

The establishment of good anti-corrosion characteristics must begin when a car is being designed. Thus the Saab 900 has a monolithic underbody, with no pockets to accumulate dirt or moisture.

Anti-corrosion measures

The Saab 900 is designed to resist corrosion. The body is smooth and has virtually no sharp corners. The sill members are ventilated to the inside of the car. The doors are provided with drain holes. The underbody has no rust traps. The front wheel housings are ventilated and are completely separate from the fenders and hood, and have no cavities that could collect dirt and moisture—neither on the wheel side nor the engine side.

The design of the Saab 900 is quoted as exemplary by the Swedish vehicle-inspection authority, which has considerable expertise on the corrosion of road vehicles.

Welded joints are located above the lowest point of every compo-

nent—the point at which water may possibly collect. The greater the number of spot welds, the sturdier the body. But their size, quality and location are probably even more important than their number. Saab employs exceptionally advanced electronic measuring equipment for checking the quality of welded joints.

Automatic welding machines and robots are widely used for body assembly and painting to guarantee high and uniform quality.

Surface treatment

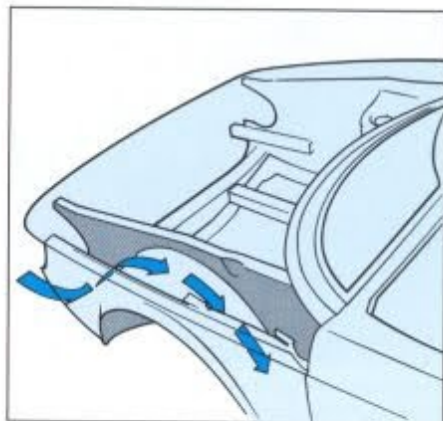
The unique surface treatments developed and applied by Saab to all its products contribute to excellent all round rust protection pro-

perties, especially in the case of light surface damage caused by chips from stones and gravel.

The entire process taken step-by-step is as follows:

Alkaline degreasing and zinc phosphatizing is carried out by high pressure spraying in nine stages. This provides a certain amount of basic protection and a good surface for the primer to adhere to. The outside of the body is then sprayed with a modified epoxy primer to reduce the risk of corrosion spreading around any damaged area of the paintwork.

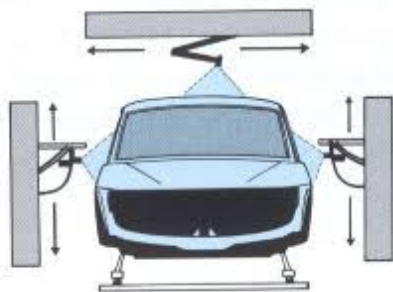
Since all internal surfaces and cavities as well as the exterior must be protected, the body is immersed in a bath of anti-corrosion



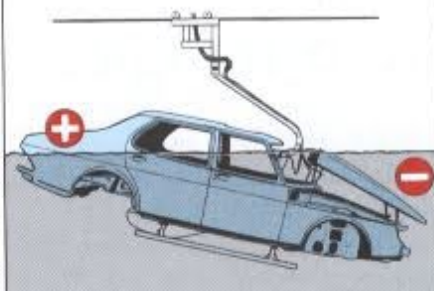
The front wheel housings are ventilated.



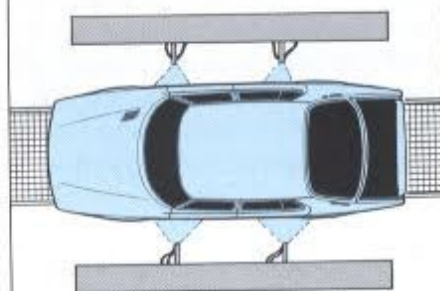
Two coats are applied for metallic finishes. The first coat is thin and has a high pigment content. The last coat is a thick layer of clear varnish which protects the pigment and produces a very high gloss.



The outside of the body is sprayed with a modified epoxy primer to reduce the risk of corrosion spreading round any damaged area of the paintwork.



To ensure the complete coating of all internal surfaces and cavities, the body is immersed in an electrolytic bath of anti-corrosion paint.



The hood and the surfaces below the mid-line of the body are sprayed with a thin coat of a polyester-based paint which provides extra protection against stone damage.



Before this polyester paint has dried, the entire body is sprayed with an intermediate coat of modified epoxy paint.



The underside of the floor pan is sprayed with an anti-corrosion agent.



The electrophoresis method produces a continuous coat of paint of uniform thickness—even in corners and around edges.



All joints are sealed with a PVC sealing compound which prevents moisture seepage.

paint. A strong electric current causes the paint particles to adhere firmly to all internal sheet metal surfaces. Long electrodes are inserted into the sill members to ensure the paint penetrates even here. The method produces a continuous coat of paint of uniform thickness even in corners and edges.

All joints are sealed with a PVC sealing compound to prevent moisture seepage. A polyurethane compound is sprayed at high pressure on to the underbody, wheel housings and below the rear wheel housing trim sections. The final result is a homogeneous, blisterfree film, which minimizes the risk of flaking. Subsequent oven curing produces a tough surface that is exceptionally resistant to abrasion.

This is followed by a thin coat of polyester-based paint sprayed on the hood and below the mid-line of the body, to provide extra protection from chips in the finish caused by stones. Before the layer of polyester paint has dried, the entire body is sprayed with an intermediate coat of modified epoxy paint. The door sills are painted in an anthracite grey trim lacquer. The polyester paint, intermediate coat, trim paint and underbody compound are then baked in an oven to give an optimal base for the final top coats.

The intermediate coat is now rubbed down wet, and the top coat is applied and oven cured. Two coats of metallic finish are then applied: first a thin coat with a high

pigment content, then a thick layer of clear coat to protect the pigment and give a very high gloss.

An anti-corrosion agent is sprayed into more than 50 cavities and joints in the body. The body is then heated, ensuring that the agent seeps into all joints. All parts which have been mounted on the underside of the floor pan after earlier anti-corrosion measures are sprayed.

A special wax is applied to all components in the engine bay to provide protection against moisture and corrosion.

“But building cars to last deserves praise and Saab certainly deserves praise for the way our particular 900 has lasted its exceptionally arduous 100,000-mile course.”

WHAT CAR?
Great Britain