

Norton

Notice

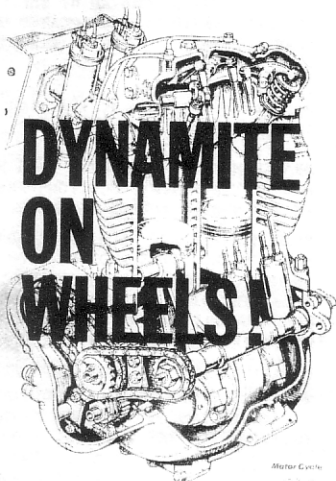


Newsletter of the Northern California Branch

NO. 36

MAY 1981

750 ATLAS



THRILLS + FUN = NORTON

A 750cc engineering masterpiece that's been rated as the outstanding motorcycle in its class by experts!

A twist of the throttle assures instant response from a meticulously prepared 60 h.p. engine of vertical twin design . . . an engine whose heritage is a direct line to 34 Isle of Man competition victories.

A touch of the controls that actuate the large, wide, full-hub front and rear brakes guarantee safe, sure stops at all speeds. The "road-holder" front fork, Girling rear shock absorbers, "featherbed" frame and reliable and proven gearbox all add up to the most dependable road-burner on the highway.

Such extra luxuries as Dual Amal Concentric carbs, 8000 rpm tach, 120 mph speedometer, new design sports type dual-seat, 12 V. electrical system with capacitor and Avon tires are all standard equipment on your Norton 750cc OHV "Atlas".

See your Norton dealer today, and start enjoying the thrills of riding a winner!

Norton

MANUFACTURED BY NORTON-VILLIERS
The New Name in Motorcycles

Berliner Motor Corporation
Plant Road • Hasbrouck Heights • New Jersey



Norton Notice

87 Ord St. #3
San Francisco, Ca. 94114
(415) 369-0597

published monthly by the NORTHERN CALIFORNIA BRANCH of the NORTON OWNERS CLUB, its sole purpose is to inform and entertain members regarding all aspects of the NORTON motorcycle, including history, technical advice, and preservation. NORTON NOTICE is not for sale, but is provided as a benefit to members of this Branch.

OFFICERS AND STAFF

PRESIDENT

Harvey Loucks
8753 Lockford Ct.
Cupertino, Ca. 95104
(408) 255-7356
(Before 9:00pm)

VICE PRESIDENT

Maya Petersen

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Art Sirota
(415) 747-0740

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(415) 493-2157

NORTON NOTICE STAFF

Michael Heth
Gene Austin
Harvey Loucks
Phil Verzola
Bob Marshall
Sandula Kong
(King's younger brother)

ADVERTISEMENTS

Current and prospective members may place ads for Norton-related material wanted or for sale in TRADING POST. Send all necessary information to NORTON NOTICE. There is no charge for ads in TRADING POST.

COMMERCIAL ADVERTISING RATES

	<u>1 Issue</u>	<u>3 Issues</u>	<u>6 Issues</u>
1/4 page	\$5.00	\$13.00	\$25.00
1/2 page	\$9.00	\$25.00	\$45.00

Ads may be designed by the Staff if so desired.

NORTON NOTICE IS A REFLECTION OF ITS READERSHIP AND EVERYONE IS URGED TO SUBMIT ANY ARTICLE, TECHNICAL TIP, JOKE, PHOTOGRAPH, ORIGINAL OR OTHERWISE SO THAT OTHER NORTON ENTHUSIASTS CAN ENJOY IT. FOR BRANCH MEMBERS WHO CANNOT OTHERWISE ATTEND RIDES AND MEETINGS, NORTON NOTICES AFFORDS THEM AN EXCELLENT OPPORTUNITY TO SHARE EXPERIENCES WITH THE ENTIRE MEMBERSHIP AND BRING US ALL CLOSER TOGETHER.

DEADLINE FOR ITEMS IS THE 20TH OF EACH MONTH.



MEMBERSHIPS

Membership is available in three categories.

FULL MEMBERSHIP gives membership in the NORTON OWNERS CLUB with its benefits and privileges such as bi-monthly issues of ROADHOLDER MAGAZINE sent directly from England keeping members abreast of Norton owners activities from around the World, the SPARES PROGRAM that allows one to buy Norton parts directly from England at an attractive, low cost, and full voting privileges at all NOC and Branch meetings.

ASSOCIATE MEMBERSHIP is established for any Norton owner wishing to be associated with the Northern California Branch and are welcomed at all meetings, rides and other functions. Members are urged to become FULL MEMBERS as they become familiar with NOC advantages and benefits.

SOCIAL MEMBERSHIP is established for Norton enthusiasts who have not yet bought their Norton to become familiar with NOC and Branch functions and to assist them in finding a Norton suited to their needs. Although Social Members do not have Branch voting privileges, they are welcome with their ideas at all Branch functions.

NORTON NOTICE is provided to all three membership categories and the publication is open to all for articles and ads they wish to submit.

FULL MEMBERSHIP: \$25.00/yr.

