THE SOURCE 02|2020

Dear Andover Norton Customer,

Another busy month that showed our **new automatic shipping cost calculation** was the right step to take. It speeds up the ordering process for our customers and saves time for our sales office personel who can now spend more time on looking after other tasks. Subsequently due to changes with our couriers and how we despatch your orders, **we can no longer accept P.O boxes for delivery addresses.**

The Triumph side was introduced and resulted in the first sales. We are still in the process of building up stock. Some everyday items we are still awaiting deliveries of but most of what we intended to stock is in already in our stores.

On the Norton front, **the Garner (chim)era** has ended at long last. Most people know I, like the rest of the motorcycle industry, have never seen the “new Norton factory” in Donington as a realistic undertaking. They may also know my negative view of its main protagonist whom Andover Norton experienced as a dishonest licensor who never performed the duties required to protect us as a paying licensee, surely due to another party's unjustifiable influence over him, but also due to mutual personal dislike.

Above: Mike Jackson about to test-ride Kenny Dreer’s VR880 in Oregon

I welcome any realistic, honest, and well-funded effort to revive Norton. I don’t want to see another underfunded, big-mouthed attempt at personal financial gain, the plundering of the pensions of pitiable OAPs, and gullible politicians wasting taxpayer’s money on an obvious non-starter ever again.

When you now read crocodile-teared comments by parties who mourn the end of what must rate as the worst period of Norton history ever ask yourself a few questions:

What personal and/or corporate advantages did this defender of the great white hope for Norton have from it while it lasted?

If no advantages can be found, what does it say about the intellectual capacities of the person or group of persons who hail the man and his sorry caricature of motorcycle manufacturing?

Would you want to ever trust these people again, or would you want put your or Norton's interests into their hands?

Enough said. More dirty washing is bound to be brought out into the open in the next few months.

Now to more down to earth, important issues:

On Main Bearing dimension and specifications

On our new Triumph pages you will notice we list two main bearings for the drive side of 650/750 Triumph engines. A somewhat puzzling part number, 68.0625, and another non-standard one, 70.2879C3.

A few years ago I had reports from people I have known and respected as meticulous engine rebuilders for many years. Mick Hemmings and Rudi Kolano complained about the Norton main bearings, and Germany's best Triumph engine man Joerg Winkelmann about the Triumph ones.
Norton specified standard tolerance bearings for their 06.4118 "Superblends", Triumph even specified C2 bearings (tighter tolerance) for their drive side main bearings 70.2879.

With modern manufacturing techniques it appears tolerances can now be held at the low side of the norm. The problem became apparent in engines freshly assembled in the workshops of these three protagonists as well in engines that failed and came into their workshops from customers frustrated with the work of previous repairers.

The common problem was that the crankshafts didn't turn freely, in fact in many cases didn't turn at all. Which was happily ignored by many "engine specialists". We therefore changed the Norton main bearings to C3 spec (bigger tolerance) a few years ago and at first the Triumph ones to standard clearance from the C2 "tight" spec. We used the BSA A65 part number for these (68-0625), because BSA A65s had that bearing in STD tolerance and used that number for it. In many cases it was found even the standard clearance was still too tight in Triumph engines, so we introduced the C3 main bearing, now called 70-2879C3.

On the drive side Nortons and Triumphs started out with ball bearings in their twins. These weren't critical at first but with increasing power figures became a weak point in the engines. Nortons can easily be changed to the Superblend on the timing side. In fact I'd use the Superblends on the timing side in every Norton twin engine.Triumphs stayed with the ball bearing in imperial size till 1972 when they changed the late 650s to a metric bearing dimension.

This was again a ball bearing but later in the T140's life this was changed to a roller bearing with a split inner ring. Triumphs as a compromise meanwhile intentionally de-tuned the 750 engines with a soft exhaust cam to extend the timing side main bearing life.

Above: the late type timing side roller bearing for 750 Triumphs 60.7362

To allow for the new two-piece inner ring the flat part of which needs to be fitted from the timing side, Triumph modified the t/s crankcase casting with a slightly bigger through hole for the crankshaft.

I recommend to modify all Triumph engines with the metric size timing side bearing to the roller bearing. But remember to slightly open up the through hole until the flat part of the inner ring can be passed through **BEFORE** you put the new bearing in the timing side crankcase.

Norton Tappets

After two years of development we now have our new tappets in stock. Post Jim Comstock testing the tappet faces were reworked by the manufacturer to ensure that they were flat.

We had two reasons to develop a new tappet design. The first was that the two-piece tappets were complicated to produce and very time and money-consuming to grind to size. Grinders are hard to find these days, and don’t like to handle an item with two different grades of hardness like our tappet bodies and tappet tips. A tricky job with a big failure rate.

