



## Frequently Asked Questions about Vapor Blasting



### What is “Vapor Blasting” exactly?

Vapor blasting is a surface refinishing process that was originally used by Rolls Royce in England many years ago, to clean and resurface aluminum jet engine parts to eliminate corrosion and facilitate inspection. It is quite simply cleaning via high-pressure surface blasting, but instead of dry abrasive media, it uses a slurry of water, compressed air, detergents and abrasive media. The vapor created is much gentler to soft aluminum than other processes, yet it will remove a microscopic layer of oxidized metal and corrosion. This process also seals the pores of the aluminum making it look better longer, and be more resistant to future corrosion. Vapor blasting differs from dry blasting in other respects as well – it will not dimensionally change a part, the media used is much finer and gentler, and the resulting surface is much smoother and shinier.



## **What is the process like?**

It can vary a bit depending on the parts being refinished, but it generally follows this:

- Your parts are inspected and photographed, and any potential issues identified and discussed.
- Oily or greasy parts will get a trip through the parts cleaning sink to remove any heavy deposits of grease, sludge or oil before their trip through the blaster.
- Engine oil passages are plugged as a precaution, but threaded and through-holes generally are not.
- Parts are then vapor blasted in the Vixen AquaBlast, then immediately rinsed with clear water, dried, and sprayed with protectant.
- Finished parts are photographed before they are carefully packed and returned to you.

## **How big a part can I send?**

The blast cabinet is 30 inches square, and has a carousel for heavier items. If it can fit in a 30-inch cube, send it!

## **Can I send steel parts?**

Unfortunately no. This process is optimized for aluminum, and ferrous metals are prone to flash rusting using this process. Steel or iron inserts in aluminum parts are masked before blasting, and quickly dried and sealed with protectant as a final step.



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## **How do I prepare my parts for Vapor Blasting?**

Disassemble the parts, removing any brackets, bolts, or any other ferrous metal parts you can. Threaded steel inserts, iron cylinder liners, valve seats and or pressed-in bearing surfaces obviously can't be removed, we will mask these before blasting and immediately clean and treat these with protectant to prevent flash rust.

Clean and remove the worst of any grease, gunk, sludge etc before sending parts, or you'll just be paying us to clean them, adding time and expense to your project. Gaskets and heavy sealants must be removed prior to blasting – the blaster will not remove them.

If you're shipping an engine or other whole assembly you may lightly bolt it back together for shipping if that makes it easier for you to pack it up. See the shipping instructions on the order form for more information. Or give us a call.

## **What is the finish like?**

The finish can vary somewhat, depending on the condition and quality of the metal in the part, which can vary really widely. In general parts will emerge from the process with a very fine lustrous satin finish. This finish is fantastic as-is straight out of the blaster for many parts including cylinders and heads, valve covers, wheel hub centers, and just about any rough-cast engine parts commonly found on British, American and European motorcycles. Bolt it on.

Some smoother die-cast parts will probably require a small amount of hand finishing to get the desired appearance – including fork stanchions, wheel hub faces, engine lower cases and side covers. A post-blasting finishing guide will accompany your parts when we return them to you outlining several different techniques we have found to be successful.



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## **How long does it take?**

1-3 days in shop is standard, but we would be happy to expedite your order if you need it sooner. Call anytime to discuss your project, we want you to be happy and well informed.

## **What does it cost?**

Services are billed by the hour (\$70 per hour), and the time it takes to complete a project depends somewhat on the condition and cleanliness of the parts furnished. In general though, a clean-ish engine would take 3-5 hours in total. A pair of (clean) fork stanchions probably takes a half-hour or less. A pair of wheel hubs will take about the same. You are subject to an hour minimum charge, billing in half-hour increments thereafter. Shipping is additional, always insured, and tracked.

## **Tell me all the secrets, techniques, materials and helpful tricks and tips you've learned!**

Sorry but no! Don't get your feelings hurt, but nobody else does either. We've blasted TONS of parts testing different air pressures, media, detergents, slurry temperatures, processes, pre-blasting, and more. We've also got a mentor who has been guiding us as we go, and some of our techniques and processes originate with his. Everyone that does this work has his own "Special Sauce" and we've got ours. We've had parts blasted by other outfits to see where we stand. The answer is, "As good as any".



## **What can possibly go wrong?**

This process results in a very fine lustrous satin finish. It's important to know that up front, so your expectations are properly set. As prior, quite a lot of parts look fantastic as-is straight from vapor blasting, to assemble or bolt right on. Some parts will need additional hand finishing to look just right, and there are different techniques and materials that are used to replicate original factory finishes. We'll share everything we know about how we do that for our own projects, but you should expect that there will be some additional hand work needed to prepare some parts if you're trying to achieve a certain look or finish.

Once in a while there are surprises lurking under the 'patina' of old parts. Vapor blasting reveals all, and in fact that was its original purpose – to facilitate cleaning and inspection of critical parts. Old metal parts frequently have scratches, gouges, pits and pockmarks that are much harder to see on oxidized or dirty old aluminum. When they emerge from the blaster they are front and center in all their glory. Existing cracks or other damage that were formerly unseen will emerge – and while that is sometimes a bummer, it's good to know before something gets put back into service.

Some parts of Japanese motorcycle engines were frequently painted at the factory, or sprayed with a clearcoat that is usually yellowed and flaking by now on bikes that have seen the outside of a garage. Once that's stripped away, any casting flaws or dings or nicks will be much easier to see. Most of these can be repaired, and we'll tell you how when we return your parts. But a freshly vapor blasted part is going to look different than a formerly painted or clear-coated part. You may like it better, or you may decide to use the spotless vapor blasted part as a prep step for repainting it – an excellent technique. Or you may finish it with one of the techniques we'll share. Just know up front what you're going to get from this process and you'll probably be delighted with the result.



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## **Will every atom of corrosion or blast media be removed from my parts when they are returned to me?**

We have to advise you, no. Once in a while a spot of old paint or corrosion in a crevice can't be dislodged without 'parking' the blast gun over the surface for too long, resulting in a 'hot spot' that is undesirable. We will also spend a lot more time on the OUTSIDE of components looking for a perfect appearance than we will on the inside. View the example galleries closely and you'll see, we left some light discoloration on the inside of some engine cases because we just don't think it's worth more of your money to make those as spotless as the outside.

With regard to blast media, oil and fuel passages are plugged or otherwise masked wherever possible and we avoid directing blast media at or into them as much as possible. Parts are immediately rinsed, several times, and then dried with compressed air. Then the plugs and masking are removed. It is however the customer's responsibility to verify that all blast media is removed and the parts are ready to be put back into service. We expressly disclaim that parts we treat will be completely free of all blast media. It's just not possible to do so. Rinse and check your parts yourself carefully.

## **I have another question!**

Please be in touch. Call the shop at (520) 308-3705 or drop us a note at [info@restocycle.com](mailto:info@restocycle.com) and we will get right back to you. If your question is a good one, we may add it to this FAQ!