

Note:



When checking the sealing of a zone, if the customer complaint was not reproduced, extend the sealing check to neighbouring zones.

As the flow of water can sometimes be complex, water may enter through a zone opposite to where the water is actually present.



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VEHICLE SEALING: GENERAL INFORMATION

1. DEFINITION

1- SEALING RING

Rendering a component watertight means stopping or diverting the flow of fluid.

For vehicles, this means protecting a passenger compartment against any ingress of water.

■ The design and production of the vehicle bodywork, generally speaking, depend on:

- the shape of the bodywork (design, aerodynamics, etc.),
- safety,
- the variety and number of parts it comprises (means of manufacture and assembly),
- the anti-corrosion protection of the structure,
- the raw materials and products it comprises (plastic, rubber, mastic, adhesives, etc.).

■ A certain number of faults may appear in After-Sales, even though they do not necessarily appear when the vehicle exits the production line, despite all the means made use of in the assembly plant:

- various checks during assembly,
- systematic passage of all vehicles through a multi-jet wash.

During the "first few days of a vehicle's life", the bodywork is subjected to various stresses.

These stresses may be determining factors for possible sealing faults.

In a vehicle, certain zones are designed to allow water to flow out.

The water outlet zones are therefore located at the lower section of the components (opening element box sections, sill panel, central or side section of the scuttle panels, front and rear sections of the sunroofs, etc.).

2- CHECKING THE SEALING

Vehicle spraying methodology.

3- REPAIRING THE SEALING

Procedure for resolving water ingress.

2. PREPARATION BEFORE CHECKING AND REPAIRING THE SEALING

Before any operation involving checking the sealing, check that all of the opening elements are correctly closed (sliding and tilting windows, sunroof mobile panel, etc.).

All the checks must be performed in the washing area of the workshop equipped with sealing tools. In the event of a customer fault, the check must reproduce the conditions described by the customer (as much as possible).

Note:



Ask the customer questions before any operation; information collected about the environment and position of the vehicle are important to locate the leak.

Example:

- vehicle parked forwards or backwards on a significant slope or parked partially on a pavement,
- very heavy rain, accompanied by a gust of wind,
- washing with a high pressure cleaning device without respecting the manufacturer's recommendations described in the driver's handbook,
- automatic car washes may clog the outlet holes,
- jet washing by an untrained operator directing a flow of water at the air inlets and outlets, etc.,
- vehicle parked under vegetation (accumulation of dead leaves in the scuttle panel, etc.),
- identify the nature of the liquid present in the vehicle (rainwater, washer fluid or coolant, etc.),

Does using the air conditioning cause the presence of water?

1- VISUAL INSPECTION

Before beginning to spray the vehicle, perform a "First visual inspection" to look for any dry signs of infiltration.

Inspecting the vehicle enables visible points of infiltration to be identified (seals which are not flush or damaged, incorrect positioning of a grommet, blanking cover, mastic bead, etc.).

2- PREPARATION OF THE TOOLS

([see 60A, General information, Sealing tools: Description](#)) .