It now appears that failure rate was never recorded and we have sold those tappets at an unrealistically low price for many years due to not accounting for the scrap rate in manufacture.

Shop

The second reason was that the tooling was due to be renewed, but was tooling for a manufacturing process that relied on finding grinders who can handle our required quantities. The current grinder wasn't keen to continue grinding our tappets, let alone to grind them in bigger quantities, and he was the last one willing to do the job at all.

Not that we didn't look everywhere for getting the tappets ground! Tim Seifert who works for an automotive engineering firm tried the suppliers they have in the German industry, we gave various companies samples, but they all said "Thanks, but no thanks!"

The new tappets are now available in sufficient quantities to allow us stock at all times.

Our Bikes

Ashley's 850Mk3:

Ashley's MK3 is now showing the signs of being used over the winter months, so a clean will be done prior to the open day. The fork oil was recently changed, but to aid the oil down into the assembly a simple piece of rubber that is large enough to cover the stanchion hole in the top yoke. It needs to be thick enough to flex like a diaphragm. With the bike on the wood under the centre stand and the springs lower in the yokes, pour in an amount of oil to nearly overspill. Then put the rubber diaphragm over the hole and operate it with a finger or thumb like a pump. You find the oil will move quicker past the spring. Just repeat, this is quicker than waiting for the oil to run down naturally.

The Tri Spark rectifier is working perfectly, so much so this has got me thinking about a LifePo4 battery as it would give more room in the battery compartment. There are some batteries out there, one is approved for aviation use, but there others than use a similar cell charging and monitoring technology. I'm no electronics engineer, but the charging logic, as described, seems flawed as a cell that is charging quicker than the others is 'shorted' to dump some of power and thus reduce the charging going to that cell, this seems a waste of power, why not 'open circuit' and needs as, many manufacturers advertise battery temperature monitoring to watch over the battery. If this electronics fails then what will be the result,

battery fire, dead battery etc. The chances are that the onboard electronics will fail prior to the battery plates, if it does can it be replaced?

As yet I am not convinced, so the AGM battery will be onboard for a while yet.

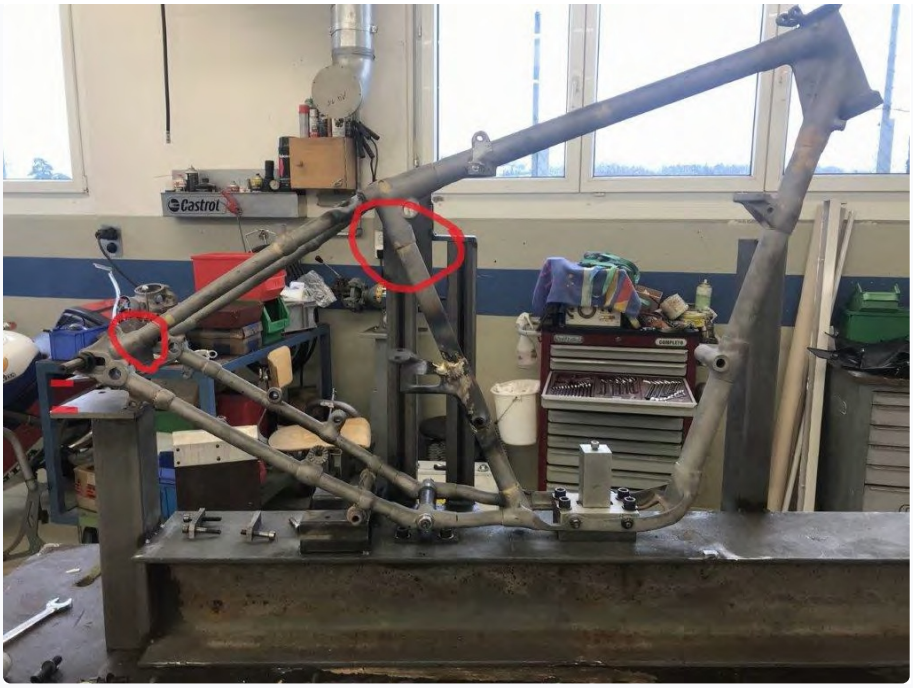
Joe’s Pre-war racing Inter:

You have seen the pictures of my rather dramatic crash at high speed in Rijeka, following a tank-slapper that remained a mystery to me. I had never had a similar experience with a pre-war or early post-war Norton on the track and lost quite a bit of self-confidence in the process.

The forks I sent to Stu Rogers to untwist, the frame I gave to Otto Ziegler, a meticulous restorer of pre-war Inters who had previously rebuilt the engine of the beast.

Otto had the misfortune of a car running over one of his pre-war Inters a few weeks ago and straightened the frame in a self-built jig. I suggested to him if he now had a jig and hands-on experience, why not apply it to my sorry, bent racing chassis?

