plugs, she ran like a top, but there must be a reason.

I took a look at the wiring under the tank and pulled off one of the wires I had so carefully soldered. Uh, huh. Being a thrifty chap, I had reused a bullet connector from a duff loom, and somehow gotten melted plastic mixed in with the solder, and a bad connection resulted. A new bullet connector, fresh solder, and she is running the best since I've owned her. Was the Boyer to blame? No, it just highlighted other problems.

The Boyer installation on the T160 was different. This time, I had a little experience and knew to make all the connections fresh and clean. The installation went fine, but the engine wouldn't start with the electric starter. Kick starting or even arm-starting the engine and she ran fine, but using the electric starter was a no go.

I posted an E-mail message with

Brit-Iron on the Internet asking for suggestions and help. I got nine replies, the main thread in all being that there is a critical voltage with Boyers; if the battery is not fully charged (13.6 v), and all the ignition circuit wiring and connections and contacts are not in excellent condition, the Boyer does not get its full portion of power (8.5 - 9.5 v) and will not fire while using the electric starter.

Helpful suggestions included:

- check voltage drop across the battery when cranking;
- wire a direct hot-wire to the Boyer from the battery (bypassing the ignition switch/kill circuit) as a test;
- dismantle and clean the ignition switch;
- clean the pin connectors and contacts in the ignition kill circuit; and
- clean the starter brushes.

Other suggestions included:

- add a small second battery for ignition use only; and
- kickstart the damn thing like most British bike owners.

When tested, the battery was up to charge and the voltage drop was only one volt. The test wire bypass worked, and she fired up on the starter. I noticed that if I stopped the engine using the kill switch, then she would restart using the starter, but if I used the key switch, then she wouldn't. I dismantled the key switch, and found sooty, black,

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corroded internals: a sure sign of poor contact. Fully cleaned, and back in--presto! Electric starting again.

Several other Boyer related incidents come to mind. Last week, Fred was having intermittent trouble with his T140. He had done all the checks and tests, but still had the problem, so he was about to go and buy another Boyer. Then he noticed that with the ignition on, he was getting a "continuous trickle spark." Ken Hazard was able to suggest that one of the cells in the battery was probably a dud (a service tip from Boyer; something to do with the resistance change in the battery). This actually was the case for Fred. A new battery, and away she ran.

Colin Kelly's ignition quit, on the way back from the Quincy, California Norton Rally. The group "helping" all insisted that he needed to buy a new unit. Colin was determined he would find the cause before shelling out the bucks for a new unit. He ultimately found a broken wire at the points plate. A quick repair, and away she ran.

The moral: Make sure all the connections, contacts, switches, and battery, etc., are in excellent condition before assuming that the Boyer is a duff one. The Boyer system is reliable in itself (proven 20 years in our midst). However, a Boyer will often reveal weaknesses in other electrical components and connections in your system.

## Mailbag

Editor,

Art Sirota's list of suggested tools and assorted handy items to take along while touring (October *Notice*) reminded me of an incident that happened to him on day one of the Velocette Club ride last August. Quite possibly Art has forgotten that when he opened his Norton's tool box that evening, he discovered that his set of feeler gauges had come apart and the wee pieces were all mixed up with the tools and stuff!

Incidentally, although it was mid-August, the temperature that night dropped to 28°, resulting in a somewhat chilly situation for those riders sans tents. However, crossing over the to the coast the next day, it was in the eighties at Roseburg, and at the ride's finish two days later at Ashland it was 106°, the hottest spot in the U.S.!

Later that week at the campground in Northern California, Art managed to borrow a guitar, and so was able to regale us with some of his latest and greatest hits, though he didn't come up with that old Velo standby "The Slippin' Clutch Blues"! (In Art's case, it had been a case of "The Missin' Sparks Blues". . .)

On another topic, you may recall that Vancouverite Nelson Skalbania and his daughter were a major factor in Norton Company's misfortunes about three years ago with their acquisition and subsequent sell-out. Skalbania went on to take over the Vancouver Lions major league football club. When the Club was forced into receivership recently, many fans stated that they weren't interested in supporting it while Skalbania was in control of the finances.

Sam Jowett, Vancouver, B.C.



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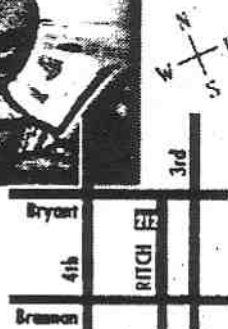
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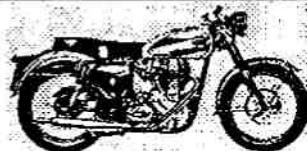
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