

REPLACING A NON-REMOVABLE COMPONENT: DESCRIPTION

1. INTRODUCTION

All the procedures described in this document ensure the quality of repairs, including the mechanical functioning of joints which are different to the originals.

Time calculations for the repairs are based on the use of these tools and procedures.

1- REPLACEMENTS REQUIRING PARTIAL CUTTING

■ For safety reasons, it is not recommended to:

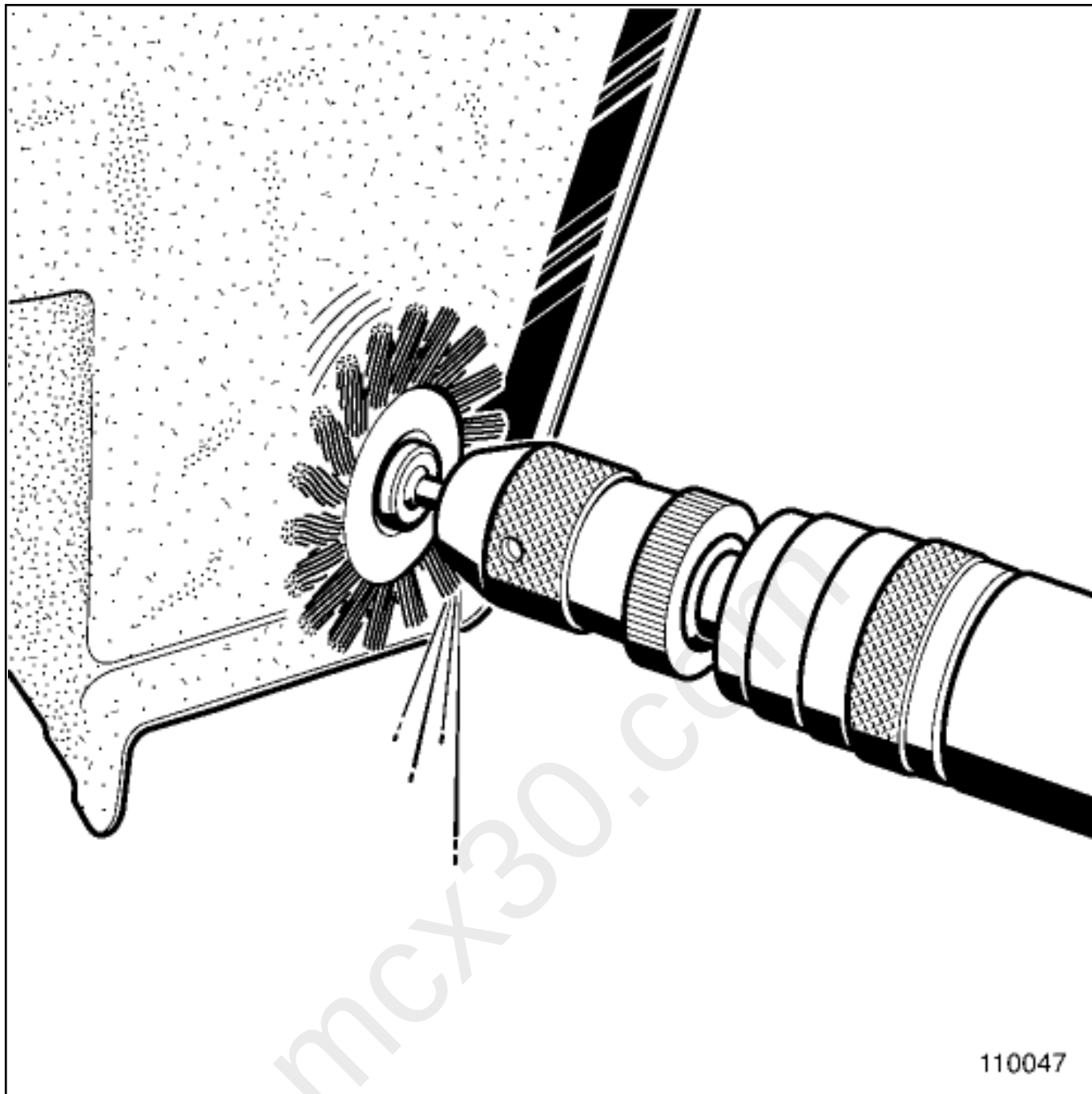
- cut and re-weld in close proximity to a reinforcement or a fatigued area (e.g.: engine and transmission assembly mounting, shock absorber mounting, seat belt mounting point),
- cut and re-weld edge to edge a structural component and its linings using the same line. Offset the cut lines by a few centimetres to distribute the weld stresses and the crumple zones,
- braze the side members, cross members or any other part of the structure.

Cutting positions indicated in the procedures which do not have any special features are given for information only. They may be adjusted according to deformities caused by impacts, unless there is a specific indication given in the vehicle's MR.

The operation times are calculated in relation to the position of these cuts and it is advisable to follow them. If the operator opts for a different cutting area, the time stated for the operation may vary.

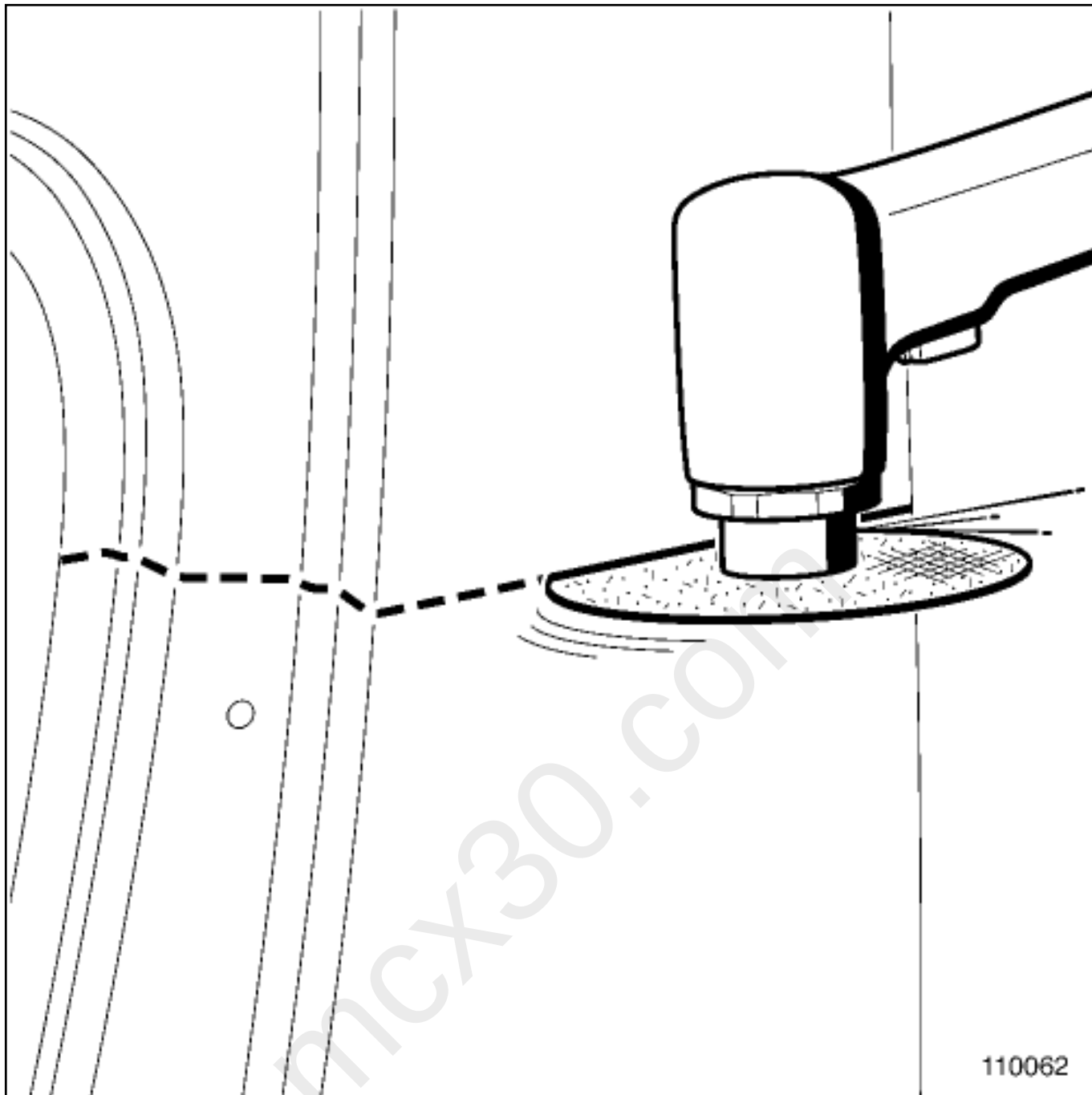
2. DISASSEMBLY

1- SCOURING



Clean the joint lines to reveal the spot welds, if covered by anti-grit mastic or paint sealing mastic([see 05B, Equipment and Tools, Tools for stripping very thick soft mastic: Use](#)) .

