



**Report Card:**

2001 Holden VX Commodore (Red)



**DISCLAIMER:** Use of Adobe Photoshop.

All photographs are **UNALTERED** except for the addition of a frame & watermark and an automatic contrast adjustment.

Registration plates have been masked in accordance with our client confidentiality policy.



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## 1.0 Enrolment:

This booking was for 'Major Paint Correction' on a well used, and often neglected Supercharged 2001 Holden VX Commodore. This vehicle was purchased some years ago by a local fast food franchisee who was 'falling out of love' with the way it now looked. Our mandate for this job was to restore the old warhorse to its former glory, and let the owner enjoy it for another few years before replacing it. This proved to be quite a challenging task – the reasons for which will soon become apparent.



This particular vehicle has covered many thousands of miles, and has only recently ceased being parked under overhanging foliage. As a result, all matter of leaves, bird-droppings, and other organic 'gunk' had accumulated in the various sills, gutters, nooks & crannies around the vehicle. There were also a large number of stone chips and a nasty gouge (down to bare metal) that had been previously seen to with touch-up paint. We would need to work extremely carefully!



The vehicle was presented with a generous coating of road grime.



With the usual areas looking particularly grubby.



The wheels themselves were looking decidedly “brake dust brown” instead of the bright silver that they ought to.



A thorough cleaning would be required before we even start to look at the condition of the paint!



## 2.0 Remedial Tutelage:

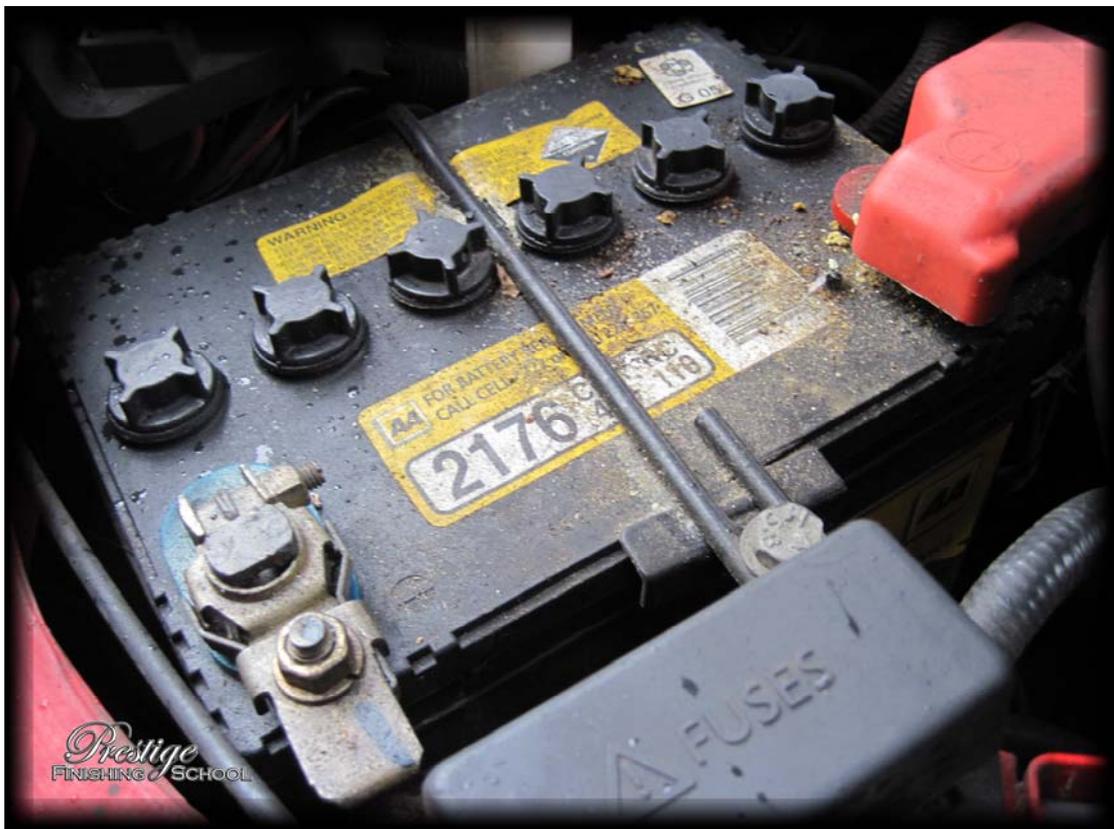
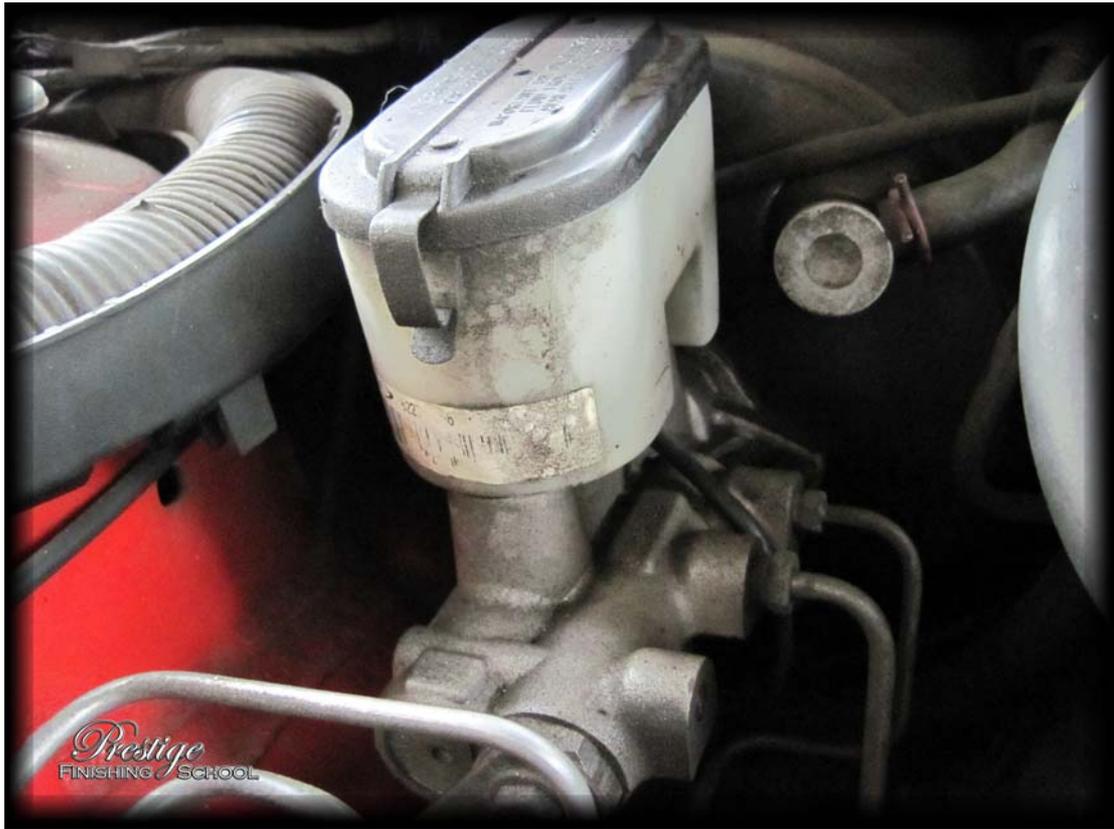
Before approaching the vehicle's painted panels, it's important to attend to some prerequisite tasks. Generally, we tackle particularly dirty areas, such as the vehicle's engine bay, wheels, arches and sills/shuts ahead of a traditional 'wash' process to ensure that the vehicle is cleaned in the safest possible manner. This also ensures that we don't end up rinsing dirt onto areas that have already been cleaned.

