

Project PROBE

PART FIVE: *Wheels and windows are what the pros say make a car sparkle. That's why with the Probe's alloys looking so shabby, Ian Cushway made it the next job on his list.*



SPONSORED BY



Jobs done so far

- ✓ Oil service
- ✓ Investigate clutch
- ✓ Get an MoT
- ✓ Underbody service
- ✓ Replace discs and pads all round
- ✓ Fit new tailgate struts
- ✓ Four wheel alignment check
- ✓ Renew battery
- ✓ Change bust headlamp
- ✓ Refurbish alloy wheels

Jobs to do

- ✗ Replace front foglight
- ✗ Parts investigation
- ✗ Full valet

Scruffy wheels can let a car down big time, and sadly our Probe is a prime example. Like a lot of cars from the mid-1990s, the paint on the Probe's wheels was sprayed directly onto the surface of the alloy without a primer being applied first. It's the cheapskate way of doing things, but owners pay later when the lacquer starts peeling off and the wheel begins to corrode.

And that's precisely what's happened here – and the attractive five-spoke directional wheels on our car now looked horribly scabby. There are also nasty graunches on the rim where the wheels have been kerbed, and these add to the overall picture of abuse.

So what's to be done? Well, because the Probe's wheels are well beyond the remit of mobile-type repair outfits (who

do mainly localised repairs), and because we want a baked-on finish that will last, we decided to visit one of the country's foremost wheel experts – Lepsons in Gillingham, Kent (Tel: 01634 580582). The company was formed 11 years ago, and they refurbish a staggering 25,000 wheels a year at their 10,000sq ft workshop which contains ovens, spraybooths, lathes and all manner of other metal-working facilities.

Best of all, for ultimate convenience they can actually refurbish your wheels while you wait – as long you arrive before 8am. So, wanting to see the entire process from beginning to end, that's exactly what we did, and the picture sequence speaks volumes about the attention to detail afforded to our sorry-looking alloys.

POLISHED ACT

Lepson's owner Tony Leppenwell told us they can refurbish virtually any type of wheel – including steel – and that they offer a wide range of finishes from standard flat silver, polished finishes and special treatments like 'shadow chrome' through to colours that match the car's body colour. There's even a wheel showroom so you can see what the end result will look like.

The only finish that presents a dilemma for customers, says Tony, is polished metal. "The metal reacts with the lacquer, and there's very little you



First Choice Through Performance & Innovation



1 Pretty Probe wheels were in a horrible state, most likely as a result of silver paint being applied directly on to the alloy surface without any primer. As well as flaking lacquer, there was also extensive kerbing damage to the outer rim.

can do about it. That's why, nine times out of ten, when we tell customers the alternative is to spray the whole wheel, that's what they opt for. Otherwise, if they want the polished finish we can do that by applying a primer then machining the surface on a lathe, according to a custom-made template." Having seen it for ourselves, and inspected some of the finished wheels on racks, it was all very impressive.

Understandably, the only wheels that give problems are early three-piece split-rim BBS wheels and wheels that are buckled from the centre. Tony told us the latter can be a particular problem for people buying secondhand wheels from an on-line auction site. "There's basically two types of buckle: ones that affect the rim from left to right, and others that are from the centre – typically when a wheel has hit the kerb sideways, perhaps when a car has gone into a slide. We can sort the former, but we can't do anything about the latter and we get a lot of people who have bought wheels like this and have ended up throwing them away."

Fortunately the Probe's wheels didn't exhibit any such problems and were surprisingly true, although as you will see, Lepsons did need to fill a particularly nasty graunch in the rim with weld.

If you were wondering about price, the good news is that it really isn't that expensive – with the average cost of a refurb being £50 a wheel. With horror stories abounding about the paint coming off cheap aftermarket wheels, it sounds like good value for money. Also, because Lepsons sell tyres as well, it is all very convenient.



2 Want your wheels refurbished but can't spare the time to send them away, or you don't have space to leave the car on axle stands? No worries, Lepsons can do the whole process in a day – as long as you arrive before 8am and are prepared to leave the car until late.



