

Norton Notice

THE NEWSLETTER OF THE NORTHERN CALIFORNIA BRANCH



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Norton
Commando



NO. 78 OCTOBER 1984

Norton Notice

The Newsletter of The Northern California Branch



is published monthly by the NORTHERN CALIFORNIA BRANCH of the NORTON OWNERS CLUB. Its purpose is to inform and entertain members regarding all aspects of the Norton motorcycle, including history, technical advice, and preservation of the marque.

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

Deadline for items to be submitted for publication is the 21st of each month.

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MEMBERSHIP IN THE NORTHERN CALIFORNIA BRANCH OF THE NORTON OWNERS CLUB IS AVAILABLE FOR \$25.00 PER YEAR.

MEMBERSHIP DUES ARE PAYABLE TO THE BRANCH SECRETARY/TREASURER, WHOSE NAME IS SHOWN ABOVE.

RENEWAL DUES ARE PAYABLE AT THE END OF THE INDIVIDUAL'S MEMBERSHIP YEAR, THAT MONTH BEING DESIGNATED BY THE LAST NUMBER OF THE INDIVIDUAL'S MEMBERSHIP NUMBER AS LOCATED ON THE MAILING LABEL OF THE NORTON NOTICE OR THE MEMBERSHIP CARD. FOR EXAMPLE, 745/2 DENOTES MEMBER NUMBER 745 WITH DUES EXPIRING ON THE 1st OF FEBRUARY.

ALL CHANGES OF ADDRESS SHOULD GO TO THE BRANCH SECRETARY/TREASURER, NOT THE NORTON NOTICE EDITOR.

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

Subscription to the NORTON NOTICE only is available for \$15.00 per year. This does not include membership in the NORTHERN CALIFORNIA BRANCH of the NORTON OWNERS CLUB, nor does it afford any of the rights or privileges of membership in the NOC.



UPCOMING EVENTS

<u>DATE</u>	<u>TIME</u>	<u>PLACE</u>	<u>EVENT</u>
Oct. 11	7:30 P.M.	Edinburgh Castle 950 Geary St. San Francisco	October meeting
Oct. 21	10.00 A.M.	Sausalito Ferry Landing Downtown Sausalito	Wine Country Ride
Nov. 6	evening	Cal-Expo Sacramento info (916) 920-1121	ANA Mile Race
Nov. 18	7:30 P.M.	Rick's Swiss Chalet 4085 El Camino Way Palo Alto	November meeting
Nov. 18	10:00 A.M.	Brook's Cyclery 1615 Almaden Rd. San Jose	Carmel Valley loop ride
Dec. 16	3:00 P.M.	Rick's Swiss Chalet 4085 El Camino Way Palo Alto	Christmas party and election of officers

NOTICE! In the event of rain on the day of a club ride, the ride is automatically postponed one week. Also, riders should have plenty of oil and gasoline by the scheduled departure time and all personal problems should be taken care of. In other words....
FULL TANKS AND EMPTY BLADDERS!

VIBRATIONS

Welcome to the club the following new members:

James Siemer of San Luis Obispo
Errol Scott of San Rafael
Ramon Towne of San Francisco
Wayne King of Anderson
Robert & Nancy Young of LaCrescenta
Herb Pagan of Oakhurst
Marty Senetra of Sacramento
Bill Glavia of Burlingame

Please, please, please...when you receive an NOC triplicate membership form with your Norton Notice, that means that your dues expire at the end of that month. If you are renewing please fill out the form and return it to me with your dues. And please include your machine details including engine number. At the end of each month I send the dues to England, and everyone who is either new or renewing has to have a completed form accompany their dues. If you don't return the NOC form to me it makes life complicated for me and more work. If you have difficulty in locating your engine/frame number and have never known your Norton's true identity, it's easy to get to know each other better. For the shy and lazy, it's usually printed on the DKV pink slip (if you have one). For the adventurous, this requires a trip to the outer regions of your garage. There, usually under a dust sheet and a layer of grease, you will find "THE NUMBER". Engines have it stamped on the left hand side crankcase just below the cylinder, and if you own a Commando the frame number is on a plate riveted to the headstock. Featherbed owners look to the left hand gusset plate at the rear of the clutch cover. Pre-Featherbed owners, you're on your own. If you're lucky, frame and engine numbers should match. Make an old membership secretary happy and please do this next time you are renewing.

If you have read the latest "Roadholder" you will have seen that the NOC is

bringing out a new, bigger and better calendar for 1985. Well, the Northern California Branch has already put an order in for 50 calendars. When they arrive they will be selling for \$6. If you wish to purchase one, please send me \$6, (plus \$1 for mailing). I will place your name on the waiting list, first come first served.

The branch is also stocking up again with more T-shirts. The order is in the pipeline and they should be available soon. For details, see future issues of "The Notice" under paraphernalia sales by Tomorman.

Phil Radford

TWISTIES

End of summer. Sounds kinda bad, huh? Well, it doesn't have to. You see, fall is just about the best time to travel on your Norton. Summer vacation traffic is gone, along with all the crowding that goes along with it in our national parks and recreation areas. The weather starts to cool off, and in the Sierra, the aspens turn to blazing shades of gold and yellow. The air is generally clearer with less humidity and much better views. The fog along the coast even lets up a little.