### Engine Bay

We commence with the Engine Bay. Plenty of grime and dust present, as well as some nasty staining/fading of the plastics.



Getting up close gives an indication of the general state of things...



The entire compartment was given a liberal spraying with Meguiars Super DeGreaser (diluted at 4:1 this time for a little extra bite) and agitated with a detailing brush. This was then rinsed off at low pressure, leaving the following results:



The underside of the bonnet is an often neglected area.



...which can really have an impact on the overall presentation of a car!



303 Aerospace Protectant was applied via a microfiber work cloth to the plastics. We find that this leaves a fantastic, matte, factory finish rather than the sticky/shiny results of other brands. In addition, it provides a significant amount of UV protection to minimize fading.



To finish up, the painted surfaces in the engine bay were sealed with a protective coat of Meguiars NXT 2.0 Tech Wax.



## Wheels & Arches

The wheels were then attended to, one at a time. Firstly, with the wheel off, we have the opportunity to thoroughly clean one of the dirtiest areas of any motorcar:





Although an underseal has been applied to the bulk of the wheel arches, a small plastic liner is still fitted – this is dressed with Meguiars All Season Dressing, leaving a very smart finish.



The wheels themselves were cleaned with various brushes, and a weak solution of Meguiars Wheel Brightener.



We also scrubbed the tyre walls with “Meguiars Super Degreaser”. Cleaning the tyres is not a common practice, however this picture gives a good illustration of why ‘tyre black’ products can turn brown very quickly if applied to a dirty rubber surface...



Once clean, the wheels look to be a completely different colour!



They were then treated to an application of Poorboy's Wheel Sealant to protect the rim and make future cleaning much easier.



Repeat three more times...



## Shuts, Sills, & Jambs

As previously mentioned, this vehicle had spent a long amount of time parked under overhanging foliage. Plenty of dirt had been deposited on the car, and worked its way into various crevices where 'regular' washing won't remove it. Door jambs...



Petrol filler caps...



Drain sills in the boot...



...and the door panels exposed to the wheel arches.



In each case, Meguiars All Purpose Cleaner (4:1) and a detailing brush was employed.



## Foam Bath

Prior to any polishing, or paint correction of any kind, it is imperative that the paint surface is impeccably clean. To achieve this in the most 'gentle' way possible, the vehicle is first covered in a thick blanket of foam. This is achieved with "Meguiar's Hyperwash", applied to the vehicle via an "Autobrite UK Foam Lance".



...and left to dwell for 5 minutes before being rinsed off.





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## Hand Wash

With as much dirt as possible removed from the vehicle without direct contact, it was time to complete the wash process with a hand wash via a Lambswool Mitt and Meguiars Shampoo Plus.



A lambswool (or microfibre) mitt should always be used for ‘contact’ washing of a vehicle’s painted surfaces. Particles of grit and dirt on the paint are the **primary** cause of swirls on modern vehicles with ‘clear coat’ paint. Regular sponges cause the grit to be trapped against the surface of the paint and dragged across it. (Even worse still are the brushes at self-service or automatic carwashes.) The plush mitt however will draw the dirt away from the paint surface, deep into the fibers of the wool, thus preventing it from inflicting further damage.

Also notice the separate buckets for ‘wash’ and ‘rinse’ action. This is the safest and most effective way to clean a vehicle’s paint. The Mitt is soaked in the 60° C Shampoo Plus solution which has a “*Low-Suds / High-Lubricity*” formula and then worked over the vehicle. After each panel, the Mitt is cleaned off in the ‘rinse’ bucket, dislodging any dirt picked up off the car, before being re-soaked in the shampoo.





This was the amount of dirt in the rinse bucket after just half of the vehicle!  
Definitely time to empty it and get a fresh supply...



...which looked just as bad after completing the wash!



## Clay Treatment

The final step in ensuring a perfectly clean paint surface is the removal of bonded contaminants with a detailing clay bar. This can include tar spots, tree sap or industrial fallout, all of which contribute to making the paint surface rough to the touch and dull to look at. In this instance, a Meguiars 'Quick Clay' bar was used with Meguiars Last Touch (diluted 1:1) as lubrication.



Even small amounts of contamination can dramatically reduce the effectiveness of any subsequent polishing. If not removed, the material will be drawn into the polishing pad, and potentially instill scratches to the paint surface throughout the machining process - so it is well worth taking the time to ensure that the paint is perfectly clean and smooth prior to any form of correction.

The picture on the next page shows the amount of contamination removed from one half of the bonnet only...





And the next image is representative of the amount of bonded and etched material removed from each panel.



The boot lid was suffering the effects of bird droppings. These marks illustrate just how damaging it can be to leave these deposits unattended to.



