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JONES-NORLEY

Harley Davidson XLH Evo 1200cc Engine In a modified Norton Wideline Frame

13th July 2022

This final chapter of my Harley Davidson / Norley Project (or is it?!) in this, my latest 'blog' I will review how I feel this project has turned out. How I'm getting on with this Norley now it's on the road and is completed; how it handles & how it responds after such major surgery.

So this is probably my final collection of photos as my Norley project comes to it's intended natural conclusion (back on the road again). I know, it's been a very long journey following so many 'stops & starts' and so many unexpected distractions (by me doing at least nine other 'Projects' in-between working on the Norley). Not to mention of the problems associated with Brexit . . . and two years of Covid disruption & turmoil, followed by shortages of materials, equipment, oil, fuel and food, plus hyper-inflationary price hikes due to the incompetence of the UK Government to 'Govern'. And . . . don't get me started on the World crisis instigated by Vladimir & fuelled by the West (bringing us ever closer to annihilation & new Stone Age).

I know! It's quite easy to blame others or situations on 'How long it takes to complete a Project', but in truth my main problem has been a combination of procrastination on my part and too many other 'Projects' (nine to be exact) on the go, that has taken up the time needed to complete my Norley.

"AnyHooo" as the Americans say, I finally rewired the Norley's whole electrical system (yet again - in May) but this time I refitted the Front Head Light Unit and added Turn Signal Indicators. In June I replaced the old (original HD) Twin Fire Ignition system for a brand new S&S Single Fire Ignition system and S&S Single Fire Ignition Coil (works a treat), obviously fitted new HT Plug Leads, Plug Caps & Spark Plugs (as best practice).



All of the electrical connectors and fittings have been 'crimped-on' & then soldered-on for good measure. I've used see-through insulating sleeves on all of the electrical connectors and tried to keep all the *electricals* neat & tidy. My Lithium Ion Battery (incredibly light-weight) is still going strong after 7 years.

I had to make a second (stronger) side-stand bracket (photo below right) due to the first side-stand bracket 'Failing' after only being on the bike for just over two years. But HEY! That's what research and development is all about – trial & error. My Mk II version is much stronger as it is made from ¼" thick mild steel plate welded together to form a double Clevis-type bracket that is bolted directly onto the bottom of the Chaincase. The actual side-stand is made from 13mm thick structural Duralumin Plate which is both strong and very light. I'm sure this one will last much, much longer.

The first photo below left: shows the (blue coloured) round tubular side-stand. This photo was taken at the time of the Norley's first MOT Test (5th July) after being off the road for many years. I am happy to report that it 'Passed' the MOT Test with flying colours (and no 'Advisory Notices') enabling me to apply for a new Road Fund Licence (aka Road Tax). It is now fully taxed, insured and MOT'ed and is providing me with an improved riding experience.



As can be seen from the two photos below; My Norley sitting proudly on the forecourt outside the newly launched 'Sycamore Motor Cycles Ltd' Harley Davidson Dealership in Wolverhampton (formally Chapel Ash Harley Davidson, which incidentally, is where I purchased my HD Sportster from, Brand New in 1999 (£4,995). I've owned my Sportster for the past 23 ears during that time I have covered many wonderful trouble free miles (over 97,000 miles).



I have even taken it out in the rain, as can be seen below with wet roads (five photos below). This was my first proper Test-Ride. It is very quick 'off-the-mark'.



You can see the Mark One Tubular Side-Stand (painted blue) in the above photos. The Side-Stand itself didn't 'Fail', it was the actual bracket that supported the Stand that 'Failed'. Obviously, it wasn't as strong as I thought it was. However, its replacement is now very much 'up-to-the-job'. I have also changed the 'Lean-Angle' as this may have been a contributing factor in the failure of the first side-stand bracket. It now sits more vertical than the previous angle.