We've tried to offer a wide variety of rides this summer, exploring the mountains, the foothills and the coast. I saw enough of the foothills on these rides to want to go back, and even farther up into the mountains. Tom Dable and Alan Holowater joined me at the Vincent Owners Club rally at Bass Lake (yea, at Ducey's Lodge). After two days of rally activities closely paralleling our own, this intrepid trio of Atlas, Nordian, and Commando headed over Tioga pass. For the next week, we spent our days exploring every paved road going west (and up) from 390. There were some spectacular passes, cooler breezes, and comfortable campgrounds to be found there, even though the roads generally dead ended in the mountains without going all the way over. Nortons (and Nordians) do run at 10,000 feet, but not too fast or lively. We skirted the southern end of the Sierra and Lake Isabel, turning

north to the sequoia forests and King's Canyon. We found over 50 miles of slalom type riding that I'd vote for the best mileage of the trip. King's Canyon offered what turned out to be about the most beautiful scenery of the trip. It also turned out to be the end of the trip, but we were getting kinda tired of setting up tents and cooking over gas stoves anyway.

It may be a little too early to be thinking about Christmas, but set Sunday December 16 aside for the NCC Christmas party that starts at 3:00 pm. It will be at Rick's Swiss Chalet on El Camino Way in Palo Alto. If Phil sez we can afford it, the club will subsidize the cost of a dinner.

One last item. Meeting attendance lately has been a little on the low side, especially at the San Francisco meetings. I'm not sure why (maybe someone would be so kind as to tell me?) but I think it would make sense to have more meetings in Palo Alto than in the City since most of the members that attend meetings do so in Palo Alto. Our next meeting will be in San Francisco and I'd like to encourage all our members that are concerned about a meeting place change like the one I've proposed to show up and give me your comments.

Joe

NITRIDE IT....FOR HARDNESS

(The following article was submitted by Nick Wiltz, who is a metallurgical engineer employed by a company in San Jose that specializes in nitriding and heat treating.--Ed.)

Since being officially introduced to the club via the Mono Hot Springs club ride article, I feel that it is my duty to contribute to the Norton Notice. Reasons for this are to correct the spelling of my last name, and to introduce or familiarize the reader with a surface hardening process known as nitriding. Let me start with the latter.

Norton mechanics (Norton owners), in their discussion of their motorcycles will eventually get around to hardness properties vs. wear of various components. Mention will be made of valves stellite'd at the end, flame hardening, carburizing, and possibly at the risk of blank stares, nitriding. Of the Norton literature I have digested, the only reference to nitriding of parts was the mention that "later camshafts are nitrided - a process which gives hardness while retaining toughness." Defining hardness as resistance to deformation and toughness as resistance to fracture, it is apparent that these two properties if combined would be invaluable. Since nitriding only changes the surface properties of a part, its toughness will basically remain unchanged. It is the hardness that we will be concerned with.

The measure of hardness is the integration of several related properties of the metal, which may include a combined effect of yield point, tensile strength, ductility, work-hardening characteristics, resistance to abrasion, etc. The property of most concern to us motorcycle enthusiasts is abrasion resistance--the resistance of metal or skin to wear when subjected to rotative or sliding motion. For metals this is an area where nitriding is applicable.

In general, nitriding is the formation of a thermodynamically stable nitride formed when a nitrogen atom combines

with one of the nitriding elements, namely chromium, vanadium, tungsten, iron, etc. The part to be nitrided is heated in a source of nitrogen. Presently most nitriding is done using a gas nitriding process where the parts are heated in contact with a nitrogenous atmosphere, usually ammonia.

The advantages for nitriding are:

1. Obtaining a high surface hardness over a relatively soft core.
2. Increased wear resistance.
3. Lower coefficient of friction.
4. Increased anti-galling.
5. Improved corrosion resistance (except stainless steels).
6. Obtaining a surface that resists the softening effect of heat, up to the nitriding temperature (approximately 1000° F.)

Parts may be nitrided without fear of distortion, the properties of the core metal are retained, the depth of case may be controlled to ±.0001", and the case hardness can be varied.

Nitriding any parts on the Unapproachable Norton should be approached with care. As with any moving contact area, there will be an associated wear factor dependent upon contact geometry, load of contact, lubrication of contact, etc. As if that wasn't enough, consider this--the hardness difference between any two points in contact is important in determining wear. For example, if one extremely hard gear (nitrided) is running against another untreated gear, the untreated (soft) gear will exhibit accelerated wear due to the large hardness difference. The nitrided gear will remain unscathed. Normally the hardness difference between two parts running against each other is small to control wear, but not equal which may cause chipping, cracking and failure.

To illustrate this point, the author will use two gears of different diameters that are in contact. The ideal case for wear in this application would be to harden (nitride) the smaller gear to a high hardness and similarly harden the larger gear but to a slightly lower hardness. Now as well as having your cake, you can eat it. Because of the high hardness the combined wear will be substantially reduced and the wear will be equal on both gears. Why? Because since a tooth on the smaller gear comes around more often than a tooth on the larger gear, it sees more contacts, hence more wear. But since it is harder and contacts more frequently, and the tooth on the larger gear is (slightly) softer, but hits less often, the combined result is reduced (non-existent) wear, thus longer wear (component) life. Whew!

Similarly friction is reduced. A hard surface does not deform (much). So if two points of contact touch, but do not deform and mush together due to the load, friction is reduced.

Logical candidates that would benefit from nitriding are those parts that wear out. Parts that have been nitrided have been camshafts, crankshafts, timing gears, transmission gears, wrist pins, axle shafts, cam followers, oil pump parts, sprockets, pushrods, tire chains,

sierra cups, and possibly the kick-starter pawl.

The kick-starter pawl is usually adequate for the pre-MKIII owner. We have more patience with making sure it is properly engaged and fail to get upset when the absent electric starter fails to work. In this case nitriding the pawl is not the answer, removing the electric starter is.