### 3.0 Initial Assessment:

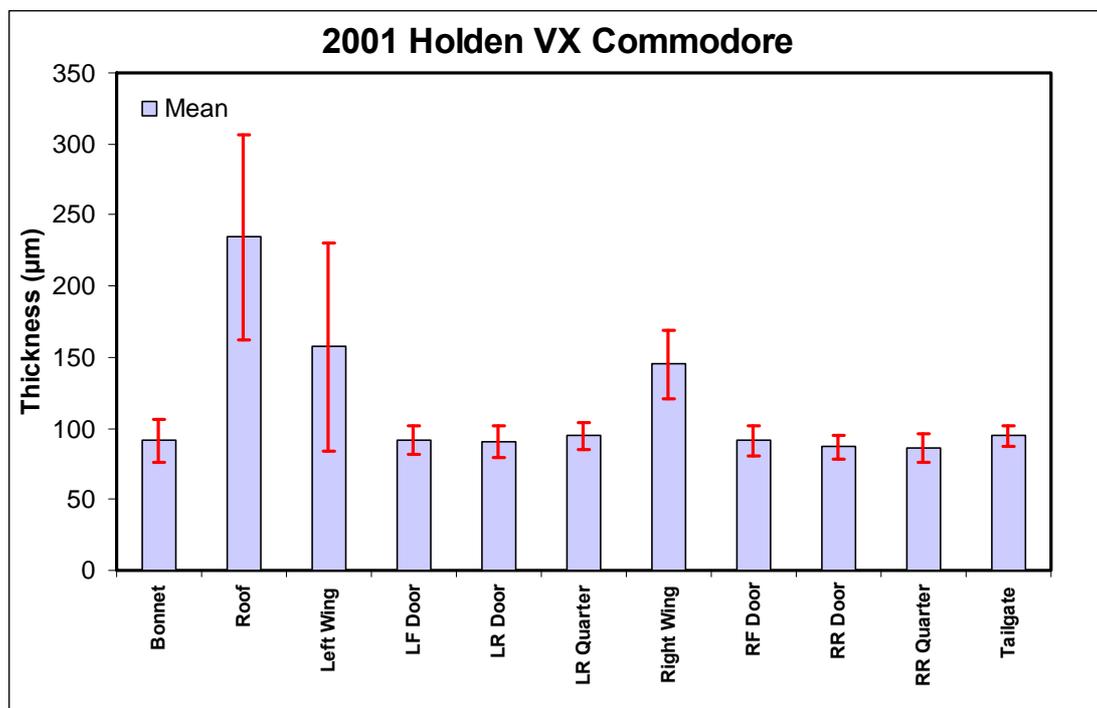
It was evident from the outset that Major Paint Correction would be required for this subject. Though not shown in this report, even prior to being washed, panels were showing evidence of significant swirls and scratches – in addition to the areas that had been previously ‘touched up’.

The eagle-eyed among you may have noticed the red tinge to the water in the rinse bucket, and the red colour transfer onto the clay in the previous stages. These are both large warning signs that point to either:

- (i) The vehicle having previously been “Cut & Polished” too aggressively, and as a result the entire “Clear Coat” having been cut away, exposing the base colour coat.
- (ii) The vehicle having single-stage paint (no clear coat) and that paint having deteriorated to such an extent that it can simply be ‘rubbed’ off.

...both of which are troubling prospects!

Accordingly, we would need to carefully assess the amount and condition of the paint on the vehicle. The “PosiTest DFT Combo” gauge from DeFelsko is an invaluable tool for this purpose. It will quickly and accurately (to the nearest micron ( $\mu\text{m}$ ) which is 1/1000<sup>th</sup> of a millimeter) measure the thickness of a coating on any ferrous (eg. steel) or non-ferrous (eg. aluminium) surface.



In total, nearly a thousand individual readings were taken, and all panels showed slightly lower than ideal readings, with obvious respray work on the roof and front wings.

With the presence of a clear coat confirmed, we would have to be especially vigilant in looking out for thin areas!



## 4.0 Course of Correction

This section details the paint correction process for each panel.

### Bonnet

To begin, we need to establish the correct polishing compound, pad and technique combination required to achieve the desired level of correction for this vehicle's paint.

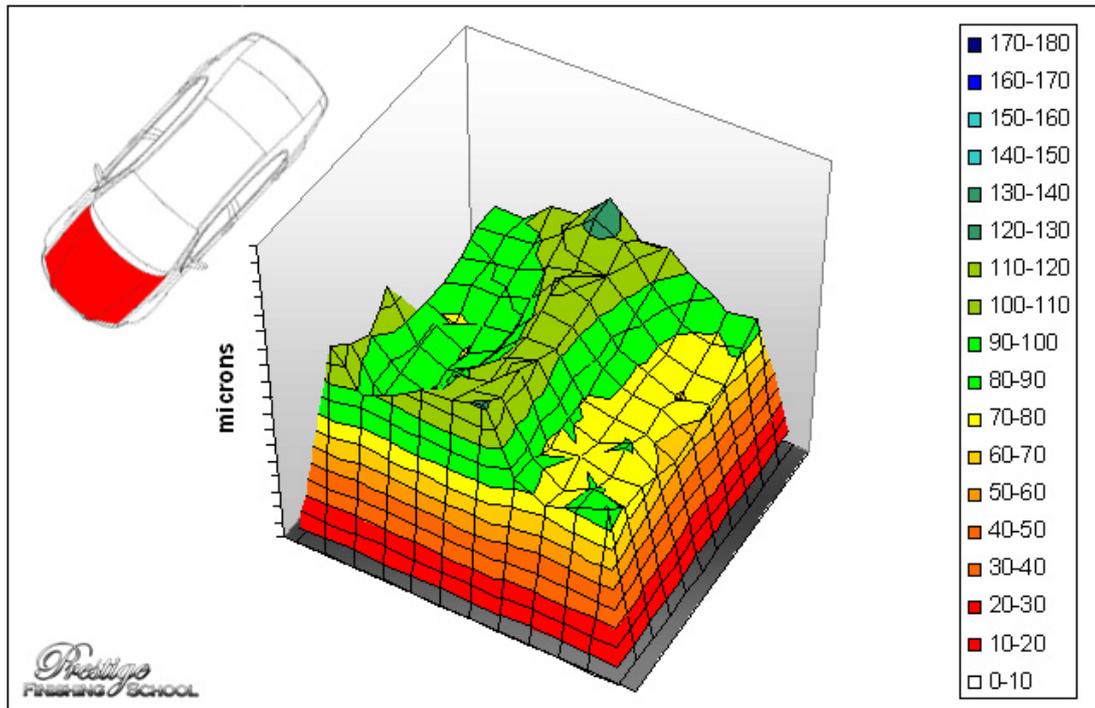
Mindful of our concern regarding paint levels, we limited ourselves to only very mild polishes and pads, forgoing any cutting or compounding options. The combination that ultimately worked best for this vehicle was Meguiars M80 Speed Glaze on a Meguiars 6.5" polishing pad.



This was the condition of our 'test' area on the bonnet prior to starting.

