



KWE Cavity Wax Injection

Protecting the interior of the structural box sections of any car is very important for long life, and minimum body repair costs. In the classic car world it is regarded as an essential part of the maintenance or restoration process. With bodies in good condition it will prolong the life indefinitely, and for rusty bodies the corrosion will be slowed or arrested.

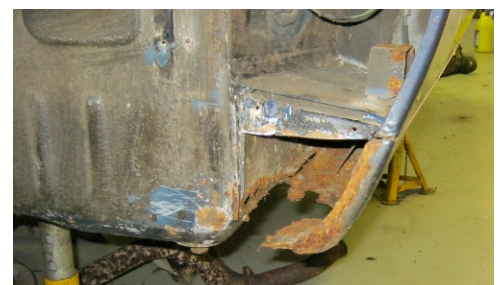
Most car bodies are made of steel and comprise sheets (wings, bonnet, floors etc) and box sections (chassis, doors, strengtheners etc). While primed and painted steel withstands corrosion well, the interior surfaces cannot be painted and this is where rain and road water often invisibly collect.



Up to around the mid 90's thorough rust protection by the manufacturers was rare, and in pre-1970 cars usually absent altogether. Nowadays new bodies are comprehensively dipped in a series of baths to protect the steel, followed up by robotic spraying of wax and underseal to complete the protection. This can still be worn away through road grit abrasion, especially in the wheel wells.



Steel corrodes (strictly speaking it oxidises) in the presence of water and oxygen. Exclude one or both of these components and steel will not rust significantly. This corrosion process is hugely accelerated - by at least 10 times - in the presence of salt (which makes the water become an electrolyte), and of course most roads are salted when snow or ice is expected.



Where cleaning, priming and painting of steel is impractical (inside box sections for example) then the only process that works is to inject a flexible waterproof coating via high pressure spraying equipment, having drilled holes (later plugged) to allow access.



KWE uses an ICI chemical, (tradename "Waxoyl"), which is an excellent product that has been proven for decades. KWE is very familiar with the vulnerable areas on the XJS and XJ saloons and has successfully treated over a hundred cars.

The most vulnerable areas on the XJS are the sills, doors, front wing/sill join, jacking points and rear wheel arches. Later cars have a specific weakness in the screen surrounds.

While Waxoyl cannot remove rust, when properly applied on dirt-free steel it will exclude oxygen even with water present and so substantially reduce rusting.

Our process includes a wash where possible, drying, drilling 9mm holes into box section (holes are in inconspicuous places), injecting wax and plugging holes.

For doors we carefully remove the doorcards, blow out any damp, vacuum out any debris and spray the wax thoroughly - it should be seen to drip from the normal drain holes, which we subsequently clear.

Rear wheel arches are a particular problem as the inner and outer wings meet in an inaccessible area which was not sealed by the manufacturer. We always recommend an additional re-undersealing process which will seal up these spot-welded joints.

KWE are also skilled at repairing rusty chassis and box sections.



Windscreen surround & scuttle



Seatbelt reinforcer



Chassis leg near jack point



Injecting Waxoyl under high pressure into door cavity...



... and bonnet sections.



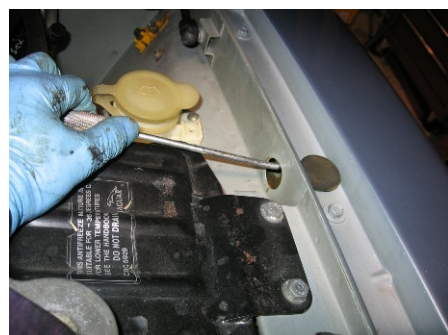
Clearing wing/sill join



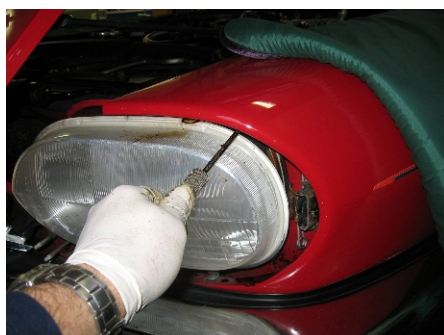
Drilling a front jack point



Injecting the front subframe



Injecting the bonnet gutter



Injecting around headlamps