4 Once the tyres had been marked up and removed the wheels were put into a chemical stripper for three hours to remove all the old paint and lacquer. It's eco-friendly Benzol Alcohol, not hydrochloric acid. The bigger overnight stripper takes a staggering 60 wheels!



6 In a different part of the workshop the wheels are spun up by hand and checked for trueness, cracks and distortion. The vast majority of buckles can be corrected by the use of localised heat and a mallet.



8 One of the Probe wheels had a particularly nasty parking ding in the rim so the area around it was ground away to remove any foreign objects before a build up of TIG weld was applied.



3 We were given a choice of silver finishes ranging from 'flat' (as factory) to 'bright' which looked just a little too sparkly for our liking. We settled for 'AWI' which looks nice and bright but not too flashy.



5 Once out of the stripper the wheels are thoroughly jetwashed to remove all the mucky deposits. Full protective gear is essential while doing this as the fumes are suffocatingly bad.



7 If given the okay the wheels are cleaned up with various abrasive tools to remove any stubborn deposits. It also serves to 'key' the alloy surface ready for the application of the powder coat primer.



First Choice Through Performance & Innovation

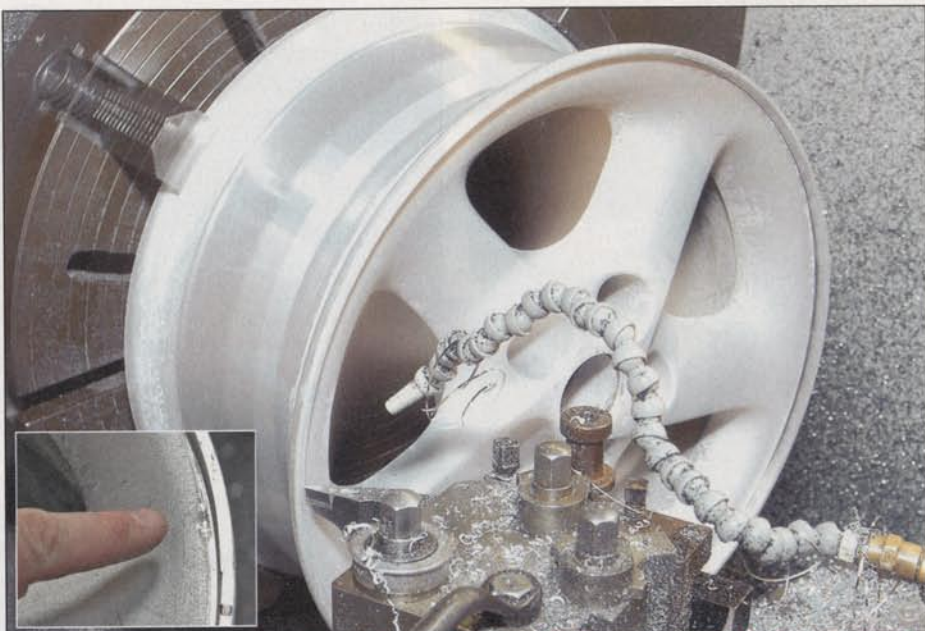
Project PROBE

CONTINUED

WHEEL CARE

Obviously, it's too late for our wheels, but prevention is a lot easier than cure so it's important to exercise proper care with alloys. The key is to use soapy water to remove any road salt or brake dust before it gets a chance to eat into the lacquer and corrode the alloy underneath, and this means washing your wheels at least once every week or so. It's important to take care if using acid-based cleaners and follow the manufacturers instructions as these, says Tony, can flatten and seriously soften the lacquer. He also recommends using a sealant which makes brake dust easier to remove.

There's little you can do to prevent



9 The wheel was then put on a lathe to be expertly machined. Afterwards, you could barely see where it was repaired. The other three Probe wheels got the same treatment to remove any nasty graunches. The lathe is also used to create the finish on polished wheels.



10 The wheels were now ready to be primed, but first they had to go through a two-stage pre-wash to remove any dust or other deposits. The first wash contains a detergent, the second one a simple rinse.