One interesting piece of information that the owner passed on was that after one visit to the paint shop, a panelbeater remarked that he had spent nearly 5 hours polishing to make the repair look right. Look carefully at the thickness diagram below and see for yourself what this caused. (Where the bonnet would meet the Left Front Wing)





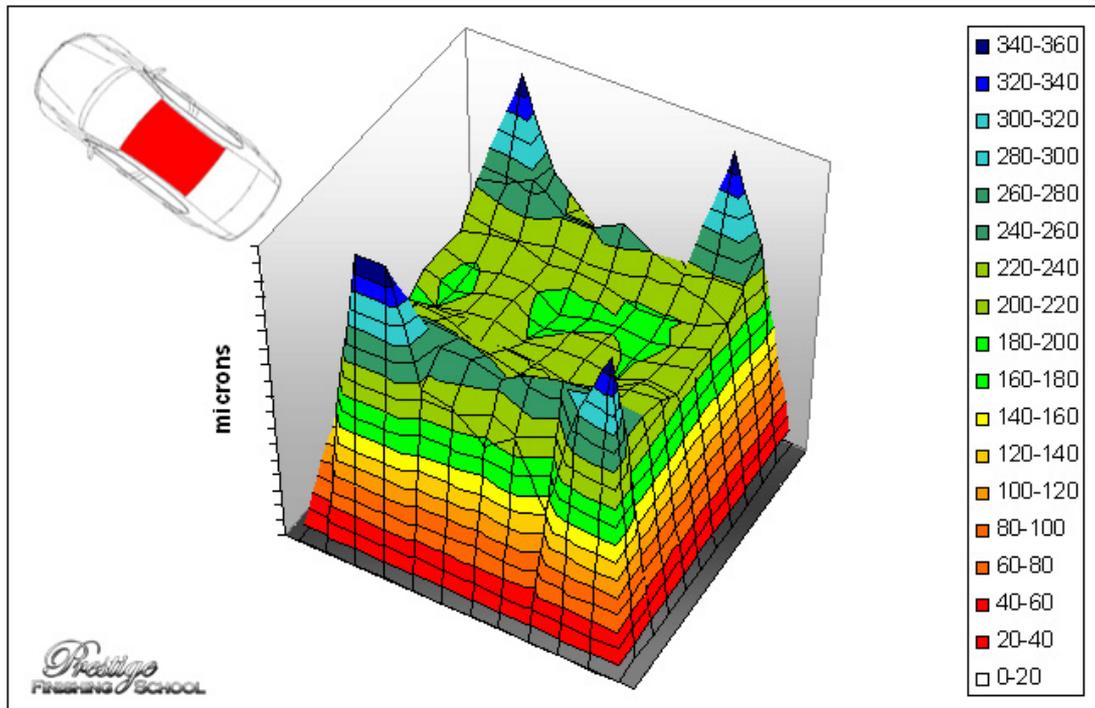
Here the paint has become dangerously thin. (65-70  $\mu\text{m}$ ) Comparative measurements on areas of the vehicle that don't have a clear top coat (Eg. Inside the door shuts) indicated that the combined thickness of primer and colour coats was between 35  $\mu\text{m}$  and 45  $\mu\text{m}$  meaning that as little as 20  $\mu\text{m}$  of clear remained!

By using a Glaze rather than anything more aggressive, and limiting the machining to a maximum of 1200rpm we were able to achieve the following result with only a single micron removed from the top coat.



## Roof

The roof had almost the opposite problem. It had obviously been resprayed (the scale in the diagram below is double the norm) but there is evidence of the newly applied paint 'running' off the top of the roof and pooling in the lower edges.



With a resprayed panel, the total thickness is less meaningful and it becomes difficult to establish how much clear coat remains on top of the many, varied layers of paint on the panel. Again, a cautious approach is called for...

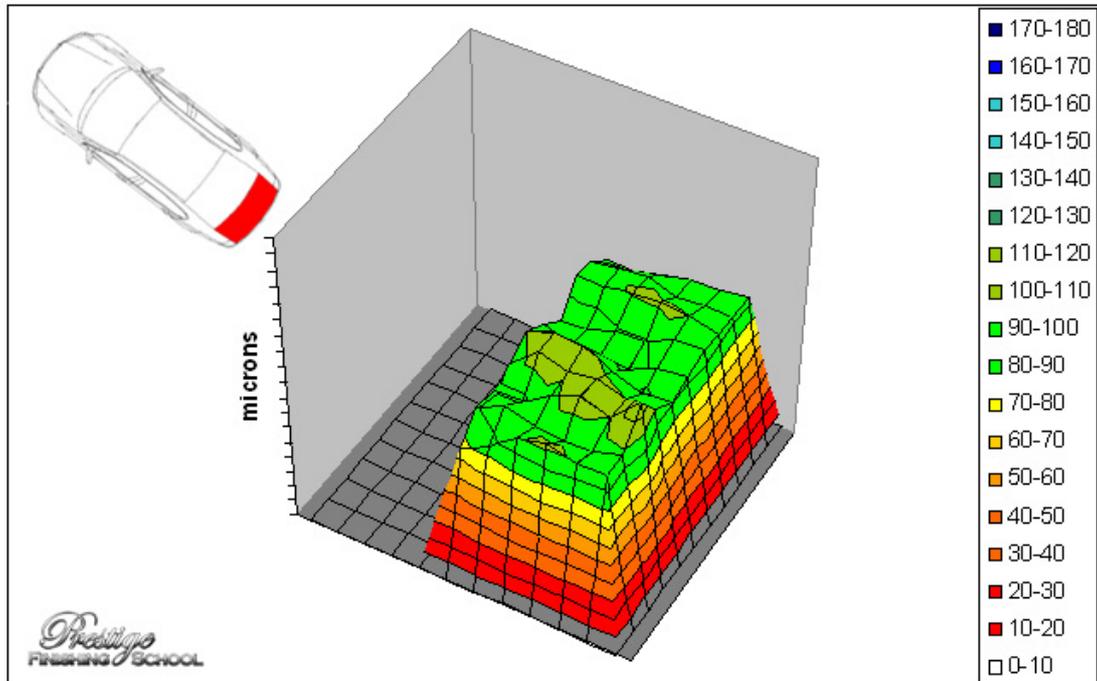


And with patience, a fantastic finish can be achieved!



## Boot

The boot lid showed original, factory paint in reasonably healthy levels. Given that 95-99% correction rates had been achieved with our 'gentle' approach, we opted to persist with this method across the remainder of the vehicle also.



It was, however, looking pretty dire...



With half the panel corrected, you can really see the difference in the panel's finish.