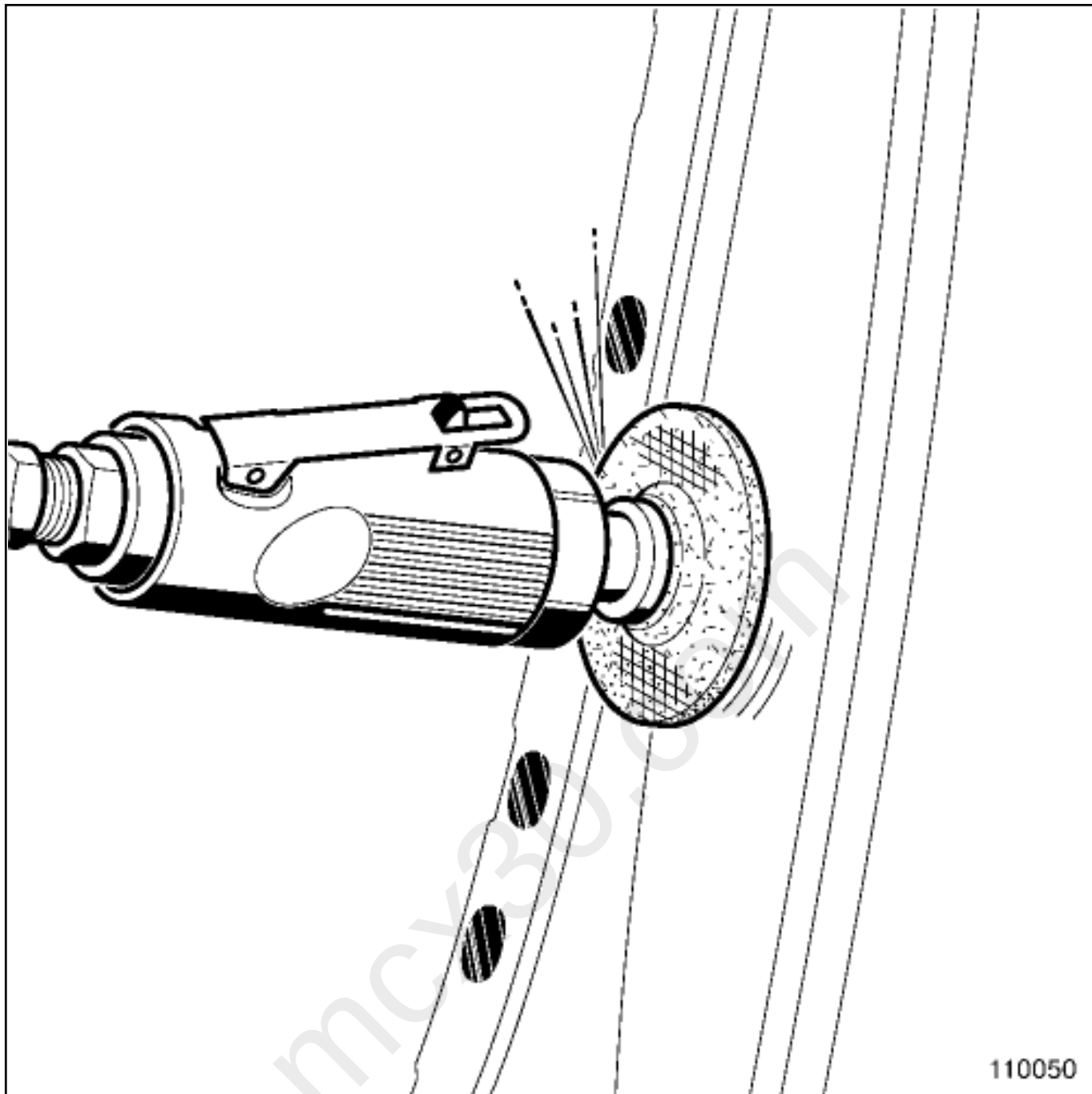
2- CUTTING



■ For partial replacements, the position of the cut lines on the damaged part is chosen with the following requirements in mind:

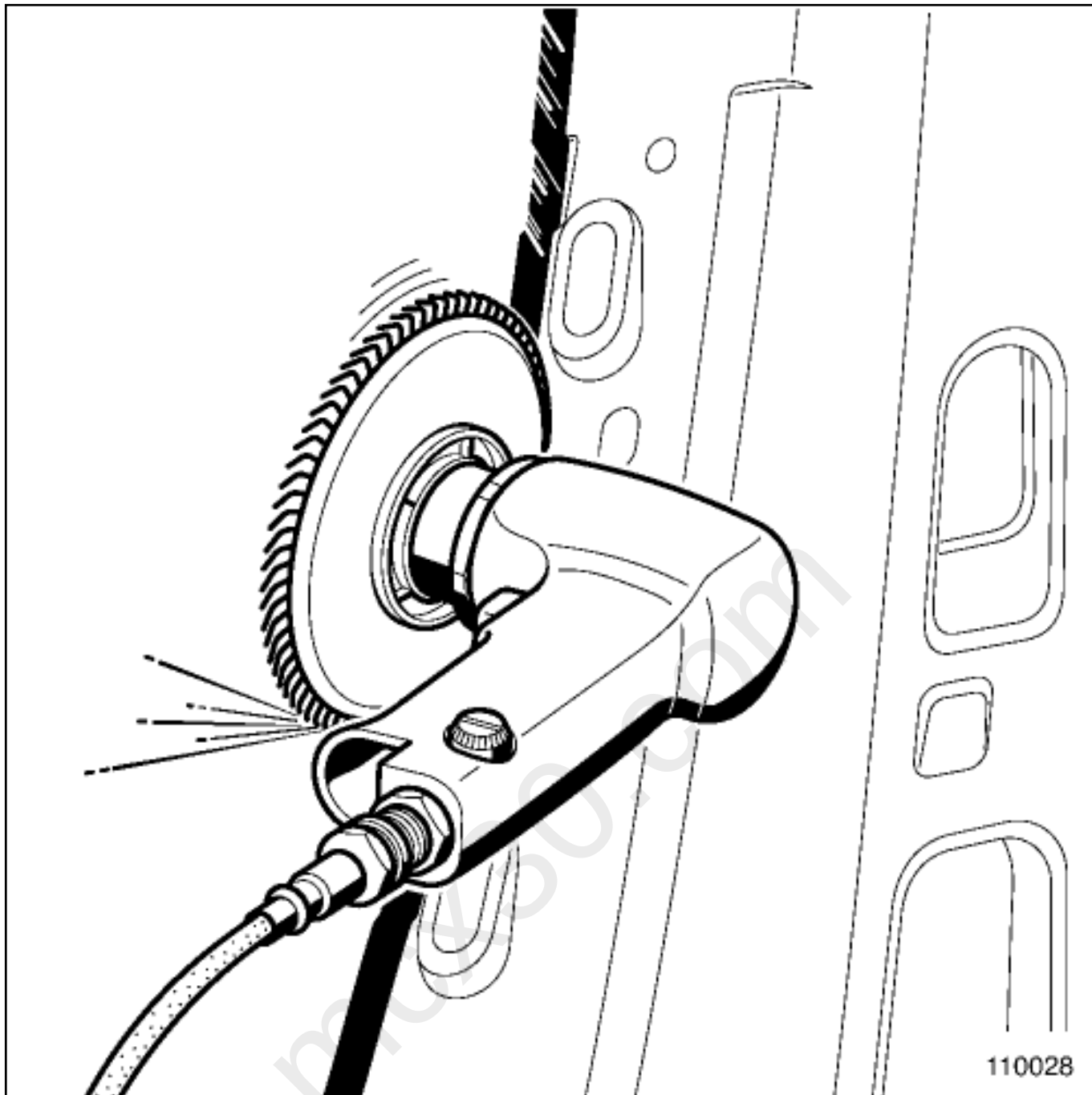
- obtain a non-deformed area with sufficient space to ensure coverage of **50 mm** by the new part,
- avoid areas where there is a significant risk of deformation when butt welding,
- choose straight, shaped or ribbed parts,
- choose a place where the internal face is accessible for anti-corrosion protection of the hollow section,
- find an area with sufficient space to allow overlapping cuts.

[\(see 05B, Equipment and Tools, Tools for cutting a structural component: Use\)](#) .



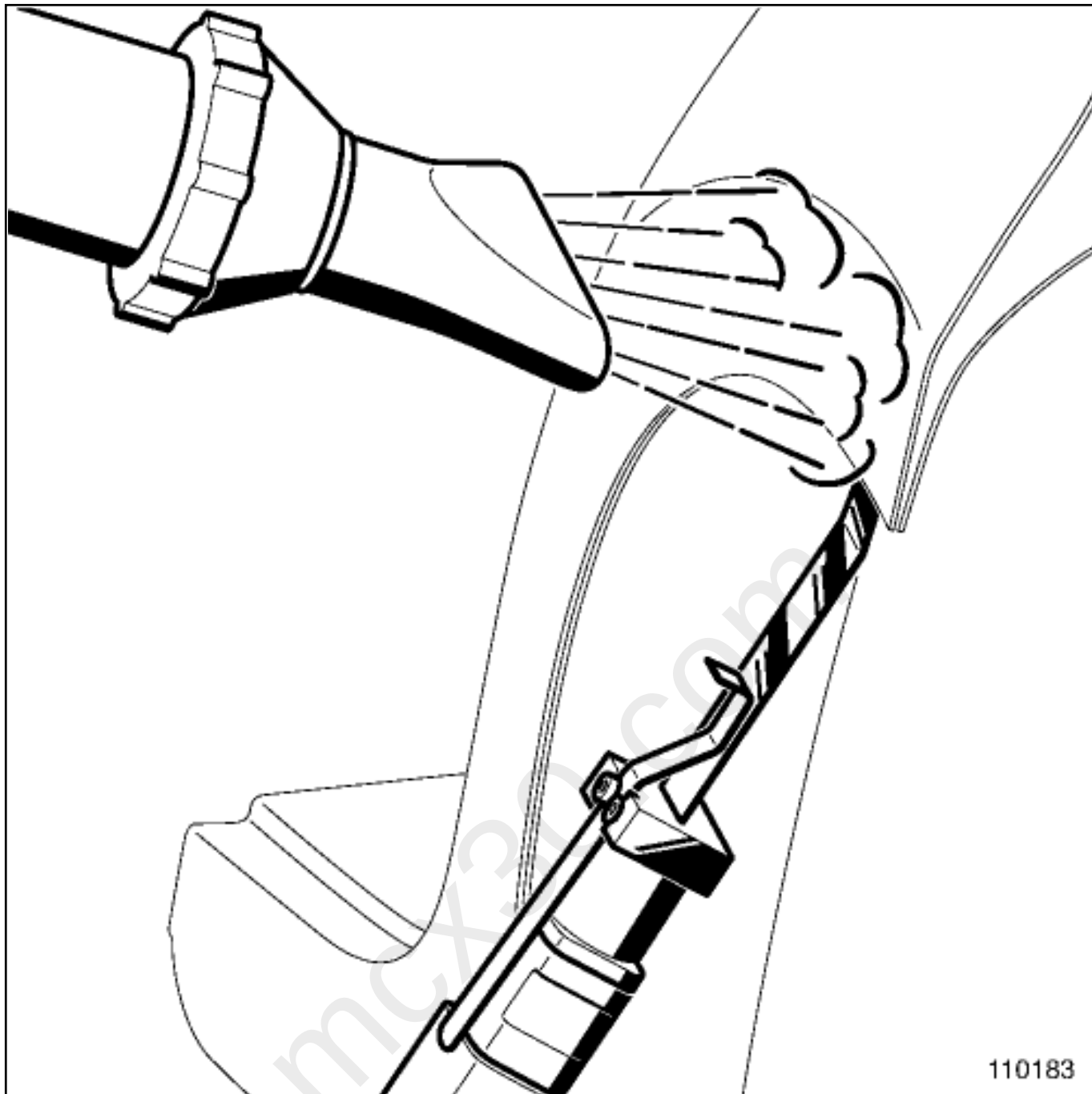
Unpick the spots using the most suitable tool according to the access, taking care to avoid damaging the retained support panel([see 05B, Equipment and Tools, Tools for unpicking a structural component: Use](#)) .