Finally, Wilkes should be changed to Wiltz and David Crader should be excused because he said it was not his fault.

Nick

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NORTONS IN WEST VIRGINIA

I'm glad the rally went well down at Big Sur. Thought about you folks that weekend and even went off on a ride by myself and pretended I was there. I think I might be missing out on something involving the fork lock issue though.

After beating all the local bushes I have located two other Norton owners in the area, both USNOA members. One of them owns a John Player with 1500 miles on it and the other has a '74 850. They are both very nice guys and it has been a great relief to me to find some friends around here. The weather has been great lately (soon to change I understand) and we have taken several rides. People around here have never seen one Norton so the sight of three together really gets their disinterest flowing. Occasionally we get a comment like "You boys from around here?"--one of the subtle rewards for riding such a distinctive machine.

We are getting a little settled in here. I am in school and have a job of sorts so it looks like we will stick it out for a year and a half anyway.

Jeff

Jeff Michael
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F.S. Christmas Party Idea:
We can have the party at my house. All members are invited and I will buy everything.

Comment by Gene Austin: For those of you who aren't active in branch activities, Jeff was an active member until he moved to West Virginia in early June. As a matter of fact, he shipped his wife and child off to their new home at the end of May, went on the Norro Bay overnighter on his Norton, and upon returning to the Bay Area, wheeled the bike into a U-haul truck and set off for his new home three days later! Come to think of it, he's still an active member. This is his second letter to the NN since June.

I suspect that Jeff is quite serious on his offer of a place to hold the

Christmas party, so as ride coordinator I officially now announce the December ride. We'll meet at Harrah's in Reno at 9:00 A.M. on December 13th and proceed east. The first ten people to show up get a free pint of Southern Comfort as anti-freeze. Route maps will be provided, as usual. Details are a little vague at this time, but be sure to get some tire chains for crossing the Rocky Mountains. See me if you have any legitimate suggestions.

Gene

OREGON INVITATION

I'd like to extend an invitation to any NOC member passing through this part of Oregon. I can put you up for the night with a dry garage, a Guinness, and a sympathetic ear. There are a lot of pleasant, twisty roads here through green farmland. It may rain a lot in winter (and spring and fall), but I just regard the western part of the state as an English Climate Simulator. Great place to own a Nort!

Dale Claussen
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Corvallis, OR 97333

NORTON GOLD

Saturday, September 22 found about 10 Norton riders gathered at the Bay Bridge Toll Plaza for a ride to the 49er gold country. The weather was clear and cool, the ride across the valley would not be the usual cooker. After a quick freeway jaunt, the group wound through the dikes of the delta country to Sacramento. They dropped into Hall-Buroett Motors for a quick hello and proceeded to highway 49 for some corner shots. Scot and Louis had spent the previous night in Calaveras Big Trees State Park (39.00 for the two of them!) and caught the main group in Auburn. North to Nevada City they went, then on to even tighter twisties and the South Fork of the Yuba River. There we all swapped leather for swim suits and hit the water, spending a relaxing afternoon alternately baking and freezing on the hot rocks and in the cool water. Toward dinner time the search for a camp ground started; we ended up at Marysville Reservoir. Camp pitched, Nevada City turned out to be the finish line for the race to dinner. After careful investigation and an endorsement from Louis, the National Hotel was selected as our dinner host. The ensuing banquet featured glazed duck, fresh trout, new york steaks and even hamburgers! Dinner having concluded after dark, we formed processions for the winding and dark trip back to camp.

The string of head and tail lights formed a twisting neon snake that carefully wound its way into the hills. Upon arrival back at camp, cold brew and firewood were produced, and with the addition of some 30 octane instant campfire, the group settled into the time honored tradition of tire kicking and bench racing. Bad jokes aside, the night was one to be remembered. We broke camp early the next morning, fed the beasts (both human and mechanical) at Doc Willie's, and headed south on 49. Some lingered into the afternoon for another round of swim and bake, others headed home to more pressing (?) engagements. All in all, it was fun for all, with no crashes and only minor mechanical adventures. Keep an eye out for this one next year, it will be a weekend well spent.

Jeff

PAUL DUNSTALL
and the DUNSTALL DOMINATORS

(Reprinted from the June 1968 issue of
Cycle magazine.)

There is nothing particularly remarkable about a businessman suddenly changing his modus operandi according to the dictates of economics. But one of the oddest changes, and significant to the motorcycle cause, must surely be from grocer to scooter marketing. Especially so when it led eventually to an extra-special world of high speed motorcycling. The business swapper, in South-East London's suburbia, was one Arnold Dunstall, since retired. His son Paul, a very young 30 year old, is now undisputed king of Britain's motorcycle goodies industry; and Dunstall Dominators are swinging things with the go fast, "in" people. Not that this brings universal acclaim - some reckon the Dunstall formula merely perpetuates the dreaded coffee-bar-racer image. Probably the critics haven't noticed the Britain of the sixties being craftily transformed to a workshop producing prototypes for world-sweeping fashions and trends. If the customer wants to feel like a road racer, goes Paul's tacit argument, then he is infinitely safer on well-designed and correctly engineered equipment. Judging by all the band-waggon jostling, there is ample evidence that Dunstall has opened a lucrative (but still to be fully exploited) special products market. And the growing export potential points to vogue spreading far beyond the shores of this tight little island.