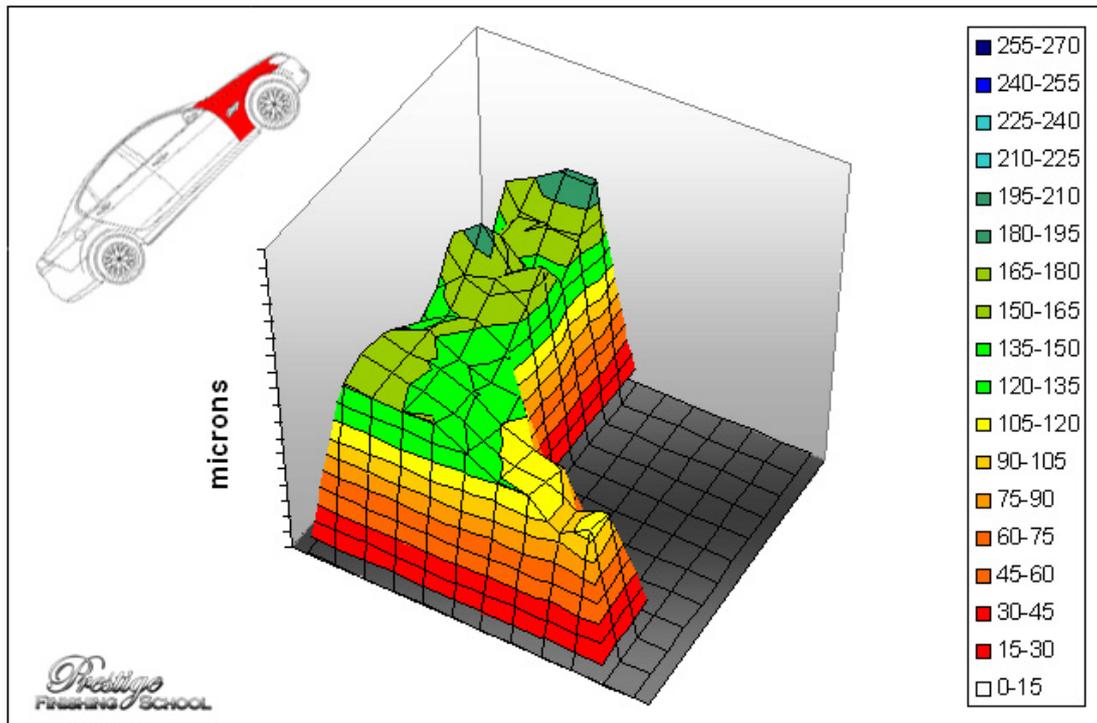


The process is repeated across the remainder of the panel, delivering the following results:



## Right Front Wing

Another re-sprayed panel. (And again, the scale has been increased by 50% below)



The usual assortment of swirl marks and fine scratches can be seen around the light sources.



Again, with the front half of the wing corrected, the contrast against the unfinished section is stark.

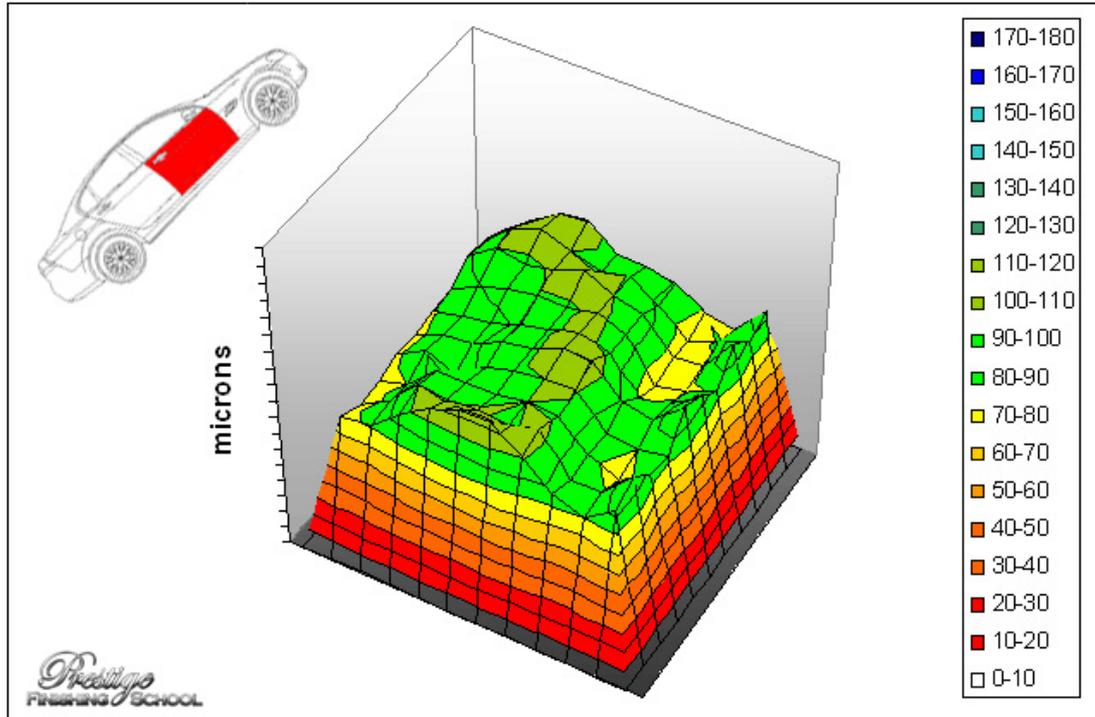


...and the end result looks *much* better.



## Right Front Door

The doors down the right of the vehicle wore original paint that was dipping down into the 70-80  $\mu\text{m}$  range in some spots. As we had not yet found any 'strike through' of the clear coat despite the red paint transfer, we were still playing it very safe...



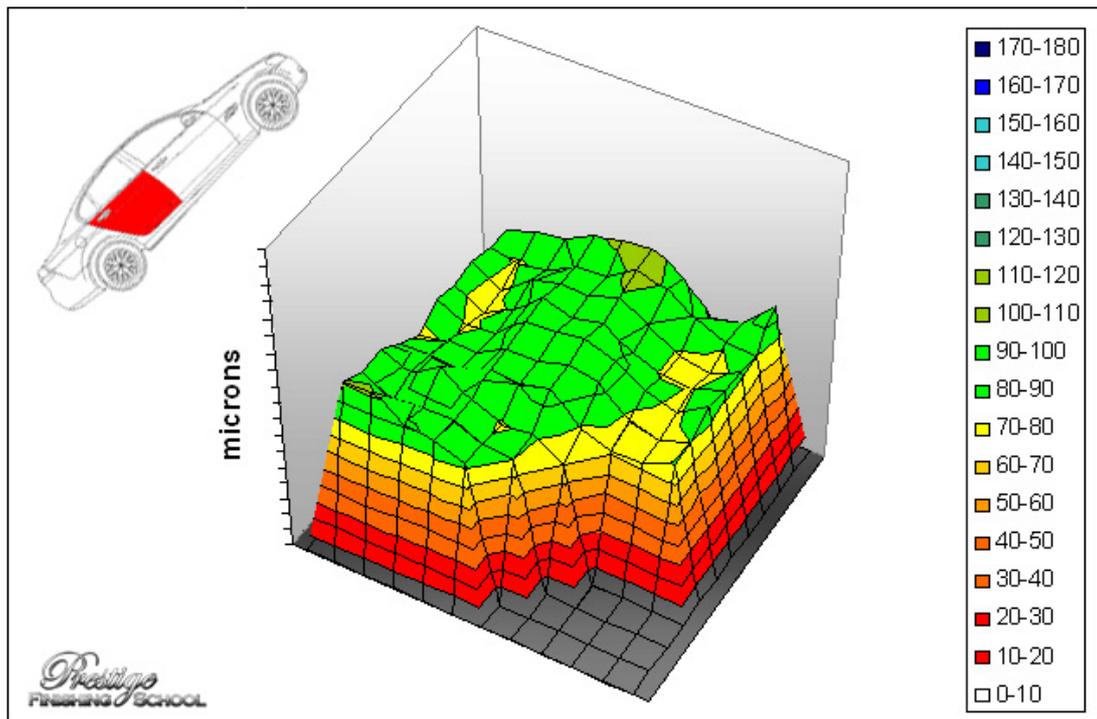
A 50:50 shot of the door during correction. Pink vs. Red!