ASSOCIATE MEMBERSHIP: \$10.00/yr.

SOCIAL MEMBERSHIP: \$10.00/yr.

ALL MEMBERSHIP DUES ARE PAYABLE TO THE BRANCH TREASURER. RENEWAL DUES ARE PAYABLE AT THE END OF THE INDIVIDUAL'S MEMBERSHIP YEAR, THAT MONTH BEING DESIGNATED BY THE LAST NUMBER OF THE MEMBERSHIP NUMBER LOCATED ON THE MAILING LABEL OF NORTON NOTICE. Example:

999/6

denotes member number 999 with dues expiring in JUNE.

BRANCH MEETINGS ARE HELD EACH SECOND THURSDAY OF THE MONTH; LOCATIONS ARE ANNOUNCED IN THE NORTON NOTICE CALENDAR.

BRANCH RIDES ARE HELD THE SUNDAY FOLLOWING THE MEETING, TIME AND LOCATION ALSO ANNOUNCED IN NORTON NOTICE CALENDAR. IN THE EVENT OF RAIN, THE RIDE IS POSTPONED UNTIL THE NEXT SUNDAY. IF IT RAINS THAT SUNDAY, THE RIDE IS CANCELLED FOR THAT MONTH.

OCCASIONALLY, MEETINGS AND RIDES ARE SCHEDULED FOR DAYS OTHER THAN THE SECOND THURSDAY AND FOLLOWING SUNDAY. BE SURE TO CHECK THE CALENDAR FOR ANY CHANGES.



APRIL MEETING

MINUTES FOR NORTHERN CALIFORNIA BRANCH
MEETING, THURSDAY APRIL 9, AT THE WINERY,
PALO ALTO.

Art Sirota

The meeting was called to order at 8:10 by Harvey Loucks. About 50 members attended. A vote was called to decide whether future meetings on the Peninsula should be held at The Winery or Cheshire Arms; it was decided to continue meeting every other month at the Winery in Palo Alto, alternating with our meeting place in San Francisco, The Edinburgh Castle. We will ask for fewer tables and more chairs for The Winery and keep our eyes open for another, more spacious location for our Peninsula meetings.

Last month's ride [March] was discussed, along with Frank Ambrosi's unfortunate accident. (Frank was present and looked completely recovered behind the smoke screen thrown up by his cigar.) April's ride through the wine country, the over-nighter to Monterey, Carmel, and Morro Bay were planned. Harvey pointed out that on the over-nighter, we will have a special government campground opened just for us!

Steve Coburn will be passing the word around at this April's CAMA Rally about our upcoming NOC Rally. Pete Gheorghiu is Chairman of the Rally Committee. We decided to clarify the Rally fee as \$10 per bike, not per person. Pat Austin announced that Gene's truck possibly would not be going to the Rally, so they won't be able to haul up any extra gear. Also, anyone wishing to reserve cabins for the Rally can call Ducey's.

Tom Horton's report on the status of the treasure was that we have \$428 at present, but since we owe \$266 to various projects, we really only have a balance of \$162 plus about \$50 in camping reservations.

Bob Marshall told about the posters the Branch is offering for sale (Peter Williams for only \$1.50 and our anniversary dealer's posters for only 50¢). Also, Norton Notice will be mailed out first class from now on.

Art Sirota sang his new Norton song, "Talkin' Restoration" and was given a standing ovation (mainly because there weren't enough chairs for everyone to sit down).

Many people offered to help organize the 5th Annual Beer Bust including Claude Wright and Michael Bruce. Ara McDavid offered her property in a remote spot in the hills of La Honda as a potential site.

People attending the meeting who were not members were urged to join. Jerry Henry reminded everyone again that only full members are eligible to take full advantage of the Spares Program.

Gene Austin ended the meeting with a demonstration of the Norton oil lubrication system. [A special thanks to Art Sirota, Steve Coburn and Maya Peterson for providing Norton decoration for the meeting room.]

PRESIDENTIAL RAMBLINGS

April's meeting at the Winery resulted in what was probably the largest gathering of Norton enthusiasts at a regular monthly Branch meeting in the history of mankind. There were forty five of us in and near the meeting room and It looks like getting the Notice delivered on time really helps (thank you US Postal Service).

Most of you may not realize it, but we are actually the largest and most active Branch by far of the Norton Owners Club International.

Northern California is basically God's gift to man as far as good sporting, scenic motor-cycling roads go and an awful lot of Nortons were sold here in the '60s and '70s to take advantage of the situation.

Taking advantage of the situation is just what we did on the April ride in the Wine Country. Twenty true believers showed up at the Bay Bridge Toll Plaza and were joined by the Vallejo gang led by Generals Stigletz and Lang at the Carquinez Bridge. Bob Stigletz agreed to lead the ride to keep Yours Truly from making wrong turns and because he rides like a turtle so everyone could keep up. Fortunately, there were no significant crashes or breakdowns (right Tom & Bob?) and we all made it to Little Switzerland in El Verano for some suds and chow. The route was extremely scenic and well worth another Branch ride.