On putting the frame on his jig Otto found the frame had an “interesting “ geometry. I had seen, after etching the paint off, that the top frame tube was cut and joined back together. Otto now suspects the frame is a combination of two frames, joined together by a person who did not understand or mind the geometry.



The rear axle was 45mm (1.77”) too high up, there was a bend from saddle tube to saddle lug, and another bend in the rear top tubes to the axle lug, Also, the steering angle was far out.

This completely distorted geometry explains not only the curious “lowboy” frame that grounded even on pushing the bike on the workbench, but also the disconcerting tendency for recurring wobbles at certain points of a track and, eventually, to the disastrous tank-slapper.

With a bike I bought from the house of the first owner, this is a bitter disappointment! But it may explain why first owner Fritz Kleber bought another racing Inter in 1938 and that all pictures I got loaned by his son show Fritz aboard that 1938 Norton. I suspect he had a serious crash on my 1937 bike, repaired the frame but then found the beast wasn’t handling as before, so bought himself a new one for the next season that he then rode in all pre-war and in early post-war races.

That ’38 Inter has disappeared but I have the crankcase of it. I guess it was broken up at some point post-war and the components sold.

Otto has now, after a short telephone conference, put in tubes at the rear and thus corrected the steering angle and the ground clearance nearer to what it should be. I should have the bike back together for Rijeka this autumn I hope. Lets see if it wobbles this time!

The Genuine Proddy Racer:

You may remember I managed to throw our genuine Proddy racer away at high speed at “Paranoiaring” a few years ago, “testing it for Christine”. She had just fallen off our “family Racer” 750 Commando which needed a bigger effort to restore the footrests etc to workable condition so the plan was to give her our “reserve bike” for the next set.

Stupidity and sometimes over-ambition seems to be my weak point on track, and I simply **had** to overtake that other racebike in my favourite fast double-bend on the outside and blissfully forgot I was on normal road tires, not racing rubber as usual, with this bike. Adhesion is a phenomenon with limits I soon found so the front fairing and a few other small bits became history.

The bike now sat in my shop for over three years doing nothing and devoid of its fairing. This winter with my friend Guenter assisting me we are getting bikes ready that have been in a part-useable state for a while.

Fitting a fairing doesn’t sound that complicated but last time I did I found it is quite time-consuming and not all that easy to fit so it is symmetrical and looks right. Having a second person to help is a definite advantage.

First to fit is the main bracket that bolts around the steering head. I recommend to fit the instruments so you know where these fit inside the fairing and allow for clearance around them.

The main bracket we produce is a reproduction of the “Hemmings Norvil” one, not of the original one which on photos looks like a girder-type construction. I have mounted my fairing on a couple of oil tank silent blocs (06.0636) to get it further up. Obviously where you mount the fairing is also dependant on the position of your clip-ons. As with all Norton race fairing arrangements clearance for handlebars, levers and cables is very limited and mainly dictated by where the fairing sits on the bike.

Take your time to determine the holes for fitting the fairing to the mount so it sits in line with the main frame tube and thus straight on the bike.

The side brackets are at first loosely fitted and the fairing laid on top of them. When you are happy with their position fasten them and drill the holes in the fairing. I have mounted the sides on two rather than the original one rubber washer 06-0648 per bolt. Try to get the side brackets fitted to the fairing “wings” in a position that does not distort the fairing structure and introduces stresses in the wings. Glass fibre is potentially fragile and will crack after a while if permanently under strain.

Above: Best is a position parallel to the edge of the fairing wing and with the bracket sides fully inside the fairing, not as shown here only partly inside.

Last are the screen and the front Perspex cover for the headlamp. The screen holes need to be drilled into the fairing shell. Make sure you have the screen in the correct position before you mark the holes. Fitting is by the trusty plastic number plate screws most probably used in the day because they were light, readily available, and in the correct colour to boot!

We now offer the fairing with brackets in “kit” form.

Calendar Pictures

As always, we are on the look out for pictures of you and your Nortons for our Calendar! so for a chance to be featured and win a prize, please send your pictures to newsletter@andover-norton.co.uk

Your entry should include the following;

- High quality, well-lit pictures. Please try to choose complementary backgrounds for your pictures. We want to see your bike at its best!
- Pictures should be as big as possible, as they will need to be enlarged for printing and small images will become distorted. Ideally your pictures should be around 4MB in file size.
- Your name, where you are in the world and model and year of your Norton.
- A brief write-up or history of you bike including any restorations or modifications you have made.

Open Day 2020

Our first Open Day at our new premises is fast approaching, and you're invited!

Come and meet the Staff and your fellow Norton and Triumph Riders on the **30th May** have a tour of our new home and a chance to get you and your bike photographed!

We hope to see you there!

The Team at Andover Norton

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