WEIGHT COMPARISON BETWEEN ORIGINAL HARLEY DAVIDSON PARTS (Left Column) AND THE REPLACEMENT PARTS USED TO BUILD THE NORLEY (Right hand Column)			
INDIVIDUAL PARTS BELOW	HARLEY-D	NORLEY	Total weight Savings Below
	Kgs	Kgs	SAVINGS Kgs
FRAME	33.400	18.300	15.100
SHOCK ABSORBERS x2	7.600	5.800	1.800
PETROL TANK	5.300	2.380	2.920
OIL TANK	1.830	0.980	0.850
SEAT	0.000	0.000	0.000
ENGINE PLATES	0.700	0.000	0.700
FRONT WHEEL WITH TYRE FITTED	14.600	11.500	3.100
REAR WHEEL WITH TYRE FITTED	19.500	12.600	6.900
REAR CHAIN	2.300	0.800	1.500
REAR SPROCKET	2.150	0.650	1.500
HANDLE BARS	3.470	0.900	2.570
REAR LIGHTS	0.000	0.000	0.000
BATTERY	5.600	1.400	4.200
FRONT BRAKE CALIPER	1.425	0.800	0.625
REAR BRAKE CALIPER	1.600	0.800	0.800
REAR BRAKE LIGHT ASSEMBLY	2.200	0.125	2.075
CLUTCH HANDLEBAR LEVER	0.800	0.300	0.500
BRAKE HANDLEBAR LEVER	0.800	0.300	0.500
THROTTLE TWIST GRIP	0.400	0.200	0.200
INDICATOR SWITCH	0.200	0.050	0.150
LIGHT SWITCH	0.200	0.050	0.150
FRONT BRAKE ROTOR	2.100	2.100	0.000
REAR BRAKE ROTOR	2.250	2.400	-0.150
SPEEDO	0.720	0.180	0.540
FRONT MUDGUARD	3.000	2.000	1.000
REAR MUDGUARD	3.500	0.006	3.494
REAR EXHAUST BRACKET	0.800	0.007	0.793
FRONT ENGINE STAY	0.600	0.200	0.400
CARB FILTER SYSTEM (K&N to Homemade gauze filter)	1.300	0.002	1.298
SHARKS FIN CHAINGUARD	0.000	0.001	-0.001
SWINGARM SPINDLE, SPACERS & BEARING BOSSES	0.380	0.300	0.080
GEARBOX MOUNTING PLATE	1.000	0.800	0.200
TOTAL WEIGHTS FROM ABOVE PARTS	119.725	65.931	53.794

As can be seen from the chart on the left; I did a 'Weight Comparison' between the original Harley Davidson Parts and the replacement Parts that I used in the Project Build.

The chart shows four columns.

- 1) The first column lists the Individual Parts Itemised.
- 2) The second column shows the H-D weight in Kgs.
- 3) The thirds column shows the Norley weight in Kgs.
- 4) The fourth column shows the weight saving in Kgs.

The chart illustrates the difference in the weight between each of the corresponding parts. For Example;

The Harley Davidson Frame weighed 33.4 Kgs.
The Norley Frame weighed only 18.3 Kgs.
Thereby 'Saving' 15.1 Kgs in weight.

Another example where weight saving was made by using Lighter Alloy parts over the OE Heavier Steel parts, such as the Wheels.

Front Wheel with Tyre fitted HD = 14.6 Kgs.
Front Wheel with Tyre fitted Norley = 11.5 Kgs.
Thereby 'Saving' 3.1 Kgs in weight.

Rear Wheel with Tyre fitted HD = 19.5 Kgs.
Rear Wheel with Tyre fitted Norley = 13.6 Kgs.
Thereby 'Saving' 6.9 Kgs in weight.

I think you will agree that just from these few examples above, this weight saving exercise has proved most successful and beneficial to the overall weight of the bike.

All-in-All: The Total weight-saving can be read at the bottom of the list which is a pretty impressive overall saving of 53.79 Kgs.

The equivalent weight saving converted to Stones & Pounds:

53.794 Kgs. = 8.471 Stone in weight

53.794 Kgs. = 118.595 Pounds in weight

I am really pleased with the outcome of my Project. The Bike is very much 'Lighter in weight' in comparison to the original Harley-Davidson Framed version, with many heavy OE Parts being replaced by much lighter aluminium counterparts (or Alume-in-um as the Americans say ☺). The Bike Handles extremely well and stops much better than the original braking system due to the weight savings & new front & rear floating Disc Brake Rotors used and the more modern & improved Twin 'Pot' front Brake Caliper fitted. Obviously there is quite a difference in the power-to-weight ratio so its performance is markedly improved. It is comfortable to ride with the sit-up style Renthal Alloy handlebars fitted, the seat is comfortable and riding position, as designed, suits me perfectly (but then it would because all of the brackets, footrests, brake levers, etc. etc has been designed and build to suit ME) !



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