I want to thank Claude Wright and Mike Bruce for volunteering to organize the Beer Bust that is coming up in June. I'm sure they will do a bang up job.

Tom says that signups for the Rally are coming in fairly steadily with over twenty confirmations so far. Based on past experience, it looks like we will have fifty to one hundred show up at Bass Lake. Don't miss it!

Keep 'em upright!

Harvey



SOUTH COAST OVERNIGHTER

As a result of enthusiastic interest earlier this year (both of us), this May ride will be an overnighiter along the Big Sur Coast. The meeting place will be at "Mr. Norton" Ed Brooks' Cyclery in San Jose located at 1615 Almaden Rd. near Vine. Take the Vine St. exit West of 280 and "you can't miss it".

Try to meet there at 9:30 so we can take off at 10:00. Ed will have a hot pot of coffee and a number of interesting old machines on display so you may want to come even earlier to "kick tires" and browse around a bit. He also has about the largest stock of Norton parts in the U.S.

From Ed's, we will head south on Almaden to McKean and Uvas Rd. past the reservoirs, then on to Hwy 152 and over Hecker Pass to the Coast Highway at Watsonville. Following the Coast down to Monterey, we will pick up Jerry Reynolds and gang then down the Big Sur Coast to Big Sur itself for lunch. Jerry will lead the ride down the coast and inland a bit at Cambria, then back to the coast at Morro Beach then back inland at Hwy 41 to our campsite at the summit - Cerro Alto Campground.

If you don't want to camp out, there are motels in Morro Bay which you could stay at, then join us the next day. Also, we will arrive at the campground around 5:00, so those who want to come back to the Bay Area can still do so in a reasonable time on Saturday night. There are eating and drinking places near the campground, so our base needs should be satisfied.

Sunday morning will stagger up bright and early and continue our adventure on the inland routes too exciting and numerous to mention. Eventually we'll get home - I promised my wife!

See you there,
Harvey

BRANCH EVENTS

DATE	TIME	PLACE	EVENT
5/14	7:30	Edinburgh Cast. San Francisco	Meeting
5/16	9:30	Brooks Cyclery 1615 Almaden Rd. San Jose, Ca. (408) 295-4341	South Coast Overnighiter
6/11	7:30	The Winery Palo Alto	Meeting
6/14	12:00	Watch this Space	BEER BUST

Brooks Cyclery

TRIUMPH
NORTON
BSA
NEW AND USED PARTS
TELEPHONE 295-4341
(408)
MOTO-GUZZI
DUCATI
ED BROOKS
OWNER
1615 ALMADEN ROAD
SAN JOSE, CA. 95125

BROOKS CYCLERY HAS BEEN A NORTON DEALER EVER SINCE 1948 AND IS STILL SERVING THE BAY AREA WITH A COMPLETE STOCK OF NEW NORTON PARTS, TOOLS AND ACCESSORIES FOR YOUR NORTON.

- * ED BROOKS - OWNER - 31 YEARS
- * BOB RABER - PARTS - 20 YEARS
- * BILL MANKINS - SERVICE - 12 YEARS

IN ADDITION TO ALL THE OTHER GOODIES IN STOCK, BROOKS IS NOW OFFERING LOCALLY MADE MUFFLERS, HEADER PIPES AND 2 INTO 1 CONVERSIONS FOR ALL COMMANDO MODELS. THESE MUFFLERS ARE ACTUALLY BETTER THAN THE STOCK 750 TYPE AND LOOK VERY SIMILAR. CURRENT PRICE IS 20% BELOW STOCK.

MR. BROOKS HAS RECENTLY JOINED THE NORTON OWNERS CLUB, AND WELCOMES ALL MEMBERS AT HIS SHOP FOR A CUP OF COFFEE AND SOME GOOD NORTON TALK. STOP BY AND GIVE HIM SOME OF YOUR BUSINESS, OR JUST STOP BY TO TALK AND CHECK OUT THE BEAUTIFUL OLD MOTORCYCLES HE HAS ON THE SHOWROOM FLOOR. IT'S WORTH IT.



TAUBER'S LEATHERS

CUSTOM RIDING APPAREL
FOR THE MOTORCYCLIST

126 SUTTER 392-1462
SAN FRANCISCO

The Newsletter of The Northern California Branch



THIS MONTH starts a long series of articles by the Branch President, Harvey Loucks, on the preparation of Norton and rider for maximum performance. Harvey's ideas have been long-researched, planned, and organized and will probably generate a mild amount of controversy. This kind of controversy we can use! Some of the material may be obvious to some, new ideas to others, but should make all Norton owners think about their machine and themselves next time they get together for a ride.

PERFORMANCE IMPROVEMENT FOR THE NORTON COMMANDO & RIDER

This is the first of a series of articles that deals successfully with handling improvement, rider (that's you) improvement, reliability improvement, and power improvement for the Norton motorcycle and rider. The objective is to help you learn how to get the best performance out of your machine and yourself. Consequently, much of the discussion will focus on how to ride fast and stay alive. Obviously, whatever machine and rider improvements apply to improving safety at high speeds will also improve your riding safety at moderate speeds.