Dunstall "came of age" as a motorcycle manufacturer some twelve months back when he was centered in a sizzling controversy over the "standard machine" definition for production racing. The purist's cozy little world was rudely upended when Dunstall Dominators were raced in stock events; and Paul was obliquely accused of nudging the would be amateur sport (and his opponents believed that in the literal sense) over into cut-throat "pure" racing competition. Dunstall the villain? It's a monumental piece of miscasting. Indeed, we find it inconceivable for Paul, with his permanent air of imperturbable nonchalance, ever sparking off controversy. The hard facts, in any case, are on his side. One: He is classed as a manufacturer by the tax authorities, who insist the Eltham - produced Dominators are more Dunstall than Norton. Two: his models are homologated by the Auto-Cycle Union for production machine racing. Simply, he manufactures standard machines.

We tossed the "spoil-sport" accusation at Paul. "I really don't know why all the fuss", he shot back. "after all, I've sold over 100 of my breathed-on machines which

are entirely suitable for street riding--so why not racing?" We conceded he had a definite point. Paul warmed to his subject, ticking off other manufacturers that have listed options--like twin-cam brakes--for production racing, though the parts were only available in theory. When you try to buy them, they are conveniently out of stock. The great long list of racing extras would probably take a private-owner ages to accumulate. On the other hand, the customer could obtain his completely-kitted Dunstall model almost literally off the shelf.

All this was stated quietly, in Dunstall's normal semi-self-effacing manner. It could be mistaken for that fictional British Reserve. It's not reserve; it's merely that Paul does not leap up and down. He will talk freely about his successes, failures, ambitions, designs, tuning methods. Every so often an impish sense of humor comes bubbling through, suddenly. You can almost miss the point.

Paul's relations with his riders is a two-part affair; deadly serious during machine preparation, a bit of a giggle before and after races. Like when his newly developed Norton twin for the 500cc class went ominously silent during a test session. Later, Paul and current Dunstall-supported rider Ray Pickrell were caught, hilariously contemplating the damage--a broken crankshaft. No talk of over-revving or accusations of brutal treatment: "I shall have to design a better one." As simple as that.

In the mid-fifties, fruiterer-turned-restauranteur Dunstall (senior) entered the two wheeled business, swapping vegetables for Vespas and enjoying the fall out from the scooter explosion. Shortly, Dunstall (junior) was successfully dicing Norton Dominators on the local British short circuits. Vertical twins were not exactly wildly fashionable at that time, but Paul threw in some of his personal performance boosting ideas and raced very creditably. It then took one of those happy accidents to jog Paul from flogging his specials around the tracks to flogging them around the counter. "I was using swept-back exhaust pipes of my own design", he recalled. "I had half-a-dozen spare sets made and, for wants of space, hung them in my father's scooter shop." Suddenly, Dunstall and Son were inundated with "we want a pair of those" requests from customers. They did not necessarily want to race; most of the lads thought the pipery looked "lively". Predictably, Paul saw there was going to be a growing demand for goodies, so he decided to concentrate on that aspect of motorcycling. Which, as it turned out, was just as well. For, with a resounding crash, the scooter boom fell flat on its face. From there, the goodies trickle grew to a

respectable flood, as Paul's reputation spread. Now it is Dunstall special equipment all the way, with export accounting for the greater volume of business.

You could call Paul something of a motorcycle tycoon, though he would be flabbergasted if you said it to his face. You would definitely find nothing ostentatious about his modest shop facade in Eltham (London); no acres of chrome and glass, no neon lighting. Inside, the operative word is hustle, with packaging cases being packed and unpacked, fiberglass fuel tanks and fairings lining the walls, the ceiling festooned with exhaust pipes and mufflers. (I've sold over 20,000 of those.) Behind a maze of doorways (we suspect they are there to discourage the inquisitive), you'll find the production nerve center, where two bikes are always being prepared.

You can't define a Dunstall Dominator, just like that. Giving basic Dunstallized Atlas engine, there remains a wide choice of finished products. By altering the gearing and swapping some cycle parts, the characteristics are completely changed. Our test model was fitted with the standard Dunstall-750. Standard, meaning considerably warm. On the cycle gear side, our model lacked the more exotic extras.

At first sight, the 750cc Dunstall Dominator looks like a big, fast, man's bike. It is a big, fast, man's bike. We personally found its masculinity strongly asserting itself during our first cold start attempt. Our hopeful attacks on the starter crank were vigorously resisted by the 10:1 pistons. We decided perhaps the Dunstall disliked being kicked away, and was better pushed, racing fashion. But we discovered that, when warm, it was amenable enough to conventional kick starting. Then, on the open road, all thoughts of it being a truculent beast were blown sky-high. It became a magic carpet, displaying a fantastic urge to zoom through the 100 mph barrier--oh, so well past-- as if non-existent. Yet the one-tooth-up-on standard top gear engaged, required no more than 4,000 rpm showing on the tach.

With orders to wind it up around 6,800 rpm through the gears (10.81, 7.71, 5.14 and 4.23 to 1), our sprint expert was dispatched to obtain some quartermile figures. The best standing-start quarter took 13.5 secs., along with a gratifying 100 mph terminal speed. The claimed crankshaft bhp of 64 at 6,500 rpm certainly seemed entirely realistic.

Such towering performance must obviously make the Dunstall-Dominator something more than a Pretty Motorcycle. Its life starts

as an Atlas, purchased from Norton-Villers in a semi-assembled condition, and filled out with raced-proved components. It emerges as a full-blown Dunstall model, available in various stages of tune. "Raced-proved" being ideal slogan because Paul sponsors a racing team equipped with 500, 650 and 750cc Norton-twin-powered bikes, designed to test production and prototype Dunstall parts. Also 750cc road-going Dunstall's are raced in production machine competition, sharing common specifications with the cataloged model. "I know some believe my work bikes are stuff full with weirdly exotic bits, but it's not true," was Paul's wry comment on his racing efforts. He points to comparisons between his own Production TT bikes and those supplied for independent tests. The Isle of Man speed trap recorded a Dunstall Dominator at 132 mph, while outsiders' tests with stock machines have been nudging 130 mph.

