

Dear Andover Norton Customer,

The weather in our part of the world turns to autumn temperatures so after a season of happy motoring, maintenance, technical improvements, and repairs lure us into our workshops.

Christmas isn't too far away and this year we have at last gotten the calendar for next year into print in good time so here it is:



Shop

Basically we beaver away introducing more and more parts and pestering our suppliers to get the parts ordered sometimes months ago, finished. A new delivery of our sound reduced Roadster silencers is promised for this month, and we already received the first "S" type silencers that are also sound reduced:



"S"-Type silencers, pair, 06.1312/X



Enough of that, and on to general news and views.

<u>Park Road Motorcycles,</u> <u>Southampton</u>

Last month's British Dealer News noted Park Road Motorcycles had closed its doors after several decades in the trade. That rang a bell. It may not look like it is of Norton interest, but it is because a respected figure worked there.

After NVT closed down, a lot of ex-Norton employees were made redundant, some of whom were figureheads of the company and seemed indispensable. One of them was John Hudson, Norton Service Manager for many years and a Norton legend in his time. He was known to go to private owners homes, repair their Nortons on the factory's behalf, and, if nothing else was available, slept in their sheds if the repair wasn't finished, or not finished in time for him to get home that night.

I first met him when I wanted some job done for the repair on one of my Nortons in my 1979/80 Southampton University scholarship days and went to Park Road Motorcycles, then Southampton's only Norton dealer. Naturally, for them Norton was on the way out and their main business was the BMW agency they had. On the counter I was referred to "John", a very friendly and polite old chap who took my part and a day or so later I collected it for a nominal sum with the job well done.

Only a while later I realized who this "John" was who came to



work every day aboard his trusty 650 Mercury.

He still lived in Andover at the time and commuted to Southampton. In those days the roads in the region were pleasant twisty English "B" roads with hedges often forming a green tunnel and with hump bridges to jump.

Guess I saw quite a lot of them in my academic year that from memory consisted of a lot of riding motorcycles and little academic work!

Above is a low-quality picture from our family album shows John as Concourse judge at a rallye I attended together with my friend Al Tritten in 1981.

John worked at Park Road Motorcycles until his retirement. I do not know how long Park Road served the Norton customer in Southampton after 1980, though.

The Middle of Schleswig-Holstein

Who or what is Schleswig-Holstein you may well ask. It is the northern region of Germany bordering on Denmark. Not remarkable per se but the name of its centre is, see the picture our Old Boys Group member Ralf took with his Norton in the background. The fact that "Norton" as a name is so rare in Germany my Norton Motors GmbH is pestered with calls from people having problems with their software all the time you will understand this is a bit of a sensation!



99.999km on a Commando

I had an email from my old customer Uli last week who sent this picture and cited Volkswagen's slogan in the old "Beetle" days "And runs, and runs, and runs!"

From my files I see he spent about 3k € since 1992 with us so that makes an average of about 300€ (£255) per annum. I'd say this tells he never had a major disaster and he obviously had good value for money out of his 850Mk3, always assuming the money was spent on only that bike, many of my customers have more than one classic British bike!



And just after I typed this last night, another customer rang me today whom I sold his Atlas when we were both still at University. He is now a notary public and still rides the Atlas in turn with his other bikes. Today he complained his clutch wasn't what is used to be and wanted new clutch plates after only 130.000km.....

Rijeka Race Meeting



Admittedly not the best meeting I ever attended. Not the organiser's fault, or the courses at all. In fact we probably never had it that good in Rijeka. The weather was dry and sunny, nice mid-twenties Celsius temperatures, practically no wind on a course notorious for strong gusts of wind that at one meeting were so bad the organizers shut the course for half a day and in the afternoon when Katrin and myself went out for a training, we cut it short because the wind was so unpredictable and strong we were in danger of falling off any minute!

This time I took the 1949 and the 1960 Manx, plus the Thruxton racer. On the first day both the 1949 Manx and the Thruxton seized, the 1949 most probably because I had a the float chamber continuously getting loose in the meeting in August with the bike then running too lean. I had managed to repair that fault in the very short meantime, but I guess the damage was done at Panoniaring and I now got the resulting bill!

On the Thruxton I had taken the carbs off. With the engine higher in the frame than on a normal Commando this is a tedious and very time-consuming exercise. I changed jetting and needle position. After the bike protested in training we took the spark plugs out. The left hand side looks like it was from a picture book, but the right hand side is snow-white.