It's going to take most of the rest of the year to cover these subjects because of the sheer volume of information that has to be transferred. But I intend to be complete and detailed enough to that the average Norton owner can make the modifications to his machine and himself himself.

Most of the information presented comes from magazine articles, Norton books, the famous Dunstall Norton Tuning Manual, the Roadholder, USNOA's Norton News, the Commando Service Notes, discussions with knowledgeable Norton folks and fifteen years of personal experience with Nortons.

So much for the introductory B.S. Let's get on with it.

PART I. Handling Improvement

Most of us like our Nortons because they are already good handling, light-weight, torquey machines and it may come as a surprise that they can be substantially improved. However, if you carry out the following suggestions on your Machine, I guarantee you'll notice a big improvement in handling.

It seems logical to start at the bottom and work up, so we will look at tires and wheels first. Standard Dunlop K81's work best. The Commando was developed with K81's and they give the best traction with the most predictable breakaway behavior of any standard road tire. And, you don't need to buy the softer (and more expensive) K81R type. The R's wear faster and don't give any better traction within the lean angle constraints of the Commando. Size 4.10 x 19 should be used front and rear on the disc brake models, but a 3.60 x 19 is OK on the drum brake models. If a 3.60 x 19 is used on a disc brake model, it is too easy to lock up the front wheel on hard braking. However, the 3.60 does clear the fender stays on the drum brake model.

Second choice in tires would be the Avon GP which also came as original equipment on Nortons, the Dunlop K91 or the Avon Roadrunner. These tires wear longer than the K81 (especially the Roadrunner) but are a more rounded profile and have a slightly harder compound. Consequently, they lose traction sooner at extreme lean angles and are not as safe. By all means, avoid K70's and Japanese (excuse ME!) made tires in general for fast road work. The K81 copies (Cheng Shin comes to mind) are especially bad.

When K81's start to break away and lose traction, it's easy to recover because they start slowly, then drift out in a predictable way. Some of the cheaper tires with harder compounds and less tread on the sidewalls put your posterior on the pavement so fast that you won't have time to even think about what happened!

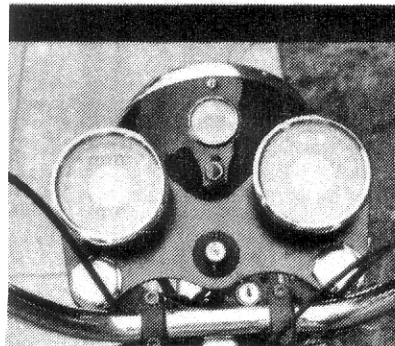
Tire pressure should be increased a bit for fast road work. Heavy riders (around 200 lbs) should run 26 psi front and 28 psi rear, whereas lighter riders can use 25 psi and 27 psi. The higher pressure is necessary to keep the tire from deforming under the high side loads of hard cornering.