Just how far to go with re-building is a problem shared by everybody that offers power-plus specials based on standard machinery. Conceivably, it is possible to strip everything to the last washer and correct whatever may have escaped the maker's quality control, and then, by careful selective reassembly, reduce the effects of manufacturing tolerances to the bare minimum.

Possible, but economically unrewarding. Though Paul goes some way toward the ultimate goal, making certain that crankcase halves match up and so on, any original wear-prone parts are bound to show up that much sooner. In any case, potential big-bike customers in general and "special" owners in particular are likely to spend more than average time wielding spanners and gilding their favorite lilies: "certainly, we have a specific class of client, for it's physically impossible to offer everything to everyone," Paul agrees. He has no illusions about converting BMW owners, but concentrates on offering big-performance machines with comprehensive specifications at competitive prices. (\$1,300-\$1,400, plus \$170-300, depending on the states, for air freight.)

It has been unkindly suggested that whoever dreamed up the psychedelic craze got his inspiration from the vibration-hazed horizon visible from a 360-degree-crank vertical twin. Any technical book will tell you the in-phase layout (with pistons going up and down together) is inherently out of balance and will vibrate. Experience will tell you whether the vibration is terrible, bearable or unnoticeable. The Dunstall version proved sufficiently smooth to suggest some rebalancing work to compensate for the heavier pistons. In fact, the bottom end is standard, the 10:1 pistons alter the balance factor from the standard 84 percent

to 82 point something, and vibration virtually disappears.

Externally, the most apparent Dunstall deviation is the exhaust system. The two sharply swept-back pipes are joined near the cylinder ports by a flexible balance pipe which allows each cylinder in turn to exhaust into two pipes, thus reducing back pressure. When used in conjunction with Dunstall's patent megaphone mufflers, the balanced pipes are said to provide another 4 bhp. Those mufflers are a nice blend of effectiveness and efficiency. At medium speeds, they blanket excess noise and give the "antis" no reason to dive for cover. Conversely, at wide throttle openings, the is a sharp reminder that here is a motorcycle of size, power and potency. ("If I muted the music any more, I couldn't sell them!")

However, the major transformation from Norton Atlas to Dunstall Dominator undoubtedly starts with the high-lift camshaft, the part largely responsible for that staggering acceleration. Fortunately, the camshaft is not a type doing disastrous things to the big displacement twin's pleasing engine flexibility. In this case, Paul has carefully developed a component for varied road usage; the added performance is not gained at the expense of producing terribly peaky power characteristics. (Also listed: an all-or-nothing racing camshaft--everything in the upper rev-range and nothing below 4,000.) Lightened and polished cam followers are employed, the rockers are similarly worked and provided with a pressure oil feed, and a double-speed oil pump conversion is fitted. Other internal modifications include opening the inlet tracts to 1-3/16" and tidying up and polishing the exhaust ports. The valves are standard (but use American S & W valve springs) and work in special bronze guides.

You don't have to look very closely before deciding the D-D's environment is the big open highway or lightly used country roads; it does not really have pretensions of being a town carriage. Surprisingly, it can be pottered around happily in urban stop-go conditions; seemingly it would perform that way all day. But, meantime, you would be getting a warped idea of the riding position, forced by the combination of rear placed footpegs, narrow clip-ons and dolphin fairing. We were struck by the thought that many riders would live easier with flatter bars and less fairing. Paul himself believes: British tastes are not necessarily American tastes and USA riders are not generally ready to adopt the full-racing rig." There is a GT (top half) fairing and flat handlebar layout available; and in any case, the nose-down-seat-up Eltham image has recently taken a knock. The latest American-designated Dunstall

features high bars and upswept pipes. You could call it a street scrambler; Paul settles for "Sprint", which seems a fair enough term. It comes complete with the fully worked motor and lower overall gearing. "Lopping the top speed just to over 120 mph", reports Paul, somewhat sadly. But, brightening up, standing start quarter mile figures are improved to a little under 12 seconds, with a 108 mph terminal speed. Highly respectable top performance figures apart, the "sprint is really something to look at. Its finish of brilliant red fiberglass pieces, bright nickel frame and liberal application of chrome, make it an outstanding model. You would only need to drop the stand and wait for an admiring crowd to gather. Should prove a real bird-catcher, too.

The normally streamlined Dunstall Dominator features a three piece fairing, with detachable side panels, which closely conforms to contemporary racing practice. The roughly "double-bubble" section wraps closely around the engine and cycle parts. Obviously, the highest degree of weather protection is a secondary consideration. Equally, the correct thing is to slide rearwards in the adequately padded "fastback" seat, hang yourself around the fuel tank and extract everything possible from the fairing's airflow characteristics. The only trouble being the 5 gallon fuel tank's high, angular rear, which we felt was a little too high. We preferred the 3/2 gallon version, as fitted to the sprint, and available for the touring model-- with a corresponding reduction in its range.

Our inspection of the fiberglass parts-- tanks, fairing and seat-- showed them to be well designed, strongly constructed and attractively finished. A nicely integrated appearance is presented by the top fairing, incorporating an instrument panel, with a "sealed-in" headlamp thrusting aggressively forward. While the length of time we had the Dunstall Dominator ruled out any destruction tests on the special cycle parts, they appeared sensibly robust. We were not taken with the flapping around of the seat-cum-rear-fender (which also supports the mufflers on long stays) during tick-over, even though this vibration-imposed condition was effectively damped out by sitting on the seat. And, presumably, the well known fiberglass resistance to fatigue would eliminate any damage in the long run. But we still preferred the alternative of dual racing seat and separate metal fender, which Dunstall lists.