11 The wheels are transported on a snail-like conveyor rail from the wash through a pre-heat oven running at 200 degrees Celsius before being given their first application of powder coat primer. It goes on better when the wheels are hot, so the sprayer had to work fast.



12 They then pass through another oven before being treated to their first coat of silver paint. We chose AWI which is slightly more sparkly than 'flat' silver without looking too gaudy.



13 The wheels then pass through the oven once again before being lacquered. They are then put through the oven for a final baking before being individually inspected for any imperfections in the finish.



First Choice Through Performance & Innovation



14 Sticking weights to the inside of a wheel will prevent chipping through the lacquer, although the wheels have to be squeaky clean for them to stick properly.

stone chips damaging lacquer, but there are other measures you can take and these include fitting beaded tyres to protect the rims against kerbing, and getting tyre fitters to use stick-on weights instead of risking damaging the lacquer by fitting clip-on weights to the outer rim. The only problem here, of course, is that to get the weights to stick properly the wheels have to be meticulously clean.

Now that our wheels look so good, we'll be sure to look after them properly from now on. And because they have been refurbished so thoroughly, we're prepared to bet that they will look a lot



better in ten years' time than they did when we bought the car!

15 Now compare this to the 'before' shot earlier in the sequence. You have to agree the finished wheel looks great – testament to Lepsons's attention to detail and professional refurbishing techniques.

USEFUL CONTACTS
Thanks to: Lepsons, Gillingham, Kent.
Tel: 01634 580582; www.lepsons.com



16 Such good looking wheels deserve equally smart looking tyres, so we treated ours to an application of Comma Tyre Black. Guess what, we've finally got the rear wheels the right way round as well!

The award winning Alloy Wheel Cleaner from

Comma

Comma First Choice Through Performance & Innovation

ecotek 100
molecular engineering

ENGINE OIL ADDITIVE

Full details on www.ecotekplc.com

ENGINE OIL ADDITIVE

ecotek 100

£26.99 (inc. VAT)

1 Litre

100% Synthetic
Ecotek 100 is 100% synthetic molecular engineering of the highest specification.

100% Active
Provides ALL the undiluted active chemistry used in the highest performance engine oils.

100% Compatible
Suitable for any engine including turbo/super charged – petrol or diesel. Add to ANY new or used engine oil.

100% Complete
The complete balance of the finest anti-wear, anti-oxidant, detergent, dispersant & viscosity modifiers for ultimate performance.

100% Protection
Every molecule in Ecotek 100 is designed to protect your engine, under the most demanding conditions, for longer.

The Ecotek CB-26P carries a full 30 day satisfaction warranty

The EcotekCB-26P is available from: **£48.99** (inc. VAT)

Feel The Difference!

Best Buy Award...
A Product we would buy with our own money, a winner....
"Response was up and the car pulled through the gears much smoother."
Revs Magazine
"Noticeable improvement in throttle response- especially in the mid range.. and petrol station visits have dropped radically. An inspired technological invention."
Max Power
Note: For petrol engines only

POWER BOOST
Engine Energizer

600ml Treatment pack: **£27.50** (inc. VAT)

PowerBoost restores your engine to the manufacturers specification, maintaining optimum levels of performance & economy. Simply apply the foam to your air intake for 8 minutes with the engine running. Suitable for: Both Petrol and Diesel engines.

The benefits of PowerBoost can include:

- More engine power - Crisper acceleration.
- Better throttle response - Higher top speed.
- Reduced emissions & improved economy with smoother running & longer engine life.

If your car's done over 20,000 miles you need PowerBoost. Never settle for less.

Maximise your Car's Performance!
Cleans and Decokes
More Engine Power
Better Acceleration
Increased Response
Smoother Running
Lower Emissions
Improved Economy
Simple to Apply

ECOTEK
www.ecotekplc.com

To purchase mail order, or for more information, visit the massive website www.ecotekplc.com or call 01483 - 204444. Any technical queries or trade enquiries call the Ecotek Technologies Plc help line on 01844 - 212 939.