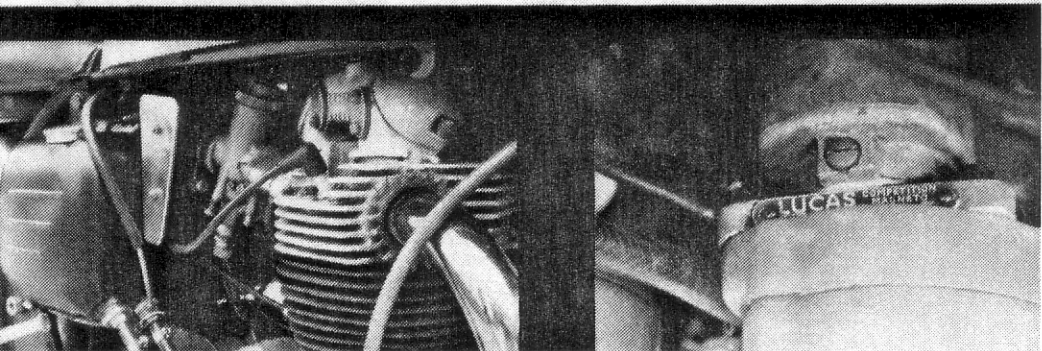
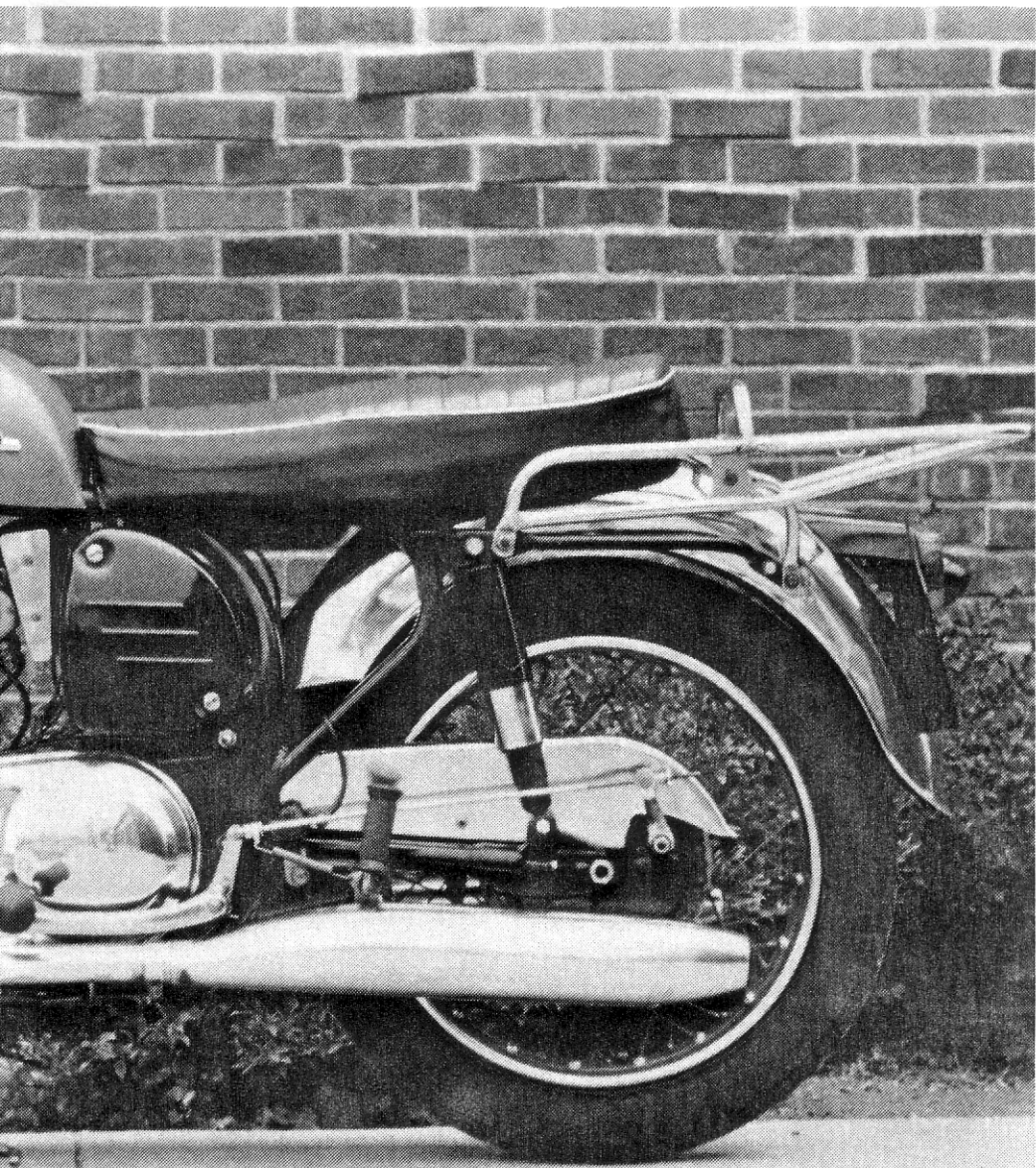
Alloy rims can save several pounds per wheel and are stronger than steel rims at the same time. Although a bit expensive (about \$160 including labor) alloy rims reduce unsprung weight which allows the wheel to follow the bumps in the road more easily. his weight loss also makes it easier for the suspension to control the wheel and reduce weird gyroscopic effects that tend to pull you off the line when making quick changes in direction. And, finally, they are pretty!

The next improvement is critically important in good handling and involves tire balance, wheel trueness and wheel alignment. Problems with trueness and balance can set up the wobbles, rob you of some power, reduce traction, and increase vibration. Wheel trueness means that the wheel spins with no side-to-side or up and down motion at the rim. You can check trueness by spinning the wheel while holding a reference pointer steadily near the rim. If you see any wobble, get your wheel trued. It only costs about \$10 for truing and balancing by an expert.

If your tires are out of balance, you can get a high-speed vibration which deteriorates handling. Most tires have a spot on them which indicates the mounting orientation relative to the valve stem. If the spot indicates a heavy place, the spot should be located opposite the valve stem. Some spots indicate a light place in the tire. Ask your dealer which way it goes when you buy the tire.

Wheel balance can be checked fairly easily. Loosen the front axle nut so that there is no pressure on the inner bearing races and push back the disc brake pads a bit with a knife or thin screwdriver so they don't rub. Now





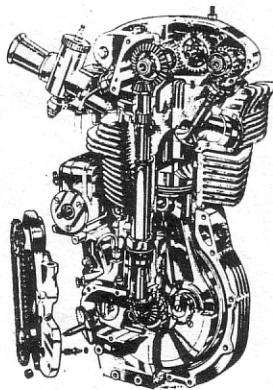


the wheel should be able to turn freely. Start the wheel to spin very slowly and let it come to a stop. If it rocks back and forth a bit (6 or 8 times or more) before settling, it's out of balance and should be fixed. Weights that clamp onto the spokes are cheap and available at any shop. The rear wheel must be removed to be checked. After removal, insert the rear axle and check in the same manner as the front wheel.