With the handlebars neatly disposed in relation to the tank and fairings, there is adequate steering lock and clearance. But the inevitable restricted ability to maneuver in confined spaces crops up from time to time. It's no joke shuttling to and

fro with 400 lbs. of king-sized motorcycle. Then you have to console yourself with the thought of never getting something for nothing; and you get a lot of very fast motorcycle with a Dunstall Dominator.

Think of Nortons, you'll think about the Isle of Man and the legendary Norton handling. The snag with legends you have grown up with is they become clouded with romantic nonsense. Happily, the old time Bracebridge Street preoccupation with racing passed some very desirable handling traits to today's Atlas. If you consider Atlas handling as something to be emulated, then the Dunstall versions produce entirely new conceptions of big-bike handleability. This is undoubtedly because of lessons acquired on race circuits. The upping of the rear wheel diameter to 19" certainly helps; fitting a 3.50 tire continues the good work. When paired (racing type) Girling shocks are included, you are inclined to start talking superlatives. Whistling into fast, bumpy bends produces no loss of confidence, nothing clangs underneath. The Avon tires (3.50 x 19 GP rear and 3.25 x 19 SM front) fitted to aluminum rims perform their noted cling feats admirably, in wet or dry going.

Our machine was fitted with the standard Norton 8-in. single-leading-shoe front brake, a terrible archaic thing in these days of double-cam layouts. Not to worry: the usual Dunstall Dominator drum-braked model comes with twin leading shoes. If that's not enough, there is always the double-disc version. When we briefly sampled that, we quickly relegated drum brakes to the horse and buggy age. For big, fast, heavy motorcycles, disc brakes must eventually become standard. In the meantime, the Dunstall discs set a new standard of braking. The unit is the one developed for road racing by Colin Lyster, and tried out by

Mike Hailwood. Dunstall double-disc equipped bikes have been long used on British short circuits, and raced in the Isle of Man. After some early frights, they are now reckoned to be completely reliable. Their looks do not match the solid looking drums. They have a tendency to rust and generally look scruffy after a little use, and undeniably have an added-on appearance. Work on cleaning up the front hub (with the strengthening webs now cast internally) and handlebar lever assembly has recently improved matters. The Dunstall big-banger is not really recommended for Family Motorcycling. True, there is room for a passenger--even folding footpegs are provided. Actually, the Dunstall's performance conception and configuration suggest a highly individual machine for specialists. Experience merely confirms the impression. It's something for the skilled, experienced rider who wishes to go faster; not something to jump on after learning on 100cc's. Moreover, we feel this is a tool for the big-bike converts and enthusiasts, people who know what's what. For although it used to be that more cc's made for greater reliability (and you could laugh at those silly little lightweights), it is no longer true. The high-performance "heavies" have become fussy things, these days. So, with the extra-high performance Dunstall Dominator, there will be additional wear and tear on things like chains. Mal-adjustments, which are permissible on lesser machines, will become downright dangerous at 120 mph. The Dunstall, having much in common with racing machines, will need looking after like a racing model. It will need more than a mass production job. With these reservations in mind, the Dunstall Dominator remains a superb high stepping motorcycle, one having handling, going, and stopping abilities unmatched by anything else.



motorcycles

SERVICE RELEASE

No. N42

CATEGORY OF RELEASE: 4 (see over)

NATURE OF RELEASE: Timing cover replacement

MODELS AFFECTED: Early Commando with chain driven contact breaker

DISTRIBUTION: Worldwide (for general distribution)

EXPLANATION: It has been brought to our notice that severe engine damage has been caused on more than one occasion by the use of ATLAS timing cover 25187 as a replacement for the COMMANDO timing cover 06-0716. The reason is that the bleed back from the oil pressure release valve into the oil feed system differs between ATLAS and COMMANDO. Use of the ATLAS cover on a COMMANDO crankcase uncovers the release valve oilway, resulting in a severe loss of oil pressure.

ACTION: Ensure that whenever a timing cover is replaced, only the correct replacement is used.

PARAPHERNALIA

4 1/2" STICKER N.O.C.	\$1.00
2" STICKER N.O.C.	\$.50
2 1/2" X 3 1/2" N.O.C. STICKER (RED, WHITE, AND BLUE)	\$.75
N.O.C. KEYFOB	\$1.50
4 1/2" EMBROIDERED PATCH	\$2.50
LAPEL PIN, BRANCH LOGO	\$1.25
T-SHIRTS - N.O.C. AND BRANCH	
VARIOUS SIZES AND COLORS CALL OR WRITE	
FOR DETAILS	TOM BORMAN
	2600 BELMONT CANYON ROAD
	BELMONT, CALIFORNIA 94002
	(415) 595-1954

FOR SALE:

- '75 WKIII Interstate. Black, excellent condition, fairing, new aluminum wheels and mufflers. \$1450.
- Good selection of Dominator 88 and 99 heads, cylinders, cranks, and cases.

Phil Radford (408) 293-4548

FOR SALE:

'70 Commando Roadster. Very nice shape, single Mikuni, front disc, Boyer, plus originals (Amals, drum, Lucas). \$1250/B.O.