4- GRINDING

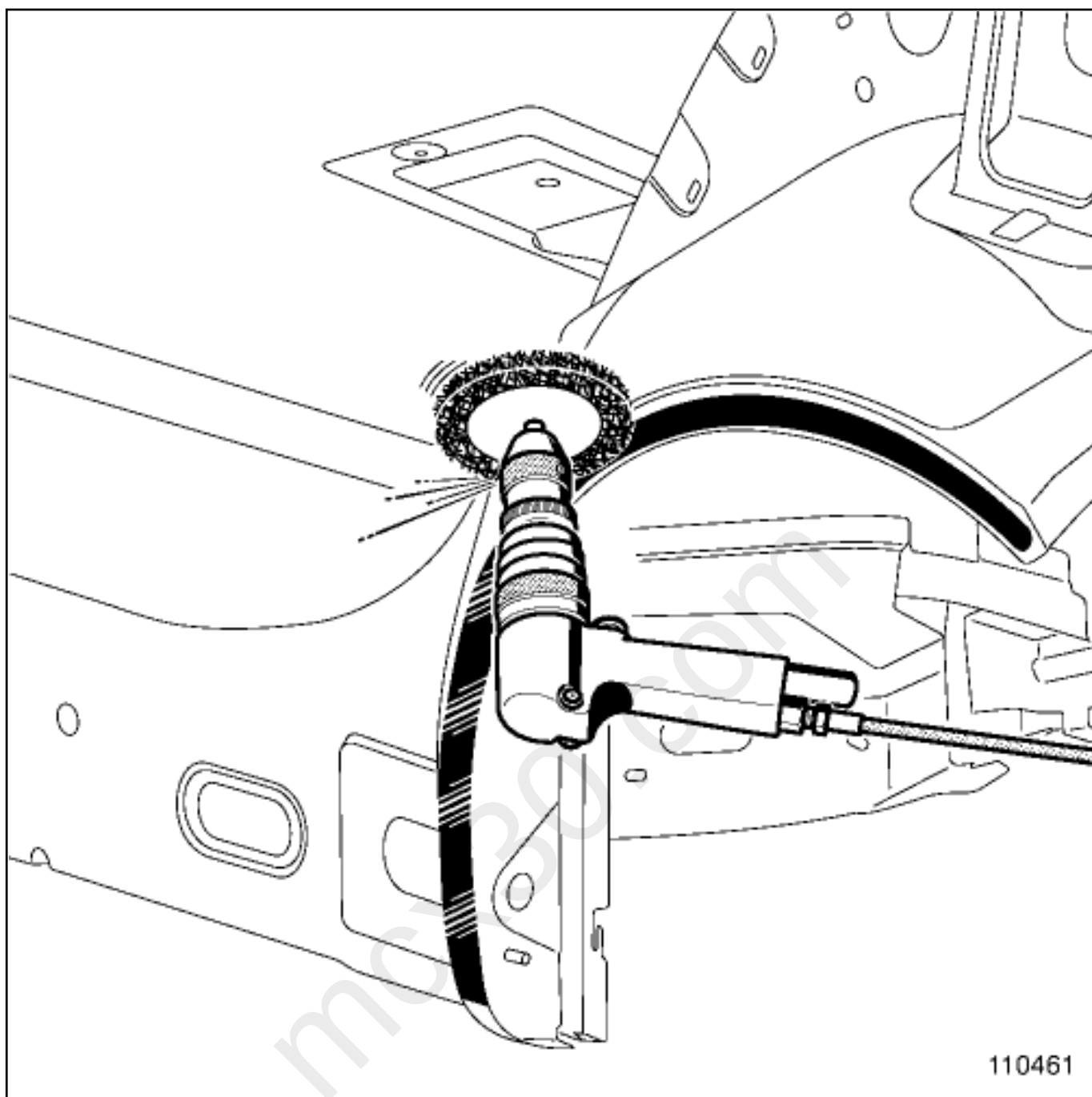


After removing damaged parts, grind the welding residue on the remaining support panels. Scour the weld joint interfaces([see 05B, Equipment and Tools, Tool for levelling off weld residue: Use](#)) .

1)SPECIAL FEATURE OF BONDED ASSEMBLIES



Heat the joint face using a paint burner, sliding a metal blade into the joint until it detaches.



Scour the cement bead residue left on the retained support panels([see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use](#)) .

3. PREPARATION BEFORE ASSEMBLY

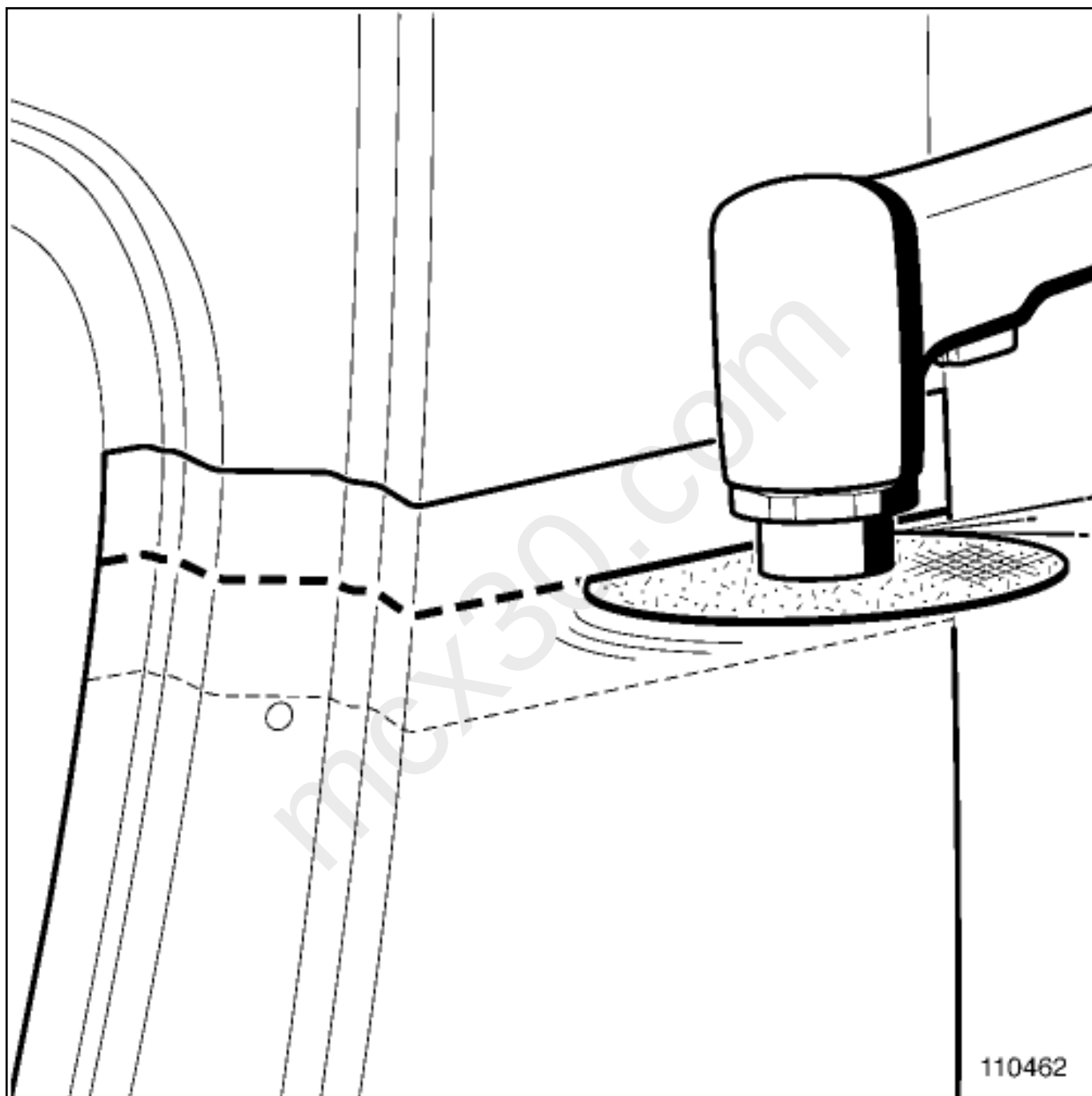
According to the different joint types, carry out the following operations in order, if necessary:

1- ADJUSTING

Position and adjust the new part on the vehicle.

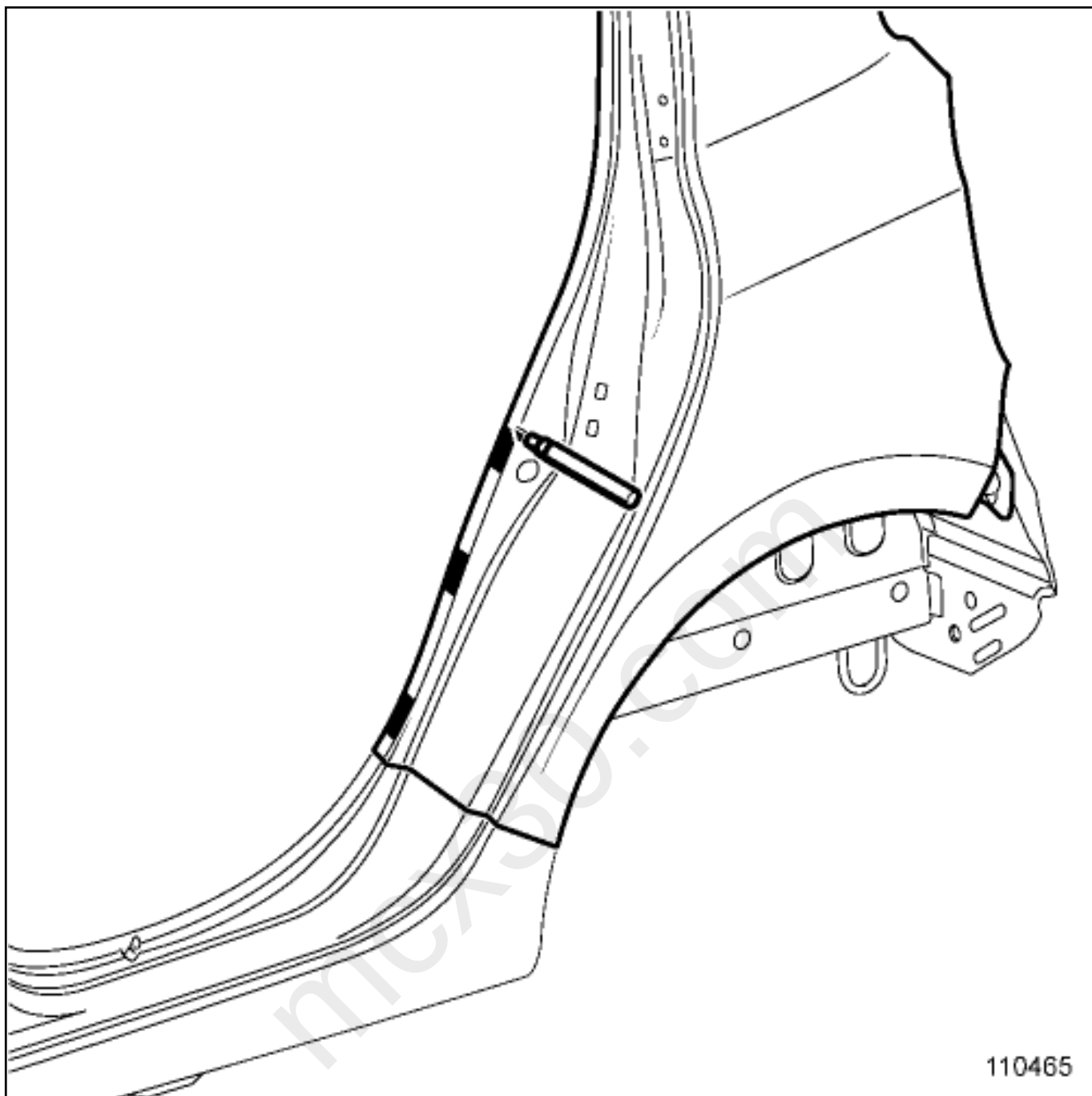
Fix the new part using locking pliers. ([see 05B, Equipment and Tools, Tools for adjusting and supporting a structural component: Use](#)) .