The finished panel.



## Right Rear Door



A very similar situation on the rear door.



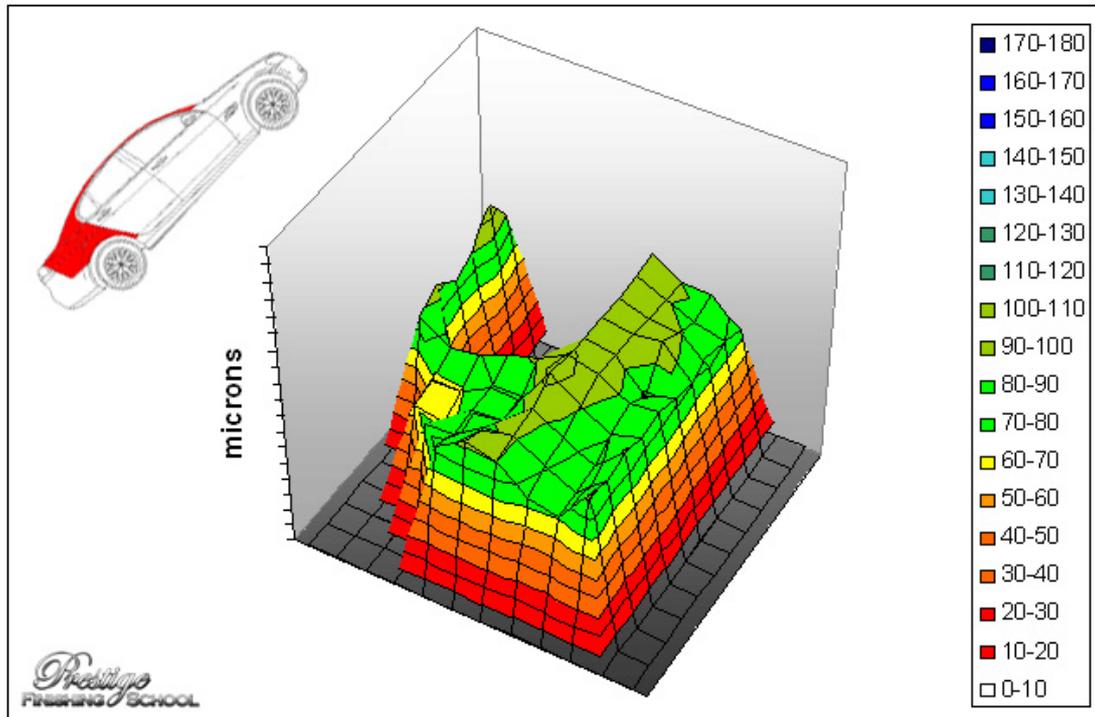


And a similarly stunning result.



## Right Rear Quarter

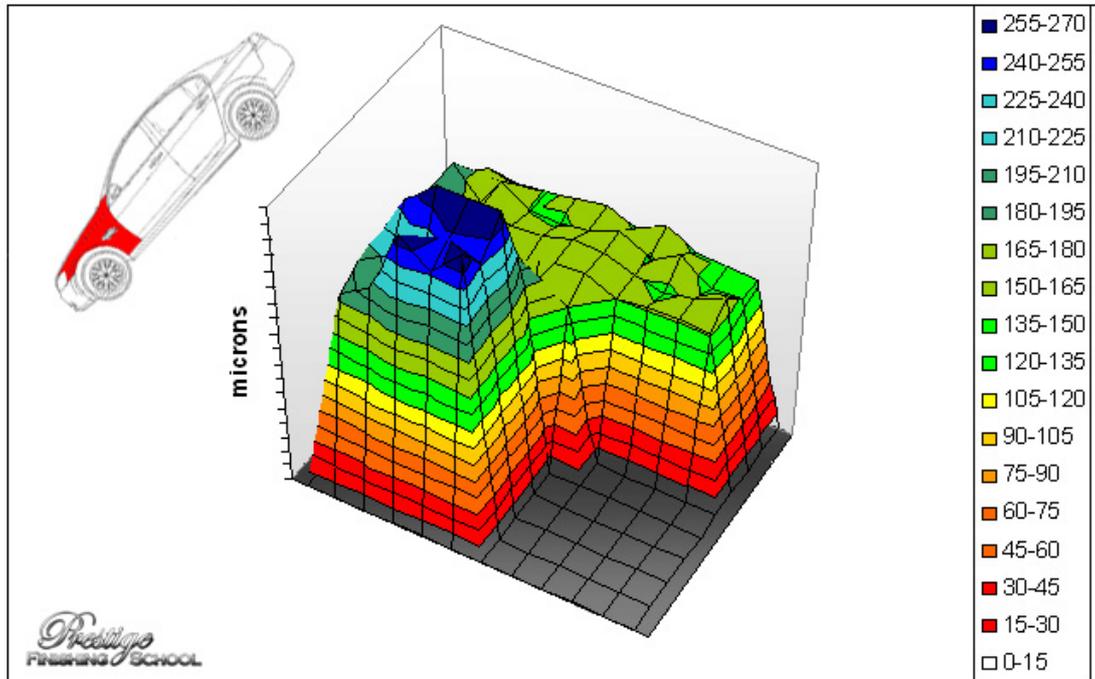
The same tried and proven formula was employed on the quarter panels.





## Left Front Wing

This was the re-sprayed panel that led to the bonnet's paint being dangerously depleted. Again, a 50% increase in scale has been applied in the paint thickness diagram below.



Definitely not the worst looking panel on the vehicle...