Rick Pearson (916) 722-7677
(Sacramento)

USED PARTS FOR SALE:

- pair black S&W shock springs (95 125 lb/in progressive) to fit S&W "H" series freon shocks, \$10.
- numerous used Roadholder fork parts, such as sliders, dampers, springs, etc., cheap.
- numerous Atlas/Dommie gearbox internal parts (gears & shafts), cheap.
- two Amal 32mm concentric carbs, in good condition, complete, \$30/pair.
- complete Atlas/Dommie front wheel with SLS brake, \$30.
- complete cush drive rear wheel for '71-'74 Commando, \$40.
- steel six gallon Interstate tank with cap and petcocks, \$125.
- steel left hand Interstate side cover, \$15.
- Commando/Atlas fork lock with key, \$4.
- rebuilt Commando gearbox with new mainshaft, three bushings in sleeve gear, roller layshaft bearings, numerous other new parts, and glass beaded cases (outer cover polished), \$150.
- used Commando 750 head with 30mm inlet ports, good exhaust port threads, all valves & springs, assembled, \$75.
- 750 Commando crankshaft with STD rod journals, ready to install, \$100.
- used Commando 750 swing arm, \$30.
- complete 750 Roadster or Interstate tail light assembly and license plate holder with black tail light fairing, \$35.
- Interstate seat with metal pan, \$60.
- set of Campbray cast aluminum wheels (as seen in Feb. '83 NN) to bolt onto '71-'74 Commandos. Polished rims with fourteen gold painted spokes, WM3-19" front, WM4-18" rear. All bearings, spacers, and seals included. Uses slightly modified standard speedo drive, \$350.

Gene Austin (415) 573-9559 even.

NORTHERN CALIFORNIA BRANCH
TOOL LOAN-OUT PROGRAM

Get in touch with Harry Bunting if you need one or more of the following tools for working on your bike. A refundable deposit equal to the replacement value of the tool is required at the time you pick it up.

TOOL	DEPOSIT
timing cover oil seal guide.....	\$ 5.00
rocker spindle puller.....	\$25.00
crankshaft sprocket puller.....	\$12.00
clutch spring tool.....	\$12.00
clutch locking tool.....	\$18.00
valve spring compressor.....	\$22.00
exhaust nut "C" spanner.....	\$10.00
timing pinion extractor.....	\$20.00

Harry Bunting (415) 968-2020
1401 Gilmore St.
Mountain View, Ca. 94040

FOR SALE:

- Early Commando instrument bracket, \$10.
- Early Commando central oil tank, \$15.
- Early Commando clutch, \$25.
- Akront WM3-18 alloy rim for Commando rear, \$30.
- Smiths speedo and tach, original equip for '75 Ducati 860GT, \$125/pair.
- Harley Sportster new rear disc conversion, \$150.
- Commando engine cases (#206500), free, left side blown.

Dave Crader (408) 295-4968 home
(408) 736-7205 work

FOR SALE OR TRADE:

1973 Norton Fastback style Commando, 750 motor, Boyer ignition, new 30mm Amal concentric carbs, new valve job (guides, valves, seats), R50 style head steady, oil filter kit, WM3 x 18 rear wheel with Dunlop K291 tires (excellent tread), disk brake front end, many more refinements too numerous to mention. Too many Commandos forced sale. \$1275 or trade for 1981 or later Honda XR or XL 200 or 250 trail bike or interesting Norton single.

Call Scot at (415) 455-8976 and leave a nice message.

WANTED:

- Dunstall dual disc front end or parts for same.
 - Roller lifter cam.
 - Big bore kit.
- Willing to swap or trade for high performance parts; call me, I've got lots more parts--tanks, wheels, engines, transmissions, etc.

Charlie Kuss
1671 Electric Ave.
Lackawanna, N.Y.
14218
(716) 824-7887

FOR SALE OR TRADE:

1. New and used Atlas mufflers, \$65 for the new ones, offers for the used ones.
2. 850 style headlamp shell, serviceable condition, \$10.
3. Footrest mounting plates, \$5 each.
4. Battery box complete with air filter, \$15.
5. Drum brake fork sliders, offer.
6. Misc. brake and clutch levers and posts, offer.
7. New pattern kickstart lever, \$15.
8. two fork top nuts, offer.
9. K & N single carb filters for Amal concentrics, \$2 each.
10. New rear hub spinner, \$3.
11. Old style 750 head steady, \$5.
12. Misc. rear fenders, offers.
13. Roadster oil tank, \$15.
14. Honda? master cylinder, \$15.
15. Drilled rotor, master cylinder, caliper, slider for Norton disk brake setup, \$125 the set.
16. Pair Circling shocks, \$15.
17. Rare notched clutch center, complete with antique grease and burned on oil, offers.
18. Misc. handlebars, stock and super-bike bends, offers.
19. Roadster style grab rail, \$15.
20. Two pair car coils, \$5/pr.
21. Used primary chain, good condition, \$5.
22. Clutch diaphragm spring, \$3.
23. Single phase rectifier, guaranteed, \$10.
24. Primary case plugs, \$.50 each.
25. Three swing arm/subframe combos, \$37 each.
26. Two frames, one 850, one 750, \$100 ea.

Call Scot at 415-455-8776 and leave a message (preferably concise and polite as to what you need).

WANTED:

1. Late '50's Lucas headlamp with switch, ammeter and speedo built in.
2. Battery and accessory boxes for 56-58 Norton single or '59 Nomad scrambler.
3. Exhaust nut for Norton single.
4. Front engine plates for 56-58 Norton single.
5. Complete front end for 56-58 Norton single.
6. Dynamo for 56-58 Norton single.
7. Lower rear fender for 56-58 Norton single.
8. Gas tank side panels (chrome) for 57-58 Norton single.

David Crader (408) 295-4968 home
(408) 736-7205 work

FOR SALE OR TRADE:

Issue #5, Spring 1979, of "Classic Bike", \$6.00 delivered.