For partial replacements, use the new part to cover the part on the vehicle by 50 mm.



Cut the two overlapping parts simultaneously.

Remove the new part then take off the residual section of panel left on the vehicle.



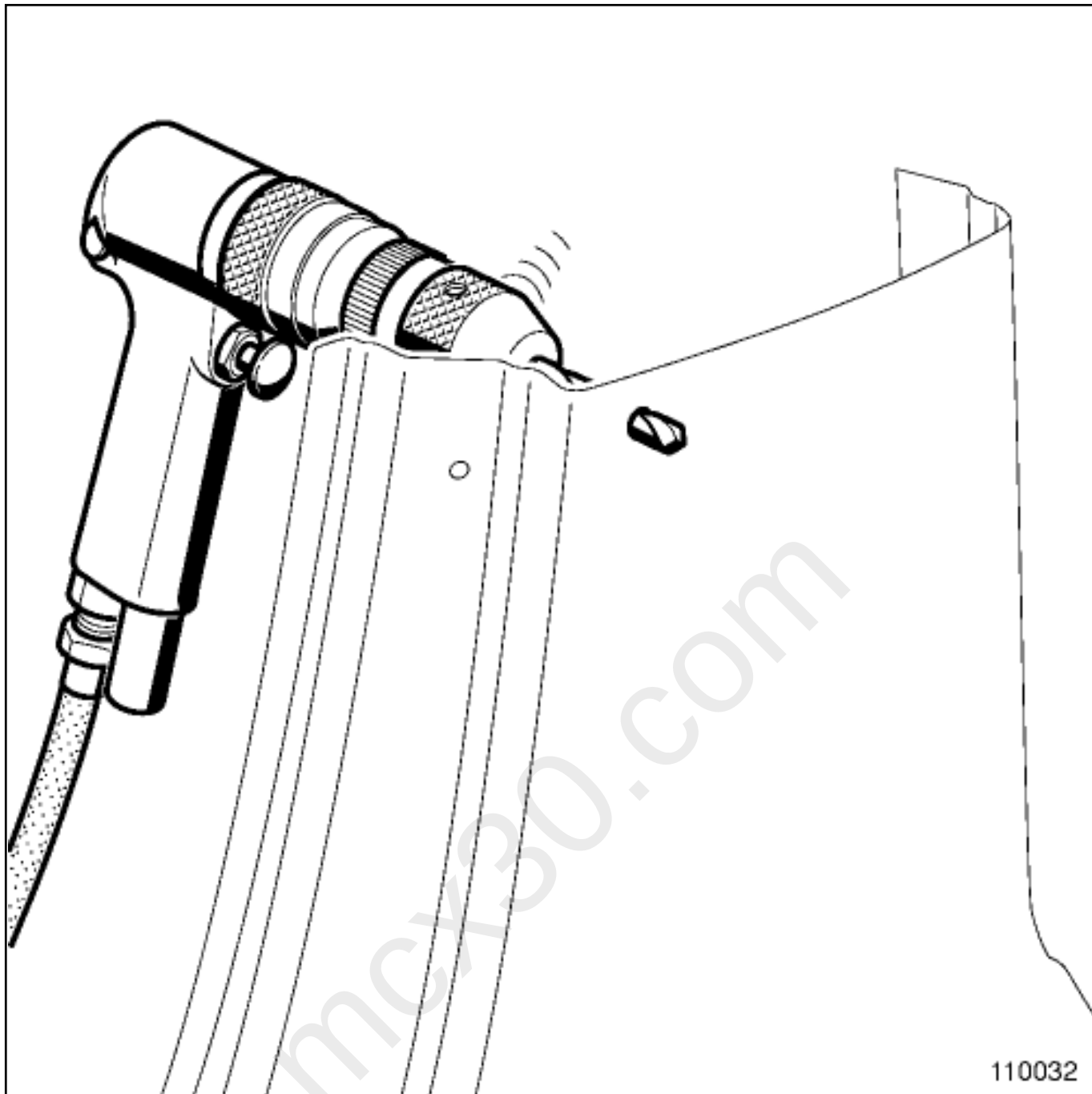
Using an indelible marker pen, mark the internal face:



of the plug weld points weld joint areas.



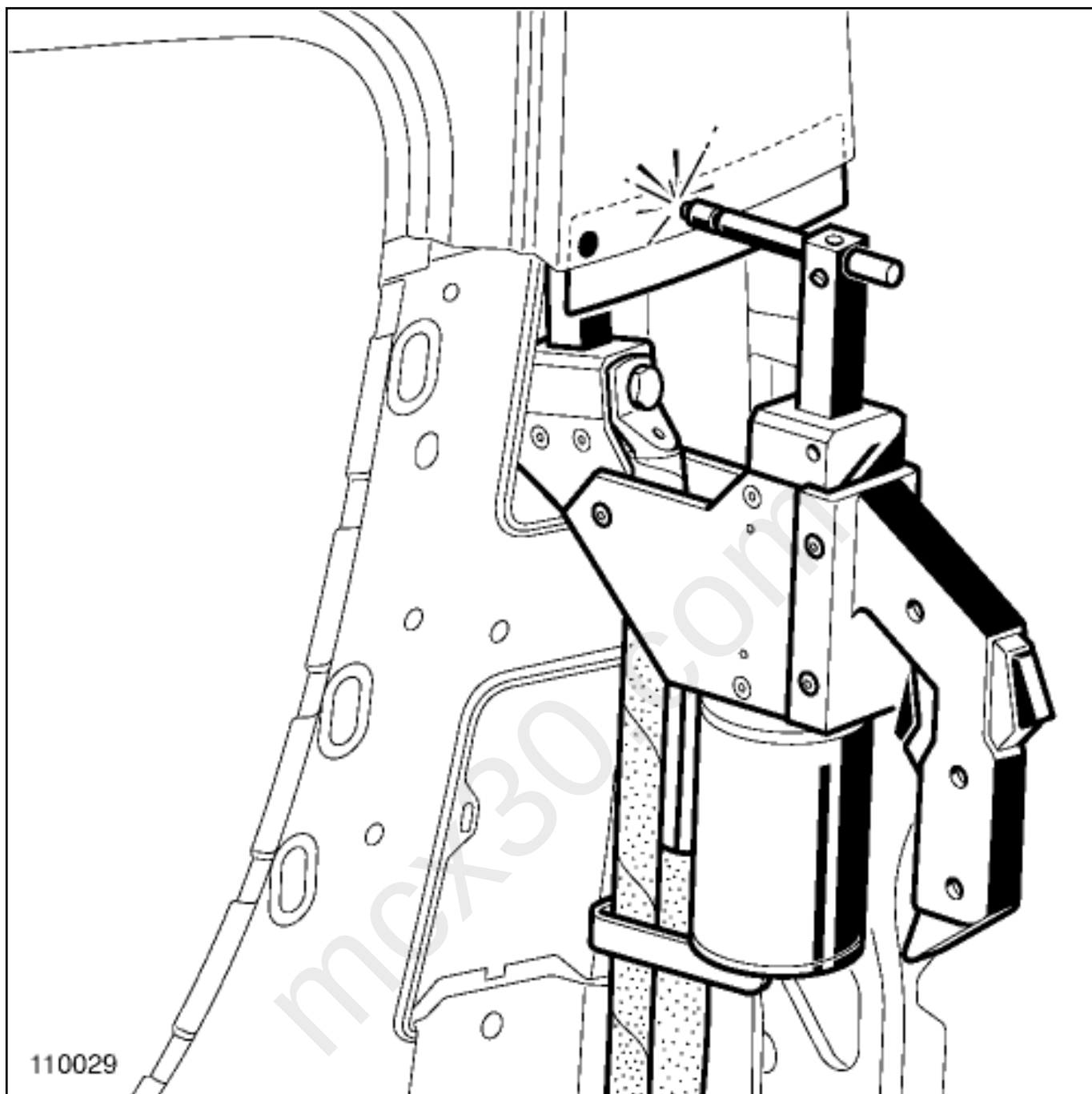
the bonding areas.



