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Water Leaks

WATER LEAKS

Sealing charts in the Corrosion Protection section show those areas of the bodyshell most likely to be affected by accident damage and water leaks, and which could therefore require re-treatment in repair. They do not show those joint areas which only apply to factory assembly operations and which are unlikely to be disturbed in service (e.g. centre tunnel), or where the damage would be so severe that the entire bodyshell would normally be written off.

When water leakage occurs, always adopt a logical approach to the problem using a combination of skill, experience and intuition. Do not attempt to reach a conclusion based only on visual evidence, such as assuming that a leak emanates from the windscreen because the footwell is wet. It will often be found that the source of the leak is elsewhere. The correct procedure will increase the chance of locating a leak, however obscure it may seem.

Tools and Equipment

The following tools and equipment are recommended for detection and rectification of water leaks:

- Garden sprayer (hand-operated).
- Wet/dry vacuum cleaner.
- Dry absorbent cloths.
- Battery torch.
- Small mirror.
- Weatherstrip locating tool.
- Trim panel remover.
- Small wooden or plastic wedges.
- Dry compressed air supply.
- Hot air blower.
- Sealer applicators.
- Ultrasonic leak detector.

During leak detection, the vehicle should be considered in three basic sections:

- The front interior space;
- The rear passenger space, where applicable;
- The rear loadspace or boot.

Testing

From the information supplied by the customer it should be possible for the bodyshop operator to locate the starting point from which the leak may be detected. After the area of the leak has been identified, find the actual point of entry into the vehicle. A simple and effective means initially is an ordinary garden spray with provision for pressure and jet adjustment. This will allow water to be directed in a jet or turned into a fine spray. Use a mirror and a battery-powered torch (NOT a mains voltage inspection lamp) to see into dark corners.

The sequence of testing is particularly important. Start at the lowest point and work slowly upwards, to avoid testing in one area while masking the leak in another. For example, if testing started at the level of the windscreen, any water cascading into the plenum chamber could leak through a bulkhead grommet and into the footwells. Even at this point it could still be wrongly assumed that the windscreen seal was at fault.

Another important part of identifying a water leak is by visual examination of door aperture seals, grommets and weatherstrips for damage, deterioration or misalignment, together with the fit of the door itself against the seals.

Sealing

When the point of the leak has been detected, proceed to rectify it using the following procedure:

- Renew all door aperture seals and weatherstrips which have suffered damage, misalignment or deterioration.
- Check all body seals to ensure that they are correctly located on their mounting flanges/faces using a locating tool if necessary.
- Dry out body seams to be treated using compressed air and/or a hot air blower as necessary.
- Apply sealant on the outside of the joint wherever possible to ensure the exclusion of water.
- When rectifying leaks between a screen glass and its weatherstrip (or in the case of direct glazing, between the glass and bodywork), avoid removing the glass if possible. Apply the approved material either at the glass

to weatherstrip or glass to body.