

# Chemical reactions reveal true metal

## SURFACE PROCESSING LTD

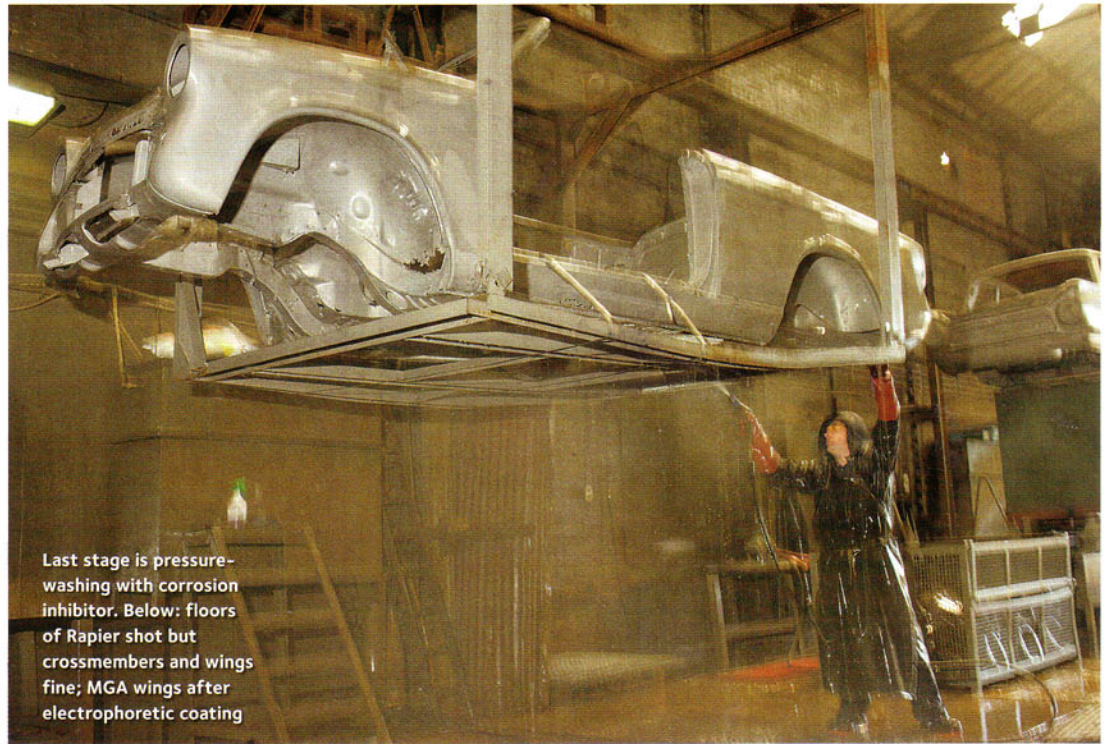
**Location** Unit 20 Sovereign Works, Deepdale Lane, Lower Gornal, Dudley, West Midlands DY3 2AF **Staff** 19  
**Telephone** 01384 242010  
**Web** www.surfaceprocessing.co.uk  
**Specialism** chemical stripping of parts, panels and bodysHELLS  
**Typical prices** small 'shell £575, big £850; strip/e-coat panel £75

The steady trickle of satisfied customers collecting their newly stripped bodysHELLS is testimony to Surface Processing's unique service. It takes a deal of nerve and total commitment to decide to lay bare your innermost metal, but only by doing this can you really know what's going on under the skin of your treasured classic. Though the price of knowing the truth is sometimes floors that turn to lace, better that than welding new sheet over rusty old metal. For the perfectionist, it's the only place to begin a rebuild because whatever's left after the exfoliation process is pristine steel.

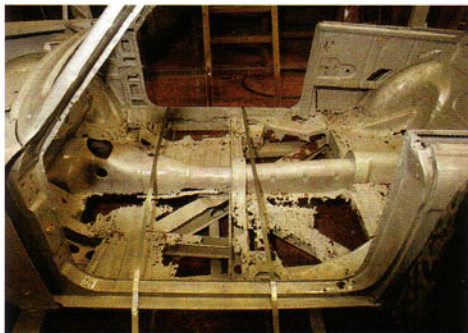
"Water is going to penetrate cars, whatever you do," says boss Adrian McMurray. "What rots them out is when it can't escape."

McMurray didn't start out to rehabilitate the old-car community. Only by chance, when in 1994 Prodrive asked about stripping Subaru bodysHELLS for rally preparation, did he think about translating an industrial process to an automotive one. His three-step method eradicates paint, sealer, filler, sound-deadening materials and, most crucially, all but the deepest rust. As Dave Angel, collecting his Rapier soft top shell, says: "At least then you know where you're starting from."

He was philosophical about the spider's-web floor he was left with – he had a new one to weld in – but pleased to discover that the crossmembers and wings were sound. Stripping removes all the nasties, leaving the good steel clean and undamaged: there's no rippling of panels, as is always the risk when blasting off old paint, and no sand or beads are left in crevices. When bodysHELLS arrive, they are strapped on to a cradle, which is hooked on to the crane and dropped into the first tank which removes all the organics – oil, grease, sound-proofing – then the second alkaline bath, heated to 80°C, takes off the paint. The third, containing an inhibited hydrochloric pickling solution, gets rid of practically all the rust – the overnight process gets into all the nooks, crannies and box sections you can't see. Some of the scaly rot on thicker chassis sections



Last stage is pressure-washing with corrosion inhibitor. Below: floors of Rapier shot but crossmembers and wings fine; MGA wings after electrophoretic coating



**ADRIAN McMURRAY**  
Managing director

**Any disadvantages to the process?** The pickling dissolves any lead-loading too.

**Can you lighten 'shells?** We've been asked about acid-dipping shells, but you might affect weld strengths. We take 32kg out of a Porsche 911 in paint and sealers.

**Can you handle aluminium parts?** Yes. And brass and zinc. We've also developed a process for reclaiming plastic parts.

**Do you do anything else?** A lot of wheels for refinishing and JCB panels. Cars are about 25% of the business, but we soon expect that to rise to 50%.

'There's no rippling of panels, the risk when blasting old paint, and no sand is left in crevices'

may remain, but this is visible and can be removed mechanically.

After the treatments, the bodysHELL or part is pressure-washed a 2500psi with water containing a corrosion inhibitor, to keep rust at bay. "We recommend you get something else on it within 7-10 days," says McMurray. SP can spray the bodysHELL with an oil coating temporarily to protect it, or weld-through two-pack etch-primer. The ultimate is an electrophoretic coating, which is contracted out. The only drawback is that this costs £750, often more than the stripping in the first place: "But it's as good as it gets for car restoration – the same as used on all modern cars, 30 microns thick and it gets everywhere. We take all the paint out from inside the box sections, and this re-coats the inside."

Stripping a bodysHELL by hand is a horrible job that takes days or weeks. This process reduces the effort to zero – aside from writing out the cheque. But McMurray believes the real advantage is that it strips all the seam sealers, meaning that you're not generating nasty toxic fumes when you weld on new panels. "It's the best starting point for a restoration," he says.

**Paul Hardiman**