From the part's internal face:

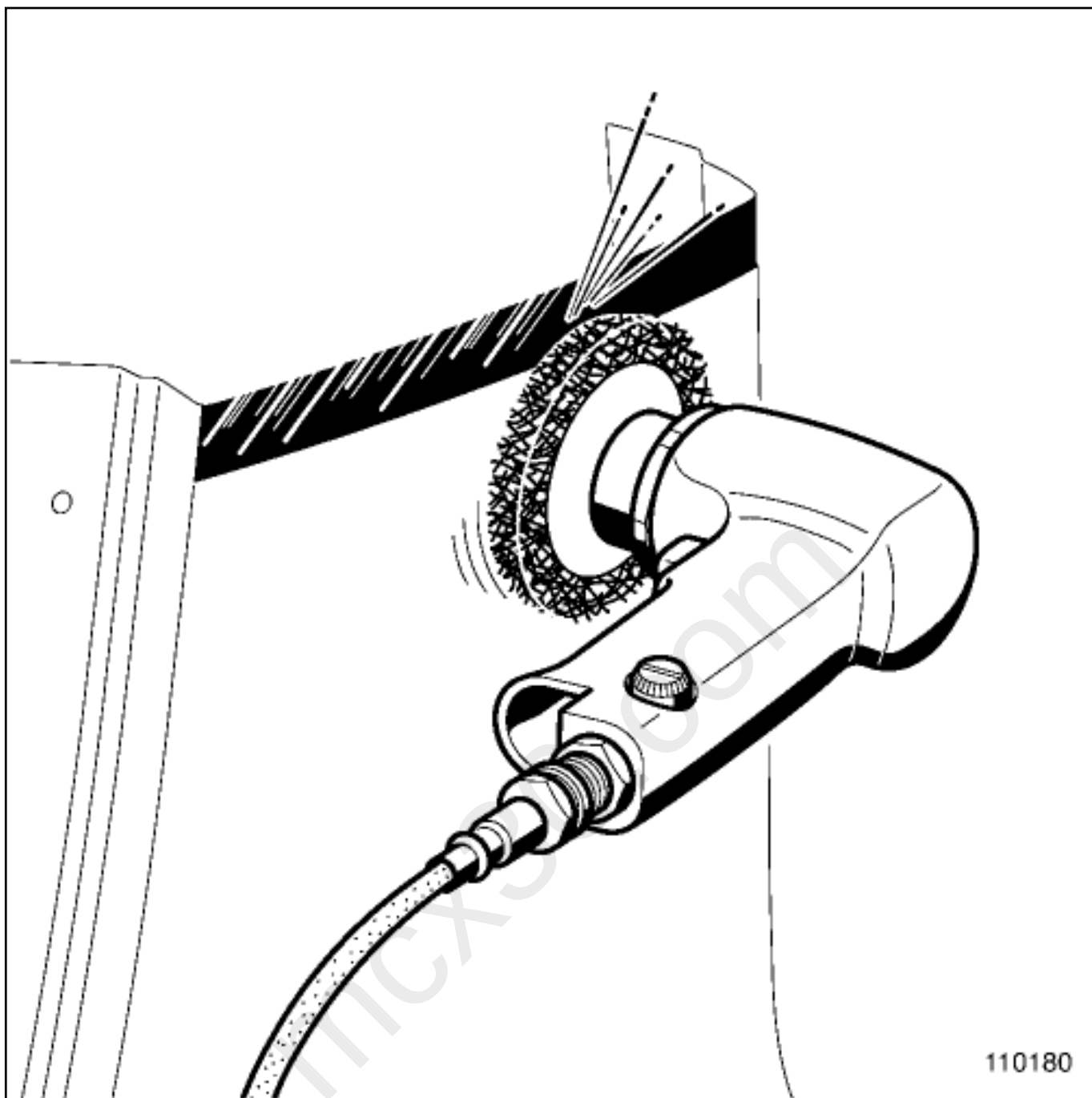
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- carry out the drilling operation for the plug welds and the riveting,
- clean the bonding zones without scouring.
- scour the electrical resistance welded connections.

From the replacement part cut off, recover a metal strip measuring approximately 40 mm in width with a length which is adapted to the patched drilling area.

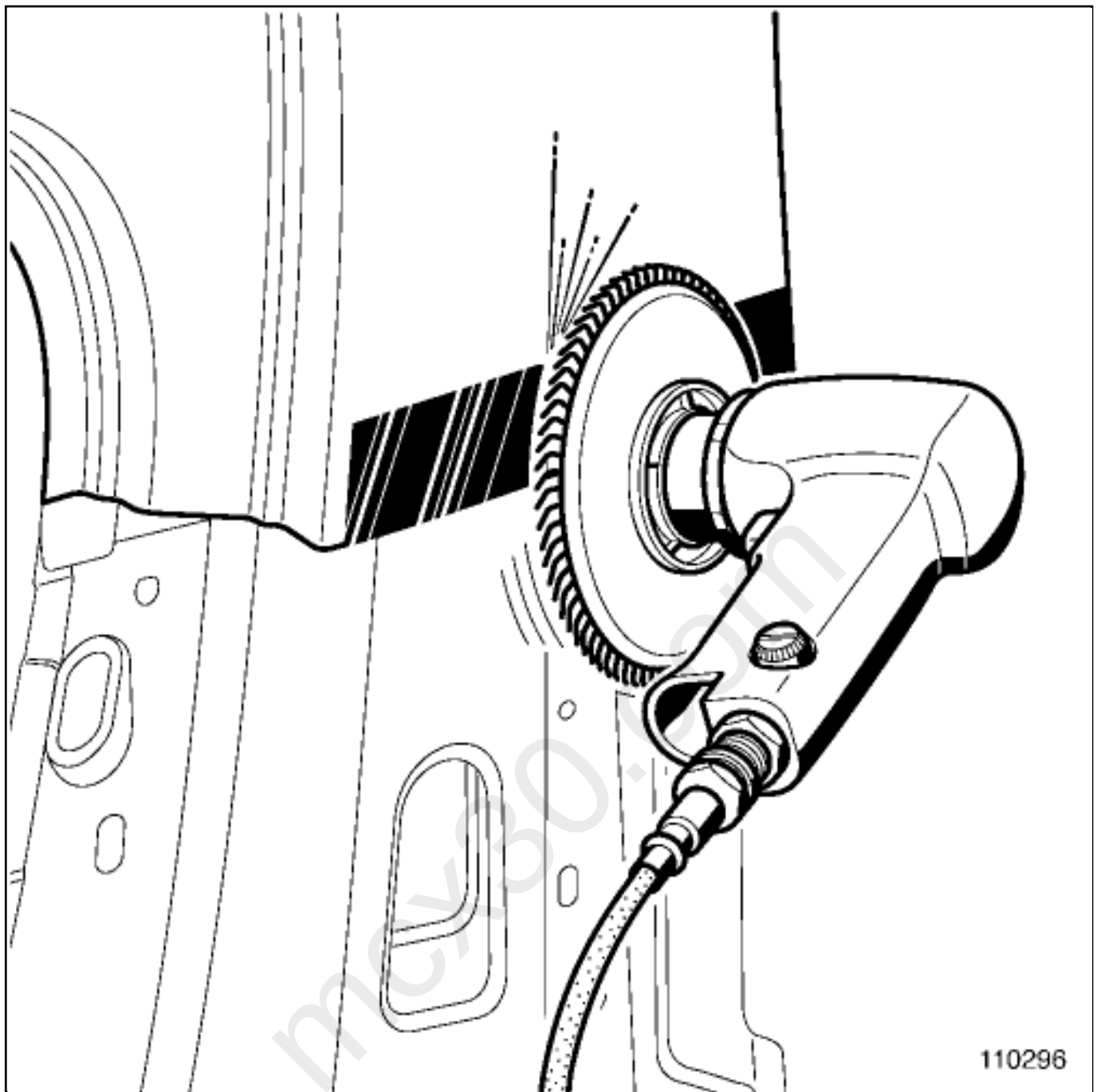


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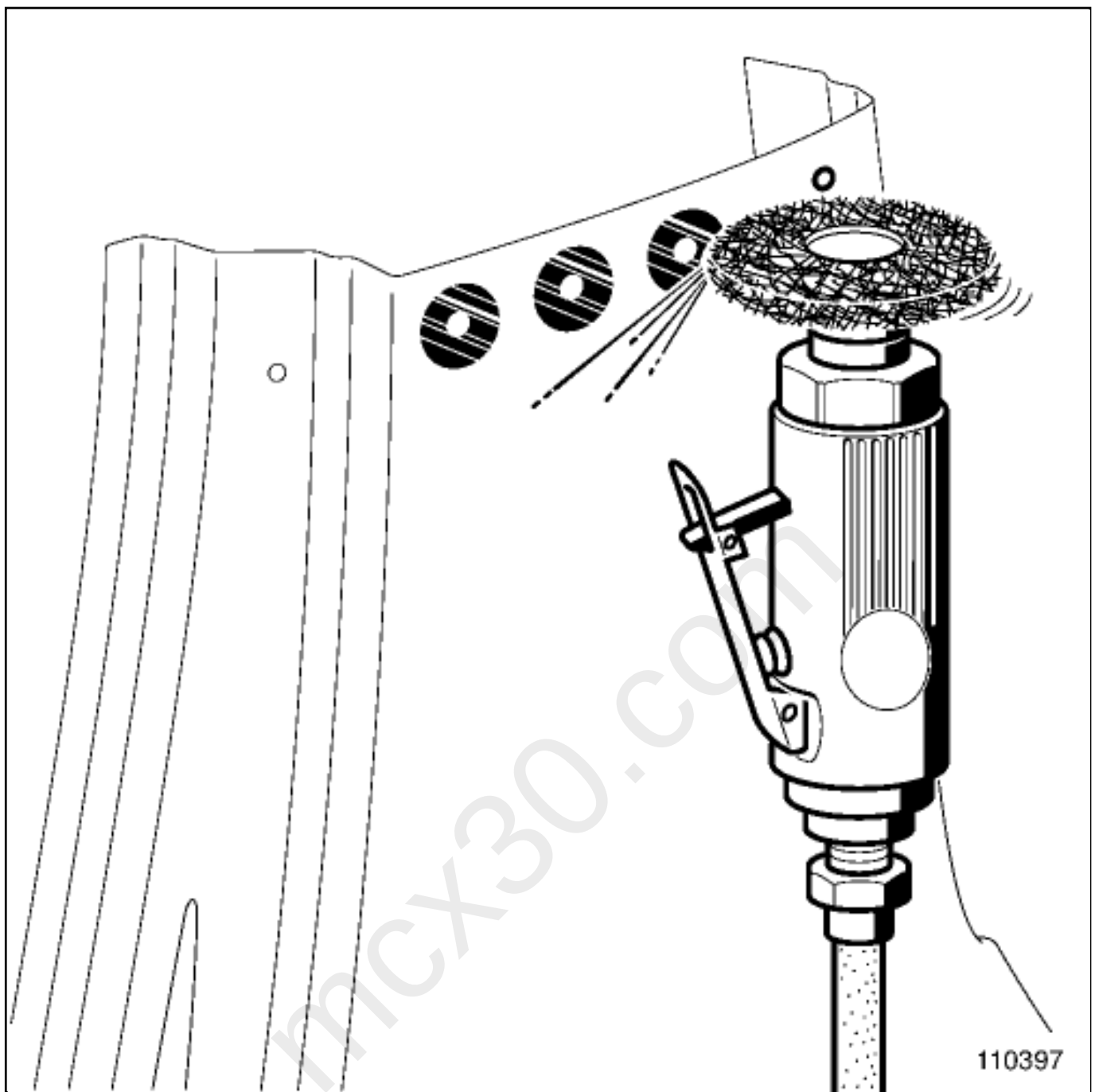
Weld this metal strip to the vehicle to carry out the patched drilling.