I can but suspect two possible causes: either the right hand carb body, which is still the original one, has a hidden defect I have yet to find, or the needle clip fell off the needle when I put the carbs back together, and with the needle sitting in the lowermost position in the needle jet fuel flow was seriously reduced. Since we came back I haven't had the time to actually find the cause of the failure. The bike sits in the shop, untouched. I will report.

That left me with the 1960 Manx. We had struggled with the carburetion at Panoniaring but got it well-sorted on the first day of this meeting. However, as soon as the bike warmed up it would start to misfire on the straights in higher revs. In the first race on the second day I actually stopped, believing I had a light piston seizure because the bike slowed down all of a sudden, so I pulled the clutch in and dropped out of the race. On insistence of my trusty "Grid Girl" Fast Fraaanzi we put the bike on the starting rollers and found there was

nothing wrong mechanically. So I started in the second race on the third day, finding I was again riding a castrated racebike and in the end actually being lapped by the other 6 participants (blush).

Thinking about it, we came to the conclusion it must be the magneto that gives up when it gets warm, a well-known problem with magnetos that haven't been serviced for a long time. And this one was overhauled about 20 years ago when I first bought the bike!



Another competitor was there with his 500 and his 750 "Domiracers". The 750 is remarkable in that is sports a "Lowboy" frame he bought off the Hemmings. It also sports other special parts that he'd rather not wax on because what he was sold in ways of special engine parts by certain "specialists" (not the Hemmings!) turned out to be of the "let the customer solve this problem" variety.

The 750 had the same problem as my short-stroke Manx, a duff magneto, and by the time they had replaced it with another one the meeting was practically over, so he raced with his 500.

How to fit an exhaust pipe to a cylinder head: Norton

In case you thought you'd escape my technical lesson this time, forget it! I am going to bore you with methods to get an exhaust pipe fastened to a cylinder head.

On 750 Commandos, and all other Norton Twins but the 850s, this is easy enough. First you put the sealing washer 06.3995 in the cylinder head. In early days these were a copper-based thingy that squashes to paper-thin and isn't all that good. These beasts are found in pattern gasket sets even today. ANIL have used the better steel variety for decades:



Above: Old & cheap variant on the left, the good stuff on the right. The good ones you put with the flat towards the exhaust valve into the cylinder head exhaust port.

Shop

On all non-850 Norton twins the fitting of the exhaust pipe to the head is now straightforward. You put the exhaust locknut threaded part forward over the rear end of the exhaust pipe, shove it to the front end where it then rests against the thicker end, and thread it into the exhaust port thread. Watch how the exhaust pipe sits on the bike, ideally the silencer should be loosely fitted to the pipe and its mounts so when the exhaust nut is tightened down it is in a position that fits the whole system to the bike with no stresses or tension.

On 850s with the balance tube the whole operation is far more complicated. Firstly, the 850 exhaust nuts have a shorter thread on them:



750 nut with longer thread on the top, 850 with shorter on right.

Shop (750)

Shop (850)

Why is this so? Easy, the 850 needs to go over the bellmouth end of the pipe, so unless something then goes inside the nut the exhaust pipe will easily fall off. Hence the 850s have an internal diameter reduction part, called the "retaining collet" (part# 06.5260) that reduces the internal diameter of the nut so it can press on the "bellmouth" end of the pipe.



850 exhaust nut (part# 06.3988) and retaining collet (part# 06.5260)

Shop

In order to keep that bellmouth in shape that then takes the "spherical seating" (part# 06.5259) which forms a gas seal at the same time. This then presses on sealing washer (part# 06.3995) and thus fully seals the exhaust pipe.



The whole package: #06.3995, #06-5259, #06-5260, #06.3988, fitting 06.5256/7

Several things to watch if you buy a Commando with exhaust pipe fitting problems:

- 1. The 750 nut is longer than the 850, so if someone used the 850 nut on 750 pipes the nut will not tighten the 750 pipe down properly. Some try to compensate with a number of exhaust sealing washers. The only proper way to fit the non-balanced pipes is to use either the exhaust lockring 06.2464, or the 1973 only exhaust nut 06.3555 which looks like the 850 lockring 06.3988 but has the longer thread.
- 2. Exhaust threads are often damaged to the point of being virtually non-existent. In my young days of blissful ignorance I managed to ruin an exhaust port thread within a few miles when the exhaust nut came loose and I decided to take no notice. There are basically two proper ways to repair these threads, helicoil or welding in material and recutting the thread. All other attempts to repair the threads I have seen were amateurish in the extreme and bodged jobs.
- 3. To make sure the exhaust locknut doesn't come loose first fully tighten it with the engine hot. The cylinder head is the warmest part of the engine, and original exhaust locknuts were made of steel. Thus their rate of expansion is far lower than that of the aluminium head and they become loose simply through the different expansion. Our exhaust nuts now are cast in brass so the rate of expansion relation is far better than it was.