When wheel alignment is correct, the tires roll along the same line and give the best balance in cornering. If you take your hands off the bars (slowly!) at about 40 mph and you have to lean to one side or the other to keep going straight ahead, it's a pretty good indication that your wheels are not aligned. Alignment should be checked each time the rear wheel is moved, as when adjusting the chain. To do this, put the bike on the center stand and move the front wheel so that it points exactly straight ahead. Now, go to the back of the bike and sight down both sides of the rear tire toward the front tire. It will be clear then which way the rear tire must be moved to bring it in alignment with the front tire. There are many alignment techniques and tools, but this method is easy and it is even used by Dick Mann, the famous racer of a decade ago.

Another helpful addition to your bike is a steering damper. Even the best bikes will wobble under certain conditions and these are usually inappropriate times (right Gene Austin?). All the GP race bikes use steering dampers even though they have the best construction money can buy. The damper simply puts the "Kibosh" on speed wobbles and cornering wobbles before they even get started. The best units have adjustable damping and mount between the front down tube and the lower triple clamp. Cost is about \$40.

(to be continued)



TRADING POST

WANTED: Frame for Norton 88 twin
contact Ron's Cycle Sales
215 Lancaster Street
Leominster, Ma. 01453

MORE STUFF AND JUNK FOR SALE

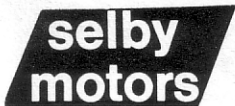
- Alloy racing oil tank for Commando \$40
 - Michelin M45's 19 in. front, 18 in. rear \$45
 - Brand new Britax crash bars. frt & rear \$40
 - Tracy Body for Norton (integral tank, seat, and fender) \$50
 - Brand new speedos and tach \$50 ea
 - P11 oil tank and cover, excellent! \$25
 - Disc Brake set up, complete \$225
 - Original John Player Norton Exhaust pipes (Black Chrome) \$60
 - Atlas oil tank \$25
 - Atlas battery cover \$15
- Call Harvey between 6 and 9pm (415) 255-7356
I can bring this stuff to the next meeting.

WANTED: Seat and Front Fender for '64 Atlas
Charles McHose
5312 W. 138th Pl.
Hawthorne, Ca. 90250

FOR SALE: 1975 MK III, 2400 original miles.,
Red/White/Blue Roadster, shop manual,
Halogen lamp, Nylon cover, \$1800.
Shoe ZG Helmet, Kryptonite lock, \$150
Dick Rogers, (415) 548-5658 or
848-4100
Keep Trying!

Scott Marburger has actually been paid for a paint job and the wind hasn't blown it off yet! so if you need a "professional" paint job on the old Norton, give Scott a call at (415) 455-8776. He really does have good equipment and seems to be learning how to use it. Also, he fell off his Fastback and bent a few bits, so he needs the bucks to cherry it out again.

All kidding aside, Scot does great work and the price is right.



- motorcycle sales
- self service
- accessory dept.
- complete service dept.
- machine shop
- insurance
- notary service

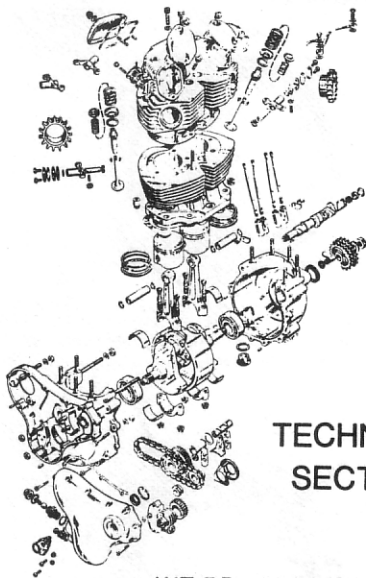
JACK MORRIS, Branch member and Norton enthusiast is the man to see at SELBY'S. Jack's been riding and working on Nortons for years and knows the ins and outs of keeping the beast healthy.

SELBY MOTORS has a complete line of motorcycling accessories and is a BMW, Triumph, Suzuki dealer whose service department will take the time to get your machine running and keep it that way.

They have LUCAS RITA in stock and their British stock changes weekly, it seems, so check with Jack to see what has just come in.

346 El Camino Real
Redwood City, Ca. 94062

(415) 369-4112



TECHNICAL SECTION

WEIRD SCENES INSIDE THE GEARBOX

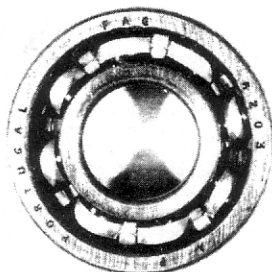
main-tain (mān-tān), v.t. to keep in a certain state, as of repair.

It has always amazed me how the definition of the above word has been so misconstrued by the average motorcyclist. To most folks, it means: fix it when it breaks. To them, there is a never-ending list of things that break on their motorcycle. For those who know the true meaning of the word, maintain, life is easier and the old motor holds up well. Witness those machines that turn 50 or 70 thousand miles without a flutter.