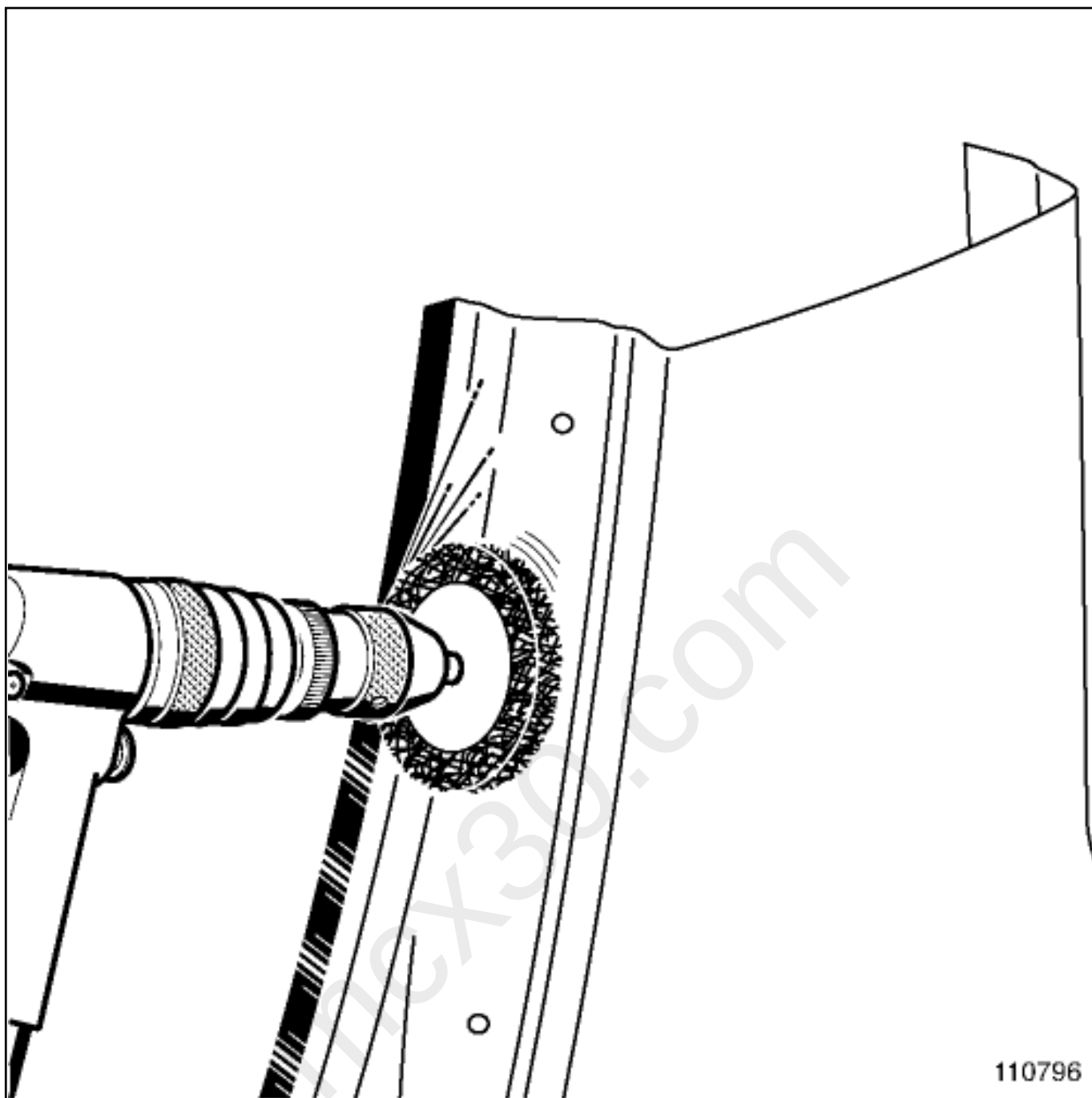
Scour the external joint faces depending on the type of weld.



Scour the weld edges of the partial cuts.



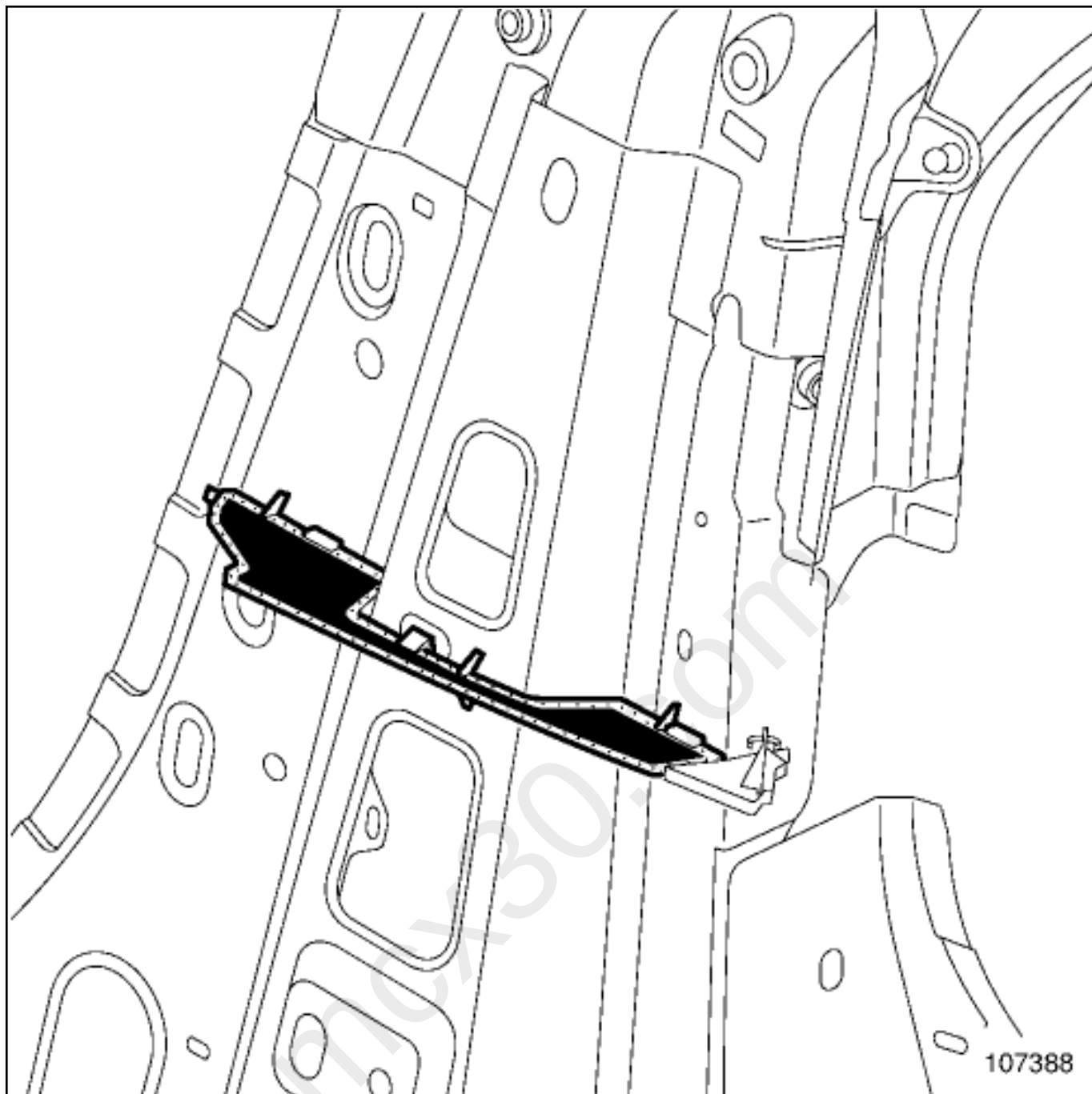
Deburr the edge of the plug weld holes.



Scour the faces of the resistance welded joints.

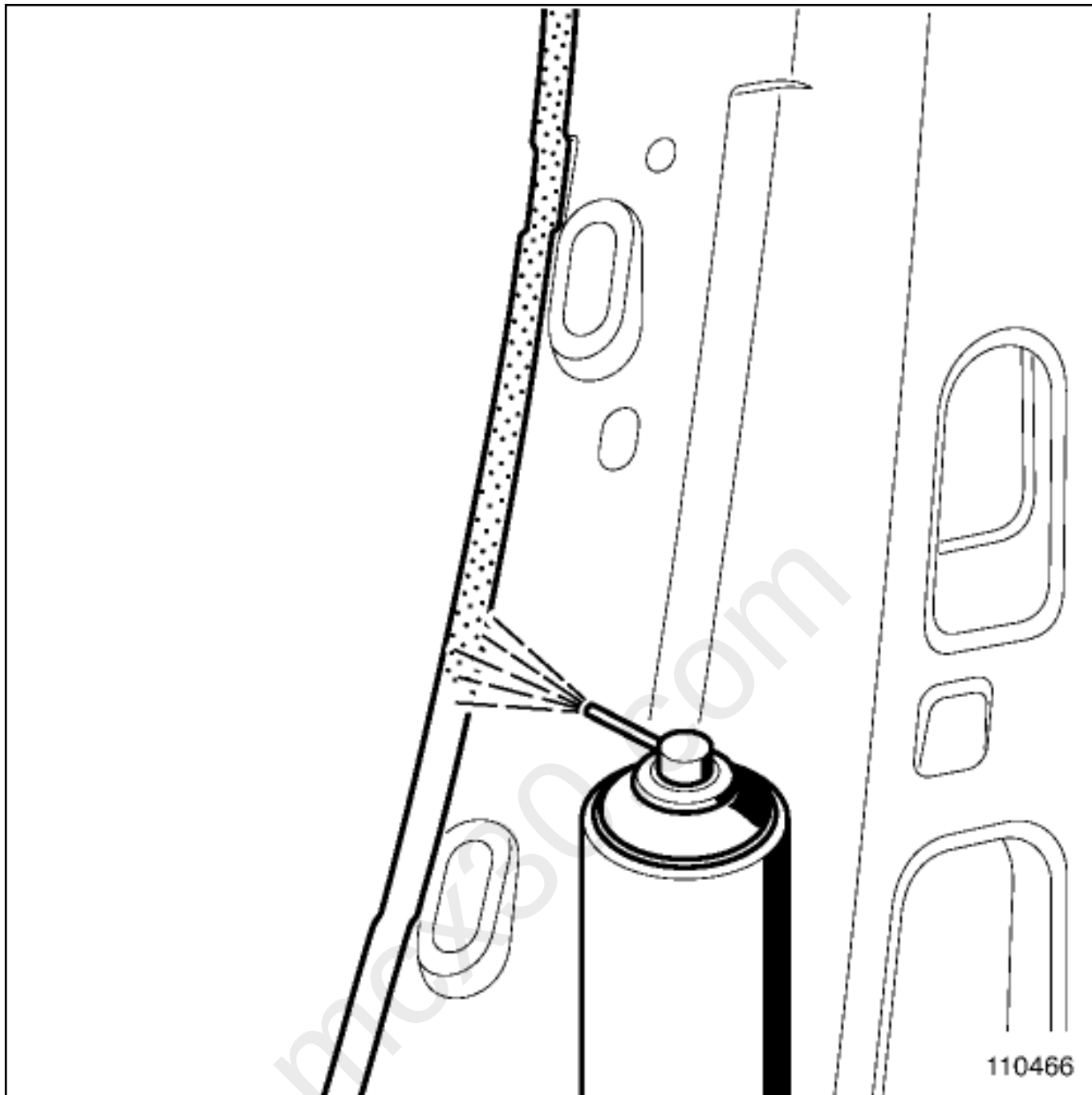
Scour the faces of the butt welded joints([see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use](#)) .