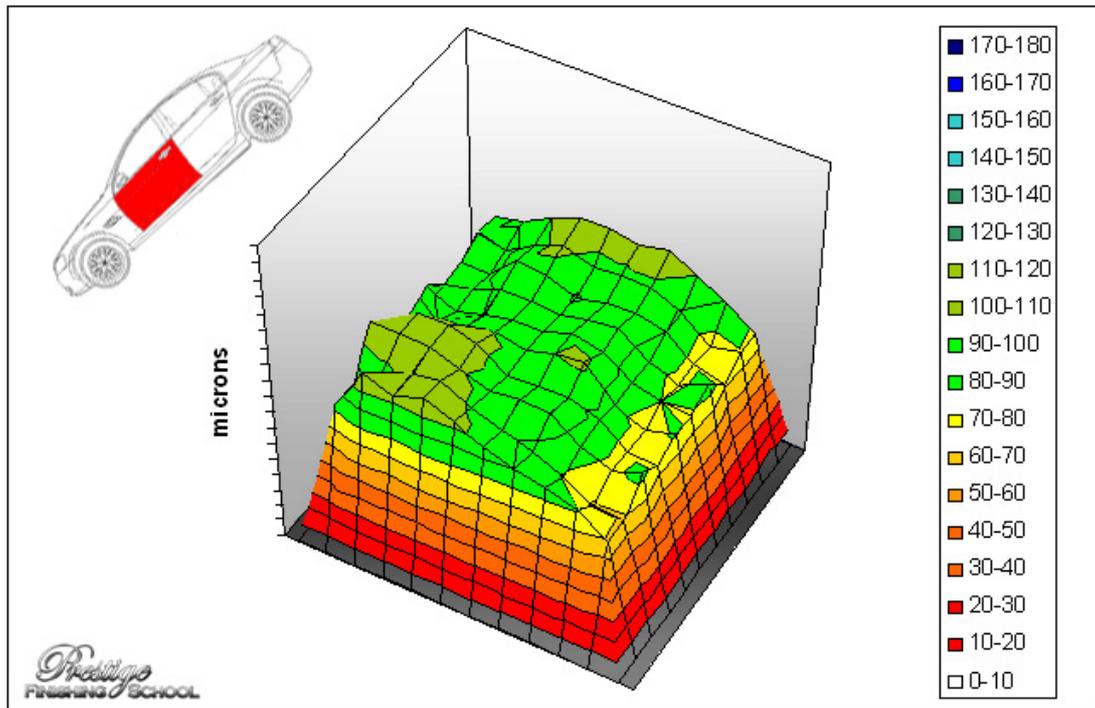


...but still markedly improved by the removal of fine scratches. (NB. The edge of the door panel on the right of the photo has not been corrected at this stage.)



## Left Front Door

The paint levels on the left side doors was original, and again getting uncomfortably thin in places (especially on the rear door)



There was a mixture of fine scratches as well as deep paint defects detracting from this panel's appearance.



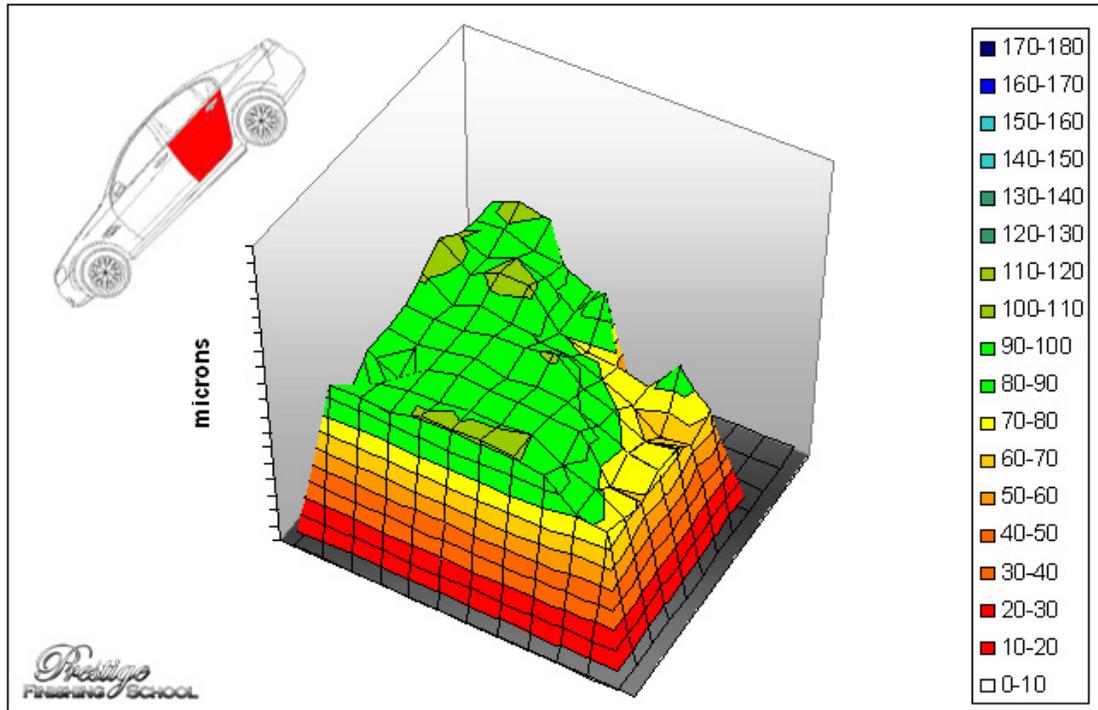
A 50:50 shot demonstrates the level of correction possible without removing a significant amount of paint.



The completed panel:



## Left Rear Door



As well as having some of the thinnest paint, this panel had suffered the worst damage in terms of deep scratches.