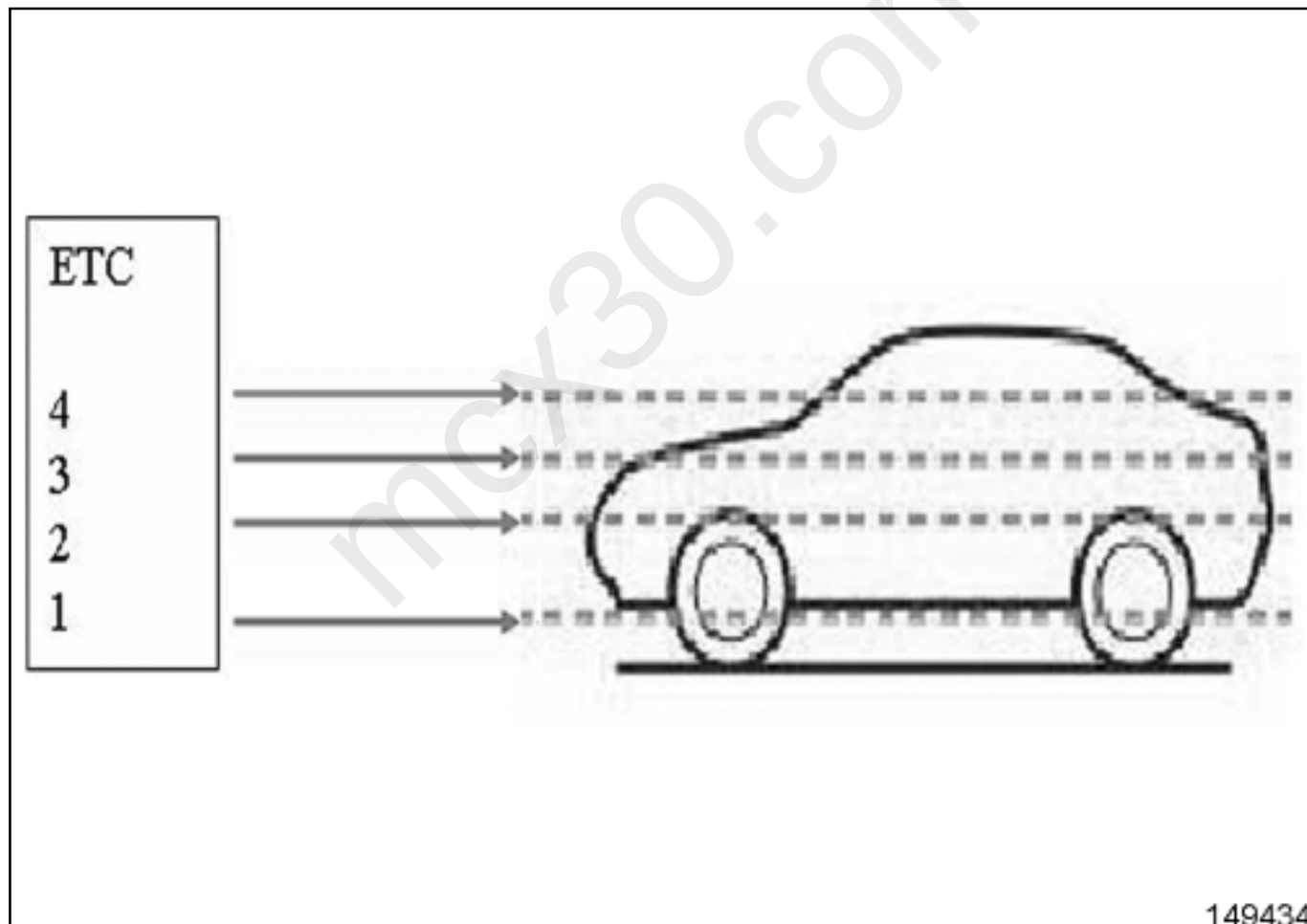
3. CHECKING THE SEALING

1- SPRAYING THE VEHICLE

"Spraying" the vehicle is an important point in the method and detection of water ingress.

Start spraying the vehicle at the lowest zones. If water is not found to be present in the vehicle, eliminate the sprayed zone as a zone of water ingress and spray increasingly higher.

1)SPRAYING LEVEL



2)SPRAYING ZONE

In order to make it easier to check the sealing, the vehicle is split into several zones([see 60A, General](#)

2- LOOKING FOR WATER INGRESS



It may sometimes be necessary to request the help of a second operator:

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- one person directs the jet in the area to be checked.
- the other operator, inside the passenger compartment, observes and locates the origin of the infiltration (obtain a door mirror glass and a pocket torch for areas which cannot be seen directly or are not well lit).

4. REPAIRING THE SEALING

1- POSSIBLE CAUSES OF WATER INGRESS



The infiltrations are generally due to:

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- a mastic seal next to the assembly line or partially detached or cracked,
- (micro) holes made by air bubbles when applying mastic,
- incorrect window bonding,
- incorrect mating between two parts (welded, removable, bonded, etc.),
- incorrect positioning of the various grommets or blanking covers,
- incorrect positioning of or damage to the various rubber profiles (door seals, luggage compartment, glass run channels, etc.),
- a dirty seal,
- partially obstructed or crushed drain pipes,
- a door sealing film which is deformed, poorly positioned, torn, etc.,
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