4- FITTING ACOUSTIC PROTECTION BEFORE ASSEMBLY



Fit the acoustic inserts([see 40J, Protective devices , Structural acoustic protection: Description](#)) .

5- APPLYING THE ANTICORROSION PROTECTION BEFORE ASSEMBLY



Concerns only joint interfaces (on the vehicle and on the new part).



Depending on the locations, apply in order:



spray products,



pad or brush products,

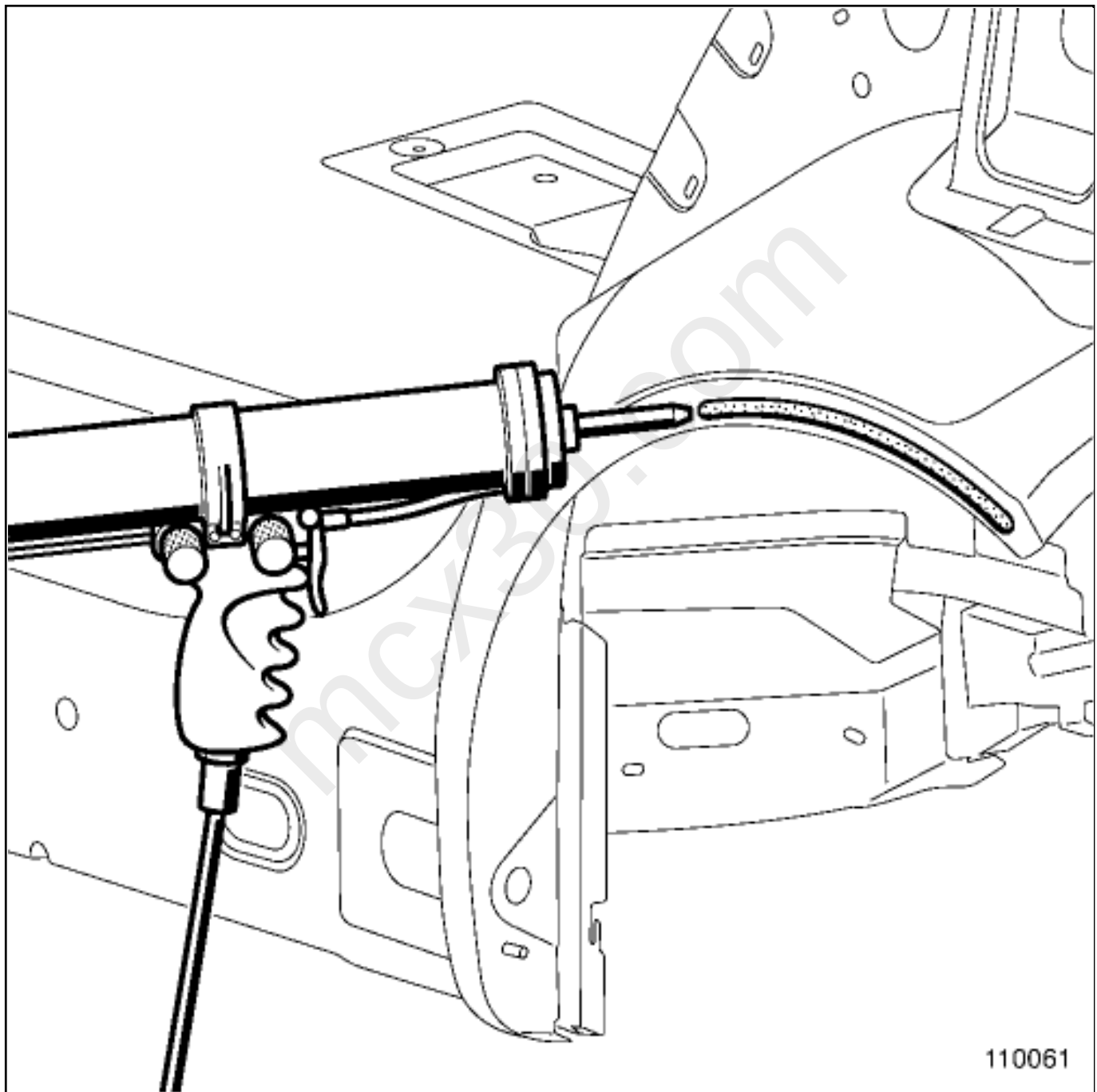


extruded products.

([see 40J, Protective devices , Anti-corrosion protection of joints before welding: Description](#)) .

4. ASSEMBLY

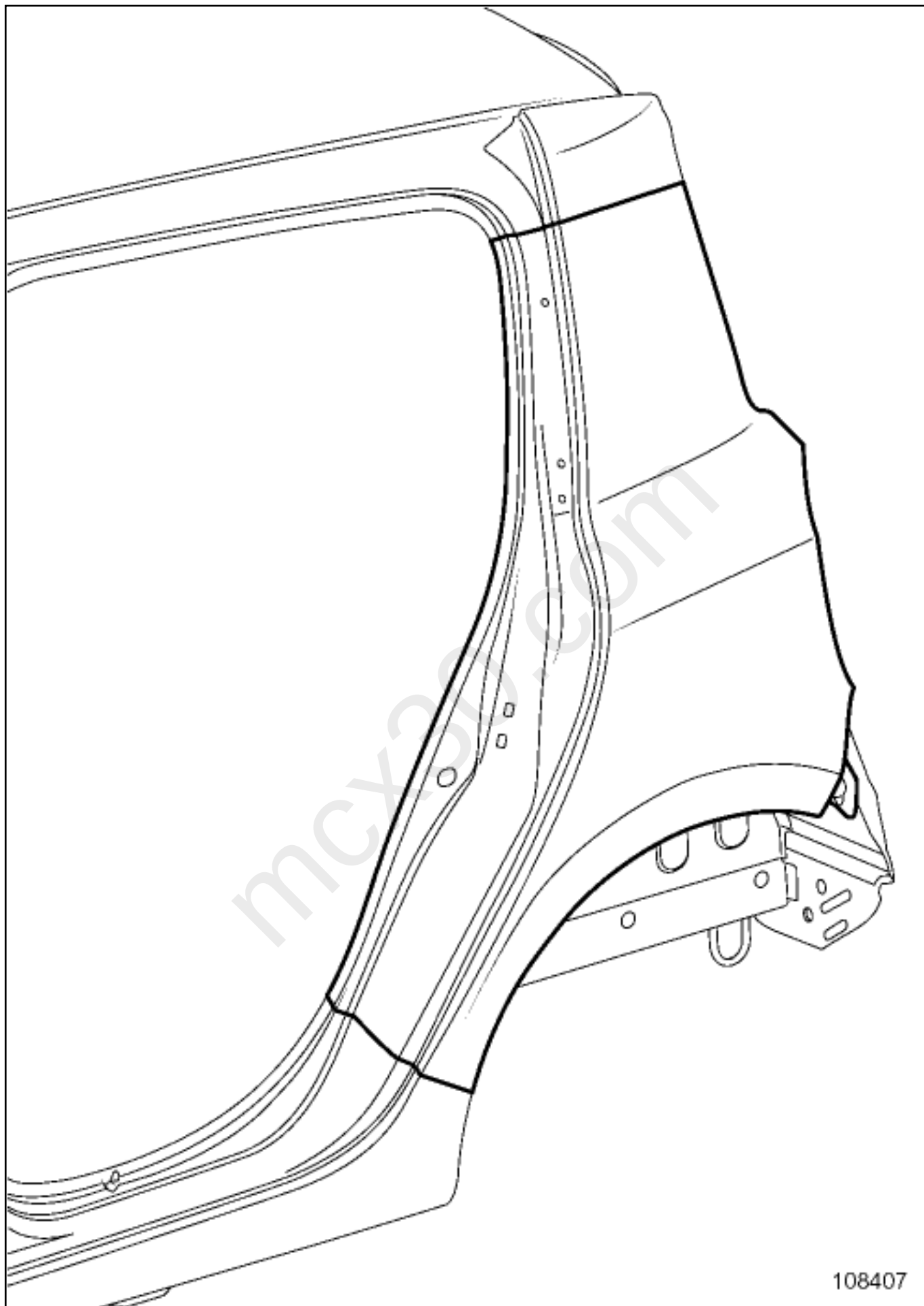
1- APPLICATION OF THE BONDING PRODUCTS



([see 40F, Bonded connections, Connections by rigid bonding: Description](#)) .

([see 40F, Bonded connections, Connections by soft bonding: Description](#)) .