Recently we had an article concerning the gearbox and primary drive. This is meant to be somewhat of an addendum to that article and the Commando Service Notes (a bargain at 10 times the price). If you were to read all 3 service manuals available along with the service notes and Harvey's article, they still wouldn't totally prepare you. Many are the problems you encounter as you trek unawares to the far side of the gearbox to remove and replace the infamous LAYSHAFT BEARING. Most of the information available to the neophyte Norton mechanic assumes he knows a great deal about mechanical maintenance in general and only needs a few particulars about the Norton for smooth sailing. Since I've just been inside 3 gearboxes in a row, perhaps I can fill in the gaps.

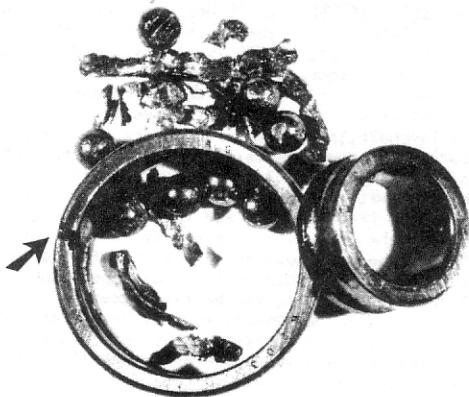
To apply the word maintain to the Norton gearbox is very important. The box has a bad reputation and I feel that most of it is attributable to 2 mishaps. One is the effect of condensation on the steel components in the box and the other is the well-known layshaft bearing failure. There are quite a few Norton owners who can tell

Our first Scene has a nice 10,000 mile FAG bearing all shiny and proud. This is out of a MK III and there is no indication that anything could possibly go wrong.



you of the consequences of allowing this stupid little part to fail. The very worst is that the balls of the ball bearing can be spit out the back of the gearbox case and, instead of just a little bearing gone, you have the entire box out to lunch.

Very little will be useable inside the case. The problem with replacing this bearing before it fails is that not all of them fail. Only some do and you can never tell which ones will. The only thing to do is replace the bearing - before it fails. A small benefit of your being concerned about the bearing is that you can also inspect the steel parts that you never give a thought to otherwise.



Here we have a somewhat similar FAG ball bearing who ate too many speed shifts or something. The mileage on this little gem is only 12,000 miles. Notice the crack in the race which endears it to the case so they never want to part.

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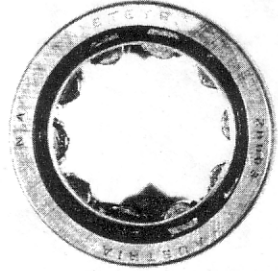
The weakening of the springs and gearshift mechanism is brought about by the non-unit construction of the Norton engine and gearbox. The gearbox rarely even gets warm and the condensation slowly takes its toll.

To try and save you some grief with the job of maintaining the performance of your gearbox, I'll try to first caution you and then point out some possible problems.

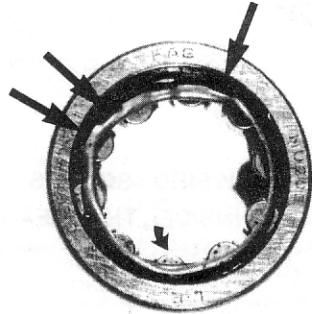
To obtain a roller replacement for your ball bearing, you can contact your local bearing house. Norton shops or use of the Spares Program. The unit is fairly standard with dimensions of 17x40x12 mm. Bearing houses can order them with part no. NJ203. It will run about \$11 - \$15. Your local shop will probably stock it for \$25 - \$30r if you plan way ahead, you can order it through the NOC for about \$17 and in this case, you get a nice SKF unit. **FIRST CAUTION** - However you get it, be sure you have the bearing in your hand before you dismantle your box. I made the mistake of assuming that it would arrive when the salesman said it would. My bike sat on its center stand for 2 weeks while I waited; by then, the money I saved didn't matter. The second cautionary note is: there is no real reason to remove the detent plunger that engages the cam plate. It would allow you to move the cam plate easier, BUT once it is removed, if you move the quadrant downward (towards first gear), the cam plate can disengage and free-wheel on its shaft so that when you move the quadrant back up, your gear timing is off. This baffled us for days (this really is the voice of bad experience talking here).

Before wandering into the nether regions, obtain a good manual. Begin to disassemble the gearbox and voila', the first problem jumps right up. The nut on the end of the mainshaft is larger than any of your sockets. It's 1/2 Whitworth, but call it 15/16. Be sure to use a socket as the nut is on there with 70 lbs of torque and nothing but a socket will get it off (we tried). Right about now, you may want to put the outer race of the new bearing in the freezer to let it shrink slightly. Following the manual will have you down to the layshaft in no time. If you are replacing the bearing before it fails (like a good Norton Owner) it may just come out, but then it may stick in the case with the shaft, too. If you remove all the gears from the main and layshafts, you can heat up the case with your trusty propane torch right around the bearing and, with a little luck, it will pop out. This could be a second problem. If you are replacing the bearing after it fails (like a bad Norton Owner) you may be in for some real trouble. The outer race may have cracked, allowing the race to expand and wedge it in the case like it never wants to come out. At this point (if I had it to go through this again) I think I would sacrifice 2 cheap blade screwdrivers by bending them 90° right after the end of the blade. After really heating up the case, you can pry equally on each side of the stuck bearing and slowly work it out.