Secondly, people wire exhaust nuts up. This means drilling nut and a fin in the cylinder head. Not good, in my opinion (and the late and great Mick Hemmings hated it, too!) so I use the exhaust lockwashers 06.2412 on my Commandos.



Part# 06.2412. Again, these are only bent into the exhaust locknut with the straight "tongue" when the exhaust pipe has been on for a while and the exhaust nut is in the final position. The bent tongues embrace a cooling fin.

How to fit an exhaust pipe to a cylinder head: Triumph

Triumphs were much simpler than Nortons in the exhaust department. The traditional Triumph method was the "push over" variant that my 1937 Speed twin I owned for many years had and that the last Harris Triumphs in the mid-eighties still, or rather again, had.

A steel sleeve is screwed into the threaded exhaust port on the cylinder head and the pipe then pushed over it (hence the name) and is clamped on with a steel clamp.



Above: push-over arrangement on late 650 & 750s used bolt part# 70.6744, conical washer part# 70.8860, clamp part# 71.0216 and sleeve part# 70.9516.

Shop (Bolt)

Shop (Washer)

Shop (Clamp)

Shop (Sleeve)

This arrangement actually works very well and was suitable for single downpipes as well as downpipes with balance tubes. Triumph became part of BSA and in 1971, with the new "Oil in Frame" chassis developed in "Slumberglade Hall ", the BSA/Triumph R&D centre, some clever accountant had the idea Triumph could adopt BSA's cheap and nasty method of fitting pipes to a cylinder head. This was the "push in" method:



Shop

It is easy to see why it appealed to the number crunchers. A cheap ally "design" clamp held on by a norm part (thus again cheap) bolt and nut masked the atrocity of an exhaust pipe just pushed into the head, relying on the balance pipe to keep the exhaust pipes, forming the top ends of an "A", in the head and hoping this arrangement would not become sloppy with wear through vibration within the then very short warranty period.

Comparing the push-over picture with the push-in variety makes it crystal clear why the accountants thought it was brilliant. Instead of casting, polishing and chromium plating the push-over exhaust clip, having the special bolt and the special washer made and plated, making the steel exhaust sleeve and cutting a thread into the cylinder head they just bored a plain hole into the head and cast a cheap ally decoration.

Apparently they weren't too sure at first if this was really viable which is why 1971/72 models had the push-in and the push-over variant fitted. From 1973 on, however, the cheap way was used exclusively till 1978/9 when, with the introduction of the T140E, things got back to normal, i.e. to the push-over method.

The 1979 T140D, famous for being so unsaleable some of then crossed the big pond twice looking for a buyer, and also for still cropping up new in the original crates, had a different arrangement again that was to keep the push-in pipes in the head. A threaded stub pressed a cutting ring into the pipe thus locating it. Parts for this variant are N.L.A. however.

Ashley's bike

Electrics

A few weeks ago I rode to work on the Monday morning in a torrential downpour for 45 minutes. The bike ran well but as I neared Andover the indicators were not working, suggesting water was getting in somewhere. Once at work and the bike left for a couple of hours, I restarted and the BSM was showing all was well but the indicators still did not work.

Suspecting the water had entered somewhere on the front of the bike, I removed the front headlamp shell and it was dry as a bone, the front indicators the same, so more investigation needed when at home. It was only when I removed the rear indicator lenses that it could be seen that the water had got in, but how? The seals looked intact then it became apparent that the only other route was down the wires and along the stems, and from the old tide marks this had been happening to a lesser extent in the past. Once cleaned and dried, the right side did not work, so a quick check across the switch which can be done in the headlamp shell gave a high resistance on one side of the switch.



The Mk3 switch discussed. I remember on my own Mk3 the metal plate- I call it tongue- on the switch was some copper-based metal that corroded and wore easily. When I repaired mine in the 1970s a friend made a new "tongue" from stainless that then lasted. Joe S.

