

HIGHWAY HAWK Powder Coating

Dr.Rod

OK so we've all been there. Painting a bike frame is one of the major pains in rebuilding a bike, and unless you're shelling out big bucks for a top class professional custom paint job you may be tempted to go down the Smoothrite route or even, god forbid, resort to the old Dulux. But be warned - prepping up a frame and getting a good finish is well nigh impossible without hours of dedication and swearing. If like me you've decided that life's too short you may have decided to go down the powder coating route, a method supposedly guaranteeing industrial standards of finish and durability at reasonable prices. Unfortunately in many cases that's exactly what you get - industrial standards. Most powder coaters make their living from coating park benches and fire escapes and you may be justified in thinking your pride and joy deserves something a little better.

That's why when I needed my Harley frame coating for its winter rebuild I trotted along to see Andy Rushworth at Triple 'S' Powder Coatings in Bingley. Triple 'S' do not coat fire escapes, kiddies playground equipment or crash barriers. They coat bike parts and occasionally, if their arm is twisted, the odd car part. But nothing "industrial". And they produce the best finish I have seen anywhere on a bike frame, and other bits besides....

Back in the seventies I fondly remember sending parts away to be stove enamelled, and eagerly unwrapping the lovely shiny results. Stove enamelling seems to have given way to the more modern process of powder coating; a bit of a mystery to me. Andy was immediately able to sort me out. "Stove enamelling", he told me, "used to use solvents in the enamel which we now consider dangerous. Over the years the solvent levels were reduced, but the resulting finish became brittle and it reached the point where it was almost impossible to rebuild the bike without losing big flakes of enamel from the bolt holes". Enter the more modern, and greener, process of powder coating.

In order to apply the powder coating the frame is cleaned back to bare metal, then given a negative electrical charge. The colour coat powder is then sprayed

from a positively charged gun onto the frame, the difference in electrical charge holding the powder in place on the frame. The whole thing is then baked in an oven, and at a critical temperature a chemical catalyst in the powder kicks in and cures the coating to the metal.

While this may sound like a simple process it actually requires an awful lot of care and craftsmanship to get a finish acceptable for bikes. "Industrial powder coaters," says Andy, "are geared up to volume production, and will use very coarse grits to blast the parts prior to coating. Everything then goes through the oven on a conveyor along with the park benches and fire escapes which make up most of their work". Not surprisingly, this approach to powder coating rarely produces a finish you'd like to see on your rebuilt pride and joy. I've had frames come back from industrial powder coaters with enough grit baked into the finish to cut your finger on. Inaccessible nooks and crannies rarely receive an even coating, and some areas such as behind the headstock may still show patches of bare steel.

Andy rides bikes himself, and has been enamelling and powder coating bike parts for long enough to know how to do it properly. Each frame which comes into Triple 'S' is hand blasted with very fine grits to leave the smoothest possible

surface, and is then carefully inspected for faults before coating. Any cracks or dodgy welds can be reported back to the customer and remedial action taken before coating. Triple 'S' will even carry out minor welding or re-threading repairs on the premises. Each frame is then carefully hand masked to ensure threads do not receive a thick powder coating which would cause problems when re-building. Again, Andy has sufficient experience to spot the out-of-the-way threads and bolt holes which an industrial powder coater simply would not be aware of.

Finally the frame receives its colour coat, carefully applied to get an even and thorough coating before it disappears into the ovens for curing. Some industrial powders give a slightly off-black, almost dark grey finish, and Triple 'S' have helped develop a special black coating specifically designed for bike frames which gives a deep lustrous finish.

Most bike factories still use paint on their frames which in some cases begins to show rust shortly after the bike is out of warranty. Some manufacturers, notably Triumph, Harley-Davidson and Moto Guzzi, now powder coat frames at the factory but still do not always achieve high standards of durability. My '98 Dyna Glide frame showed extensive rust

around the headstock and lower frame rails, probably due, says Andy, to poor preparation before coating. The Triple 'S' finish is deeper, glossier and more durable.

Triple 'S' can powder coat almost any steel or alloy bike part, including engine covers and crankcases. They also have a wide range of colours (including metallics) off the shelf, and can obtain specialist powders for gloss, matt or wrinkle finishes in any colour, though special orders can be expensive. "The powder has a shelf life of three months," explained Andy, "so anything we haven't used by then has to be thrown out".

The finish I saw on the parts in the shop really was second to none, and just as I was about to leave Andy produced a Triumph cylinder barrel from under the counter which a customer had just returned for re-coating. "We coated this one thirteen years ago, and it's just starting to look a little scruffy" commented Andy. Now that's what I call durable.

Triple 'S' are at 5 Whitley Street, Bingley, West Yorkshire BD16 4JH, tel (01274) 562474. And if you should ring and not receive an immediate answer hang on, as Andy can't always drop his coating gun to answer the phone. If really busy, he'll dial 1471 and call you right back.



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Oh and part two of the 100% Biker Project bike next month!!

Dr.Rod.

PICTURE 01:

Andy carefully hand blasts each part to make sure all traces of old paint and rust are removed before coating. His job is made considerably easier if you remove all the bearings and de-grease everything thoroughly before sending it to him for coating. Budget for new head and swing arm bearings for the rebuild.

PICTURE 02:

None of your horrible coarse grits here. Andy uses only the very finest grit to blast your precious bike parts. This takes longer but gives a much better surface for re-coating and ensures the best possible finish.

PICTURE 03:

With the frame carefully prepared

and all threads and bolt holes masked off, Andy sprays on the powder. An electric charge running through the frame attracts the powder particles and holds them in place ready for curing in the oven. Getting an even and thorough coating is a skilled job, and will dramatically affect the final result.

PICTURE 04:

After heating and allowing to cool the frame can be removed from the oven. No further finishing is needed and the finish will be not only be better looking but also more durable than other options.

PICTURE 05:

Frames awaiting collection in the shop. Triple 'S' can accommodate any bike frame and have even coated the occasional go-kart chassis, and are ultimately only limited by the size of their blasting booths and oven. Trike chassis, unfortunately, are simply too big for the blasting booth.



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