At this point, you are about half done. Take the layshaft up to the freezer



Here is our Hero, the "Roller Replacement". These bearings are about 8 times stronger than the ball bearing.



Here we have a similar roller bearing that was improperly installed by yours truly. The piece of wood I was driving it in with fractured and deformed the cage for the rollers. Let's sing it together - M-I-C-K-E-Y M-O-U-

and get the outer race of the new bearing. At the same time, put the inner race of the new bearing in the oven at about 400°. I would measure the land that has been machined into the case for the layshaft bearing and compare it to the width of the bearing. Of the 3 gearboxes, I just saw each had a different depth in the land. This way, you'll know when the bearing is seated home in the case.

Heat up the case with the torch and drive the bearing in using a drift that contacts both sides of the bearing equally and will not deform. By now, the layshaft and inner race of the bearing have shrunk and expanded respectively, you can put the race on the end of the shaft and it should slip right down next to the gears with a nice "thunk".

Everything is now honkey-dory and you can put the box back together again. Of course, inspect all your internals for any signs of weakness and replace any suspect parts.

If by chance you wait until the bearing fails and you ride home on it AND it doesn't destroy the box, it will at least

(continued next page)

The Newsletter of The Northern California Branch



give the first gear bush and kick start bush a hard time since they support the layshaft at the other end. If you have to replace the first gear bush, it will help you out to know that the bush must be PRESSED into the gear and then REAMED to fit the LAYSHAFT. It cost us 2 bushings and 3 nights until we called someone who told us this.

The only other things I can think of are not to heat up the inner race of the new bearing with a torch. It really works a whole lot better in the oven and when it comes time to put the outer case back on, smear some grease on the face of the ratchet plate so that it will stick up onto the inner cover. Trying to put the outer cover on while holding the ratchet in place with your hand is a lost cause (this last part is for MK III only).

Hopefully, this little ditty will encourage you to do a little "maintenance" on your own gearbox. As you can see, I've made all the possible mistakes, so you should have no trouble.

Special thanks to Harvey Loucks, Gene Austin, Mark Scardina, Bart Rago, Tom Skillington and Art Sirota who each contributed to this in some way.

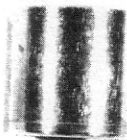
M.



This inner roller race is brand new and, if you heat it up in an oven, it will look the same after you shrink it into the layshaft.



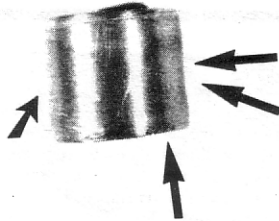
This inner race was heated up with a propane torch and doesn't look like it like it at all.



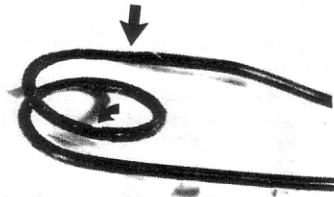
This is a shiny new 1st gear bush. It runs \$6.50 to \$10.00, so shop around.



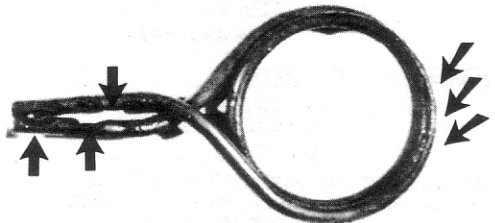
This 1st gear bush took the load after the ball bearing above failed. Other parts of the gearbox take it in the shorts too if you drive on after the tell-tale "kick-starter swings down".



And last, we have a shot bush that we heated up to fit over the layshaft. \$10 down the tubes!



This ratchet spring has corroded away to only half its original thickness.



This gearshift return spring is notched and eaten away from moisture.



The gearshift stop plate is also notched and half gone in a critical load area. When these little guys finally give it up, your whole box could bite it. The stuff reputations are made of!

1964 NORTON ATLAS

The Centerfold bike this month is Harvey Loucks' 1964 Atlas. Everything you see on the bike is original including those longhorn handlebars. The Norton Atlas was the biggest, baddest, meanest, fastest bike available in 1964 and a popular tourer to boot. Standard equipment included the famous slimline featherbed frame, solid mounted 750cc twin engine, and magneto ignition. This model is fitted with the hot Lucas K2FC competition mag. The bike is comfortably smooth up to about 80 mph and handles superbly as one would expect from a featherbed. It is ridden frequently on errands and for commuting.

It's indeed unfortunate that there aren't more of these fine old bikes around - most were butchered in the late '60s chopper craze.

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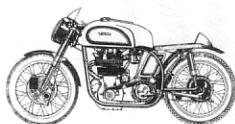
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