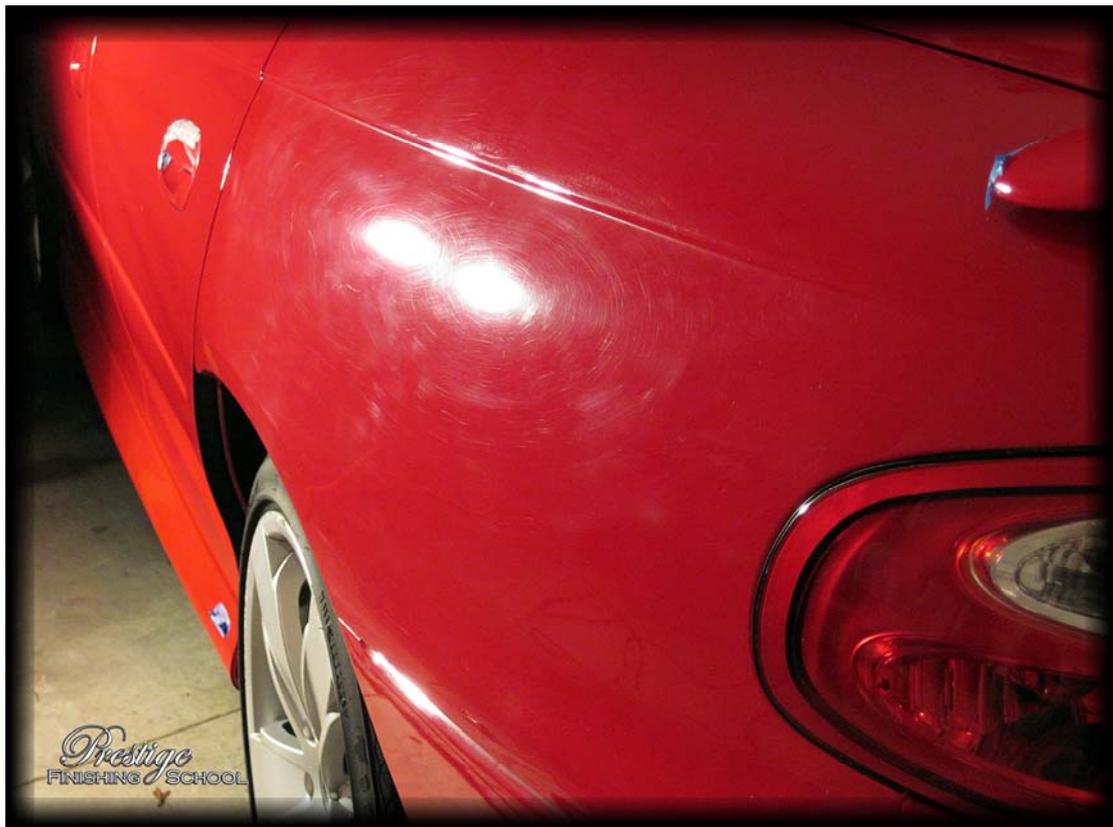
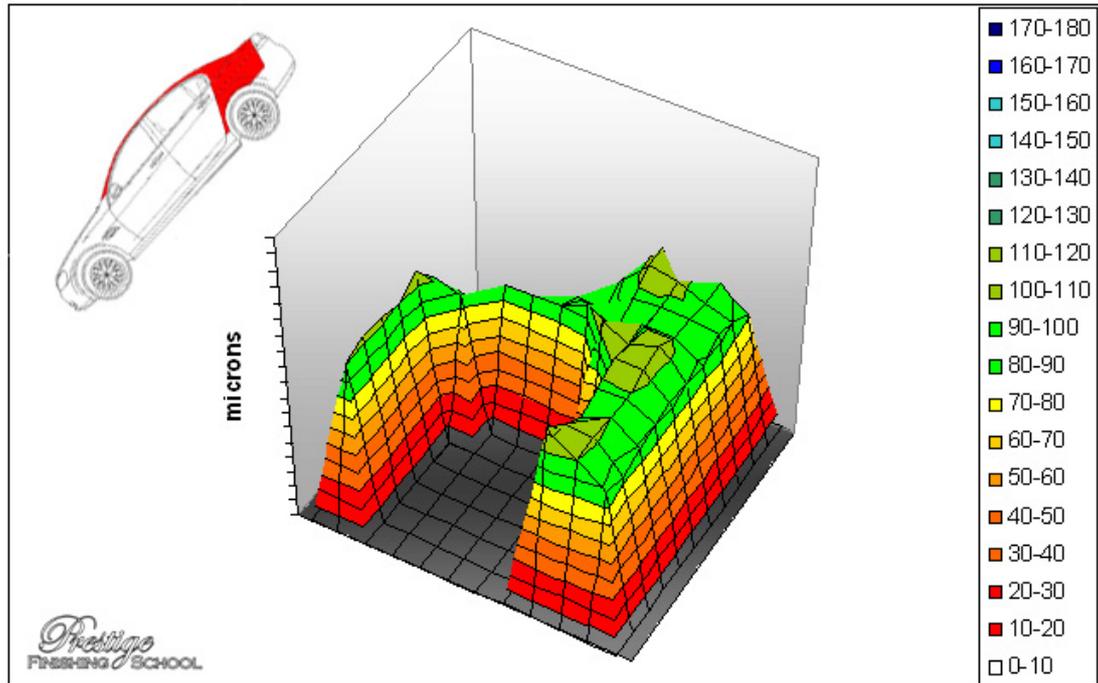
In these situations, it becomes a judgment call on how far to take corrective work before the paint integrity becomes compromised.



Here, a vastly improved panel is the end result, and is achieved without removing large amounts of paint. Removing the last few remaining defects would not be possible without undue risk.



## Left Rear Quarter





## 5.0 Finishing

With the paint restored to the best possible condition, we turned our attention to the final details, and application of protective products to the vehicle.

Paint work was protected with the “Wet Ice over Fire” premium paint protection system from Blackfire USA. This is a three step system, beginning with a coat of their “All Finish Paint Protection” synthetic sealant, applied via Meguiars G220 (Dual Action Orbital Buffer) on a 6.5” Meguiars Finishing Pad, buffed off with an ultra plush microfiber cloth.



This product can be applied by hand if necessary, but we find that machine application helps to ensure uniform coverage across the vehicle without excess product being left on the panels. (Which can make the buffing-off process more difficult.)





This leaves a remarkable clarity and depth to the paint, as seen below.



This must be left to 'cure' for a minimum of 8hrs before two applications of Blackfire's Midnight Sun Carnauba Wax.



While the sealant was curing on the paint, the exhaust tip was taken care of. For those readers still wondering about the red ‘paint’ transfer into our wash buckets and claybar (as well as a fair amount onto our polishing pads as we set about correcting the paint) the mystery is finally answered here.



Tell-tale product residue... This vehicle had been covered in Turtle Wax “Color Magic” Red Wax. A rather unnerving situation for a detailer when combined with extremely thin paint turns out to be completely innocuous!

Back to the exhaust – this was cleaned up with the assistance of our “Tar & Glue Remover” and Meguiars NXT “All Metal Polysh”.





The difference is quite remarkable.



In addition, the following tasks were performed:

- Interior thoroughly vacuumed & wiped down with Meguiars APC.
- Leather cleansed & conditioned with Meguiars Leather Conditioner.
- Glass was cleaned inside & out with Meguiars Glass Cleaner Concentrate
- Arches and plastic trim pieces dressed with Meguiars All Season Dressing.
- Tyres were dressed with Blackfire Long-Lasting Tyre Gel.
- Door shuts, boot sills etc. sealed with Meguiars NXT Tech Wax.



## 6.0 Final Showing

With all the hard work complete, it's time to wheel the vehicle outside to show off...





The Blackfire products admittedly do have ‘Over-the-Top’ names, but “Wet Ice over Fire” almost perfectly sums up the look of the paint in this next shot.







We had expected this job to be a challenging one, and we weren't disappointed! In addition to having suffered nearly a decade of exposure to the elements, this Commodore had also suffered at the hands of over zealous tradesmen, jealous vandals and poor wash technique.

Nevertheless, by the end of day 3 of this detail, we were completely satisfied with the outcome. The owner loves their 'new' ride, and the mighty VX is safe from being traded-in for a few more years yet! For our part, we are also extremely pleased with the final product, and must now set about cleaning the red ColorWax out from our polishing pads and cloths. We are proud to present another outstanding graduate from Prestige Finishing School!