Frank Batten
Box 7355
Boise, ID 83707
(208) 343-6991

WANTED:

1. Alternator rotor and stator for a '73 850 Commando. Must be in working order.
2. Chain guard for same machine.

Fred Wickman (415) 676-9551

FOR SALE:

1. two 1969 Fastback oil tanks, G.C., \$15 each.
2. 1969 Fastback seat, has one small rip on bottom of cover, otherwise G.C., \$40.
3. two sets N.O.S. fiberglass Interstate sidecovers (white), \$38 a set.
4. 1968 Fastback tail section with Norton emblem, V.G.C., \$45.
5. B.N. 1974 Roadster right sidecover, metalflake blue with silver decals and striping, \$32.
6. set B.N. 750 Commando exhaust pipes, \$62.
7. set B.N. "S" model exhaust pipes, \$110.
8. pair 30mm Mikuni carbs with cables and throttle, V.G.C., \$100.
9. pair 30mm Amal MK-2 carbs, E.C., \$120.
10. pair 32mm Amal concentric carbs, rebuilt with new slides and viton float needles, E.C., \$80.
11. 1975 Hi-Rider gas tank, original paint (black and gold), G.C. \$50.
12. 1975 Hi-Rider seat, G.C., \$40.
13. pair 1973 fork assemblies, straight, \$75.
14. 1982 Harley-Davidson electronic ignition system complete with coil, \$85.
15. 1974 850 Norton crankshaft w/rods, std journals, V.G.C., \$80.

Charlie Kuss
1671 Electric Ave.
Lackawanna, N.Y. 14218
(716) 824-7887

FOR SALE:












'75 Electric Start parts bike, complete.

Ken Armann (408) 559-0185

NEW PARTS FOR SALE:

1. Commando primary chain (Renolds), \$30.
2. Renolds cam chain for 500-850 cc twins, \$7.
3. pair of black Koni shock springs (106-235 lb/in progressive rate) which also fit standard Commando Circling shocks, \$15.
4. recently re-chromed Atlas/Dommie fork top nuts, \$10 pair.
5. recently re-chromed Atlas/Dommie fork crown stem lock nut (the one at the upper center position), \$5.
6. recently re-chromed Atlas/Dommie fork slider extensions (p/n 030454, 2 3/4" exposed length), \$20/pair.
7. Dommie 500 or 600cc STD rod bearings, \$8/set
8. recently chromed Commando fork oil seal collars (p/n 061137), \$10/pair.
9. set of Commando pushrods, \$20.
10. Lockheed brake master cylinder rebuild kit, \$8.
11. Lockheed brake caliper rebuild kit, \$7.
12. Dommie/Atlas primary chain case seal, \$6.
13. Stainless steel allen head screw set for '57-'75 AMC gearbox, \$4 for set of five.
14. pair of STD bore Dommie 99 (600cc) pistons and cylinder sleeves, \$80.

Gene Austin (415) 573-9559 eves.

<p style="text-align: center;"><i>Hall-Burdette</i> MOTORCYCLES</p> <p style="text-align: center;">Norton</p> <p style="text-align: center;"> MOTO GUZZI DUCATI</p> <p>We have been selling and servicing Nortons since 1948 and have a good supply of parts and accessories, both new and used. Our mechanic, Bob Bennett, has been repairing Nortons for over 20 years and is a recognized expert. Thor Berke, our parts manager, has a thorough familiarity with all Norton parts and accessories.</p> <p style="text-align: center;">2010 DEL PASO BLVD. SACRAMENTO, CALIFORNIA 95815 PHONE (916) 925-1797</p>	<p style="text-align: center;">RABER'S EUROPEAN CYCLE WORKS, INC. "Your source for parts and service" BSA <small>(the Englishman's)</small> TRIUMPH</p> <p style="text-align: center;">Norton</p> <p style="text-align: center;">DUCATI MOTO GUZZI</p> <p style="text-align: center;">the same old guys at the same old place...</p> <p>Over 60 years combined M/C knowledge... (Bill must be older than I thought)</p> <p>*****PARTS: Bob Raber SERVICE: Bill Mankins*****</p> <p style="text-align: center;">1615c ALMADEN ROAD (rear building) SAN JOSE, CALIFORNIA: 95125 (408) 998-4495</p>
<p style="text-align: center;">     T.T. MOTORS</p> <p>Norton Owners - T.T. specializes in European motorcycles and offers complete parts, service, and machine shop for all the wonderful bikes we sell.</p> <p>Stop by and visit and check us out!</p> <ul style="list-style-type: none"> * Complete line of British tools * Manuals and spares for your Norton * Speed Equipment: <ul style="list-style-type: none"> Megacycle and webcam camshafts Single Mikuni kits Exhaust port repair \$45 each Valve jobs and port work Cycliner boring and surfacing <p>* 10% discount on all parts (except Lucas) to N.O.C. members</p> <p style="text-align: center;">2800 Adeline Street Berkeley, CA 94703 9 a.m. - 6 p.m. Tues. - Sat. 845-8235</p>	<p style="text-align: center;">    MUNROE MOTORS, INC.</p> <p style="text-align: center;">MOTORCYCLES SALES - SERVICE - PARTS</p> <p>Munroe has three mechanics that are familiar with Nortons and have been for a number of years. We can replace exhaust ports with the head on the bike and don't know of anyone else who can. The job looks like original factory! Call for a quote on shop prices. We also have a good Norton parts supply.</p> <p style="text-align: center;"> INC.</p> <p style="text-align: center;">412 VALENCIA ST. SAN FRANCISCO 94103 PHONE 626-3496</p>