It has been many years since I was last in the switch to repair the indicator mechanism. The repair is relatively easily but care needs to be taken so no parts are lost. Once the switch gear is removed from the handlebar you can then see the metal plate with the lever which moves left and right. This can be removed easily by removing the 3 screws, BUT BE CAREFUL WHEN YOU LIFT IT AWAY, IF THE NYLON BLOCK UNDER COMES WITH IT THEN THE SPRING AND LITTLE BLOCK WILL FLY OUT.

The main parts that wear are the little metal sliding block and the 3 contacts in the circuit board. A new sliding block can be made with Swiss files and the 3 contacts can be cleaned and built up with solder. Never try to rush soldering, always use the correct power soldering iron and always give plenty of time to ensure the soldering iron is fully up to temperature. When it is, you can work quickly and not damage the circuit board.

I cleaned the rest of the switch gear internally, ensuring the drain holes were clear of old grease, then re-assembled using fresh grease. Some may notice that there is small gap along the left hand switchgear at the front when it is fitted to the handlebar where the two halves meet, I sealed the front gap with a little clear silicone to prevent water getting in. Hey presto, all indicators now work

<u>Ashley's Bike</u> Ethanol Fuel

Something that is also a hot topic at the moment is the use of ethanol in fuel. I was at my local garage and refused to pay the price they were asking for the new higher RON fuel which is also now E5, so if I am going to have ethanol in my tank why not use the cheaper fuel that is E10.

After several tank fulls I am pleasantly surprised by this E10. It still starts well, runs smoothly and I have noticed that I have lost some vibration. The downside is that the performance is slightly different when I crack open the throttle, but in the rush hours that is pretty pointless. Considering the additives that have been put into the fuel, and that other places on the planet have had E10 for years, providing that the bike is used often I don't see a problem with using the E10. If the bike is left for a prolonged period then it would make sense to drain it and vent and dry the tank and carburettors completely, and then install desiccant pack in the tank.

Bike Theft

Sadly, I have to finish on bike theft, a neighbour has had his bike stolen. Yes, bikes get stolen, but the manner in which this was done was scary. It is believed they had made a previous visit to his property and managed to get under his floodlights and cameras and move them prior to another visit to get into the area where the bikes were stored with additional manpower - who checks daily that their cameras and security have not been moved or tampered? The sensors on the lights had been moved and one of the lights was over 3m off the ground and a camera was moved. They were able to do this as they could get under area the sensors and camera covered. Whilst there they also noted what was needed to remove a 6 x 6' double gate which had a serious lock in the middle of the two gates.

The gate lock was not an option to attack but they considered they had time to quietly remove all the hinges on one side as they knew what to bring to the scene, before lifting the bike off the ground as it had front and rear disc locks fitted. The area is now secured with perimeter sensors and additional cameras as it seems the floodlights and one camera were not enough. Positioning of these items is critical, as is the physical security of the bike – can it be lifted.

Another bike was also stolen a few roads away the same night, so it seems a lot of bike crime is pre planned, layered security - some visible, some hidden- will help prevent this, if they can see it they can either decide to risk defeating it or try elsewhere, if it is hidden it will

raise the alarm. Maybe time to review security, cheap anti tamper bolts through hinges, perimeter detectors for less than £50.00, ground anchors, baby monitors, tile, air-tag, all reasonably cheap as well as decent camera systems and security chains.

Sometimes they will even attempt to test your security, beware of the "I'm just in the area doing a job locally, and looking at your roof tiles etc" they are more than likely walking around testing your system and see if you respond, or the person on your property "My dog has run off this way and I'm looking for it" Ohh, and if your bike does get stolen don't ring 101 – they will cut you off, it has to be reported online by filling in a form.

Simon's Bike



This Guide can also be found on our Tech Database: Here

Shop (72-74 Models)

Shop (850 Mk3)

Courier Shipments in Europe

We have noticed in recent weeks that some further changes have been made with regards to sending parcels by courier into certain European countries. Most notably, Spain and Norway.

This change is the requirement of a Personal Identification Number (PID) for the parcel to pass through customs. This number may have a different name locally, so we would advise checking with your local postal service if you have any questions regarding this.

We would like to ask that, if you are placing an order with us, that you include this information within your address or in the "Additional Comments" box on our web shop. By having this information at point of shipping, we can avoid delivery delays, as we will need to contact you for this number and pass it onto the shipper if it is missing or the courier may return the parcel undelivered.

That's all for now, so until the next issue of "The Source"! The Team at Andover Norton



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