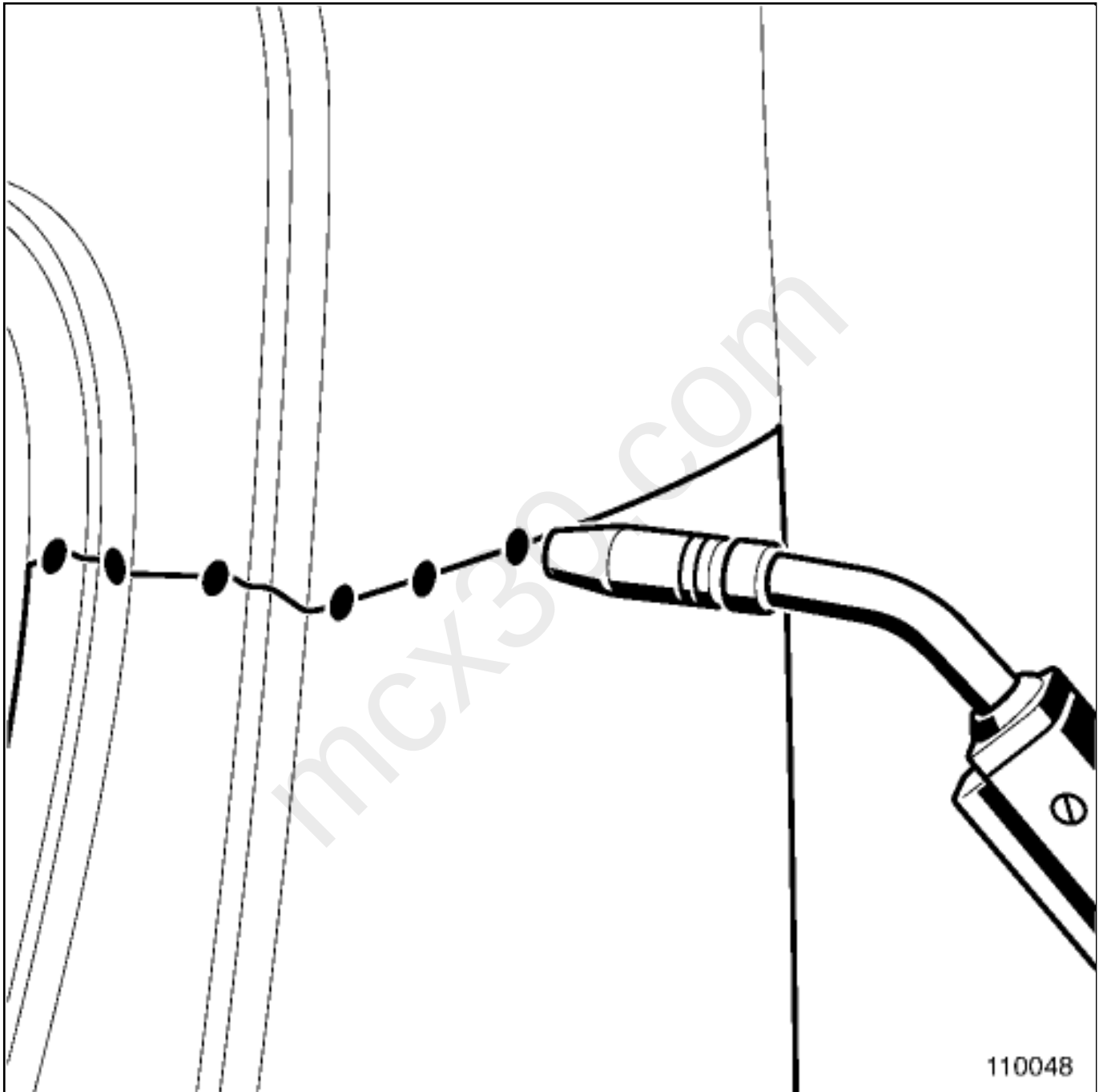
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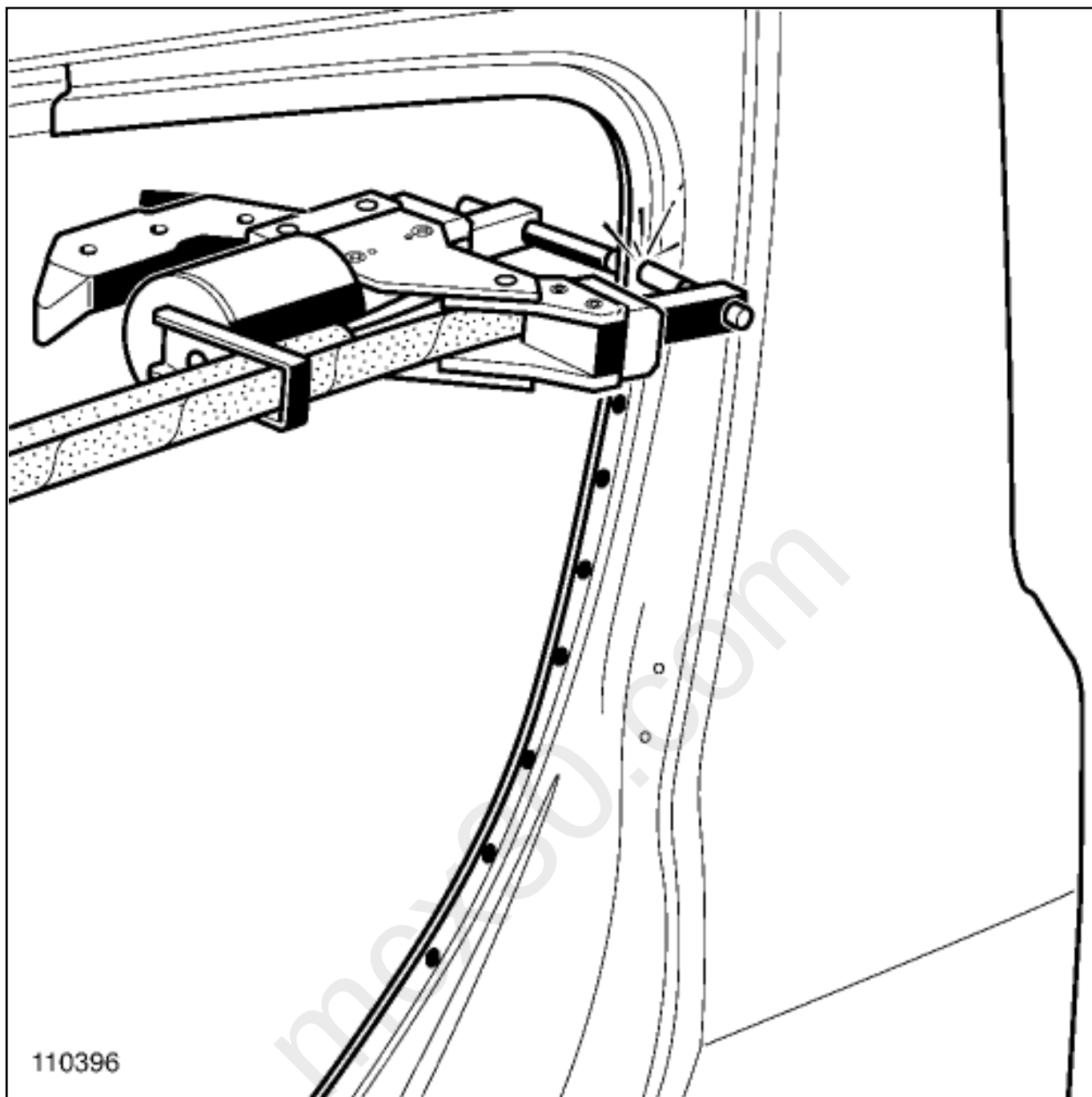
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Position and adjust the new part on the vehicle. Fix using locking pliers. [\(see 05B, Equipment and Tools, Tools for adjusting and supporting a structural component: Use\)](#) .

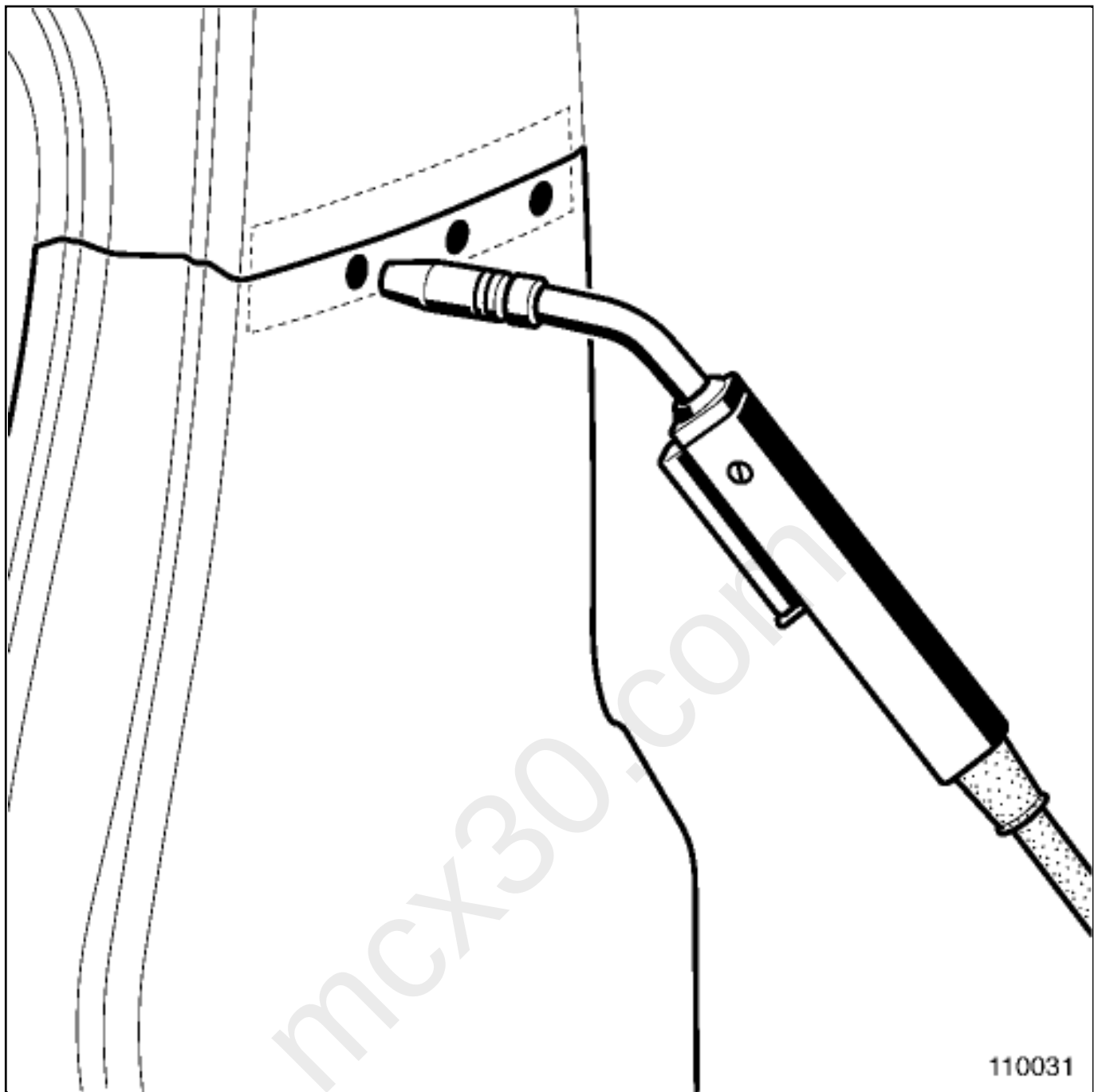
3- CARRYING OUT THE WELDING



Carry out the securing points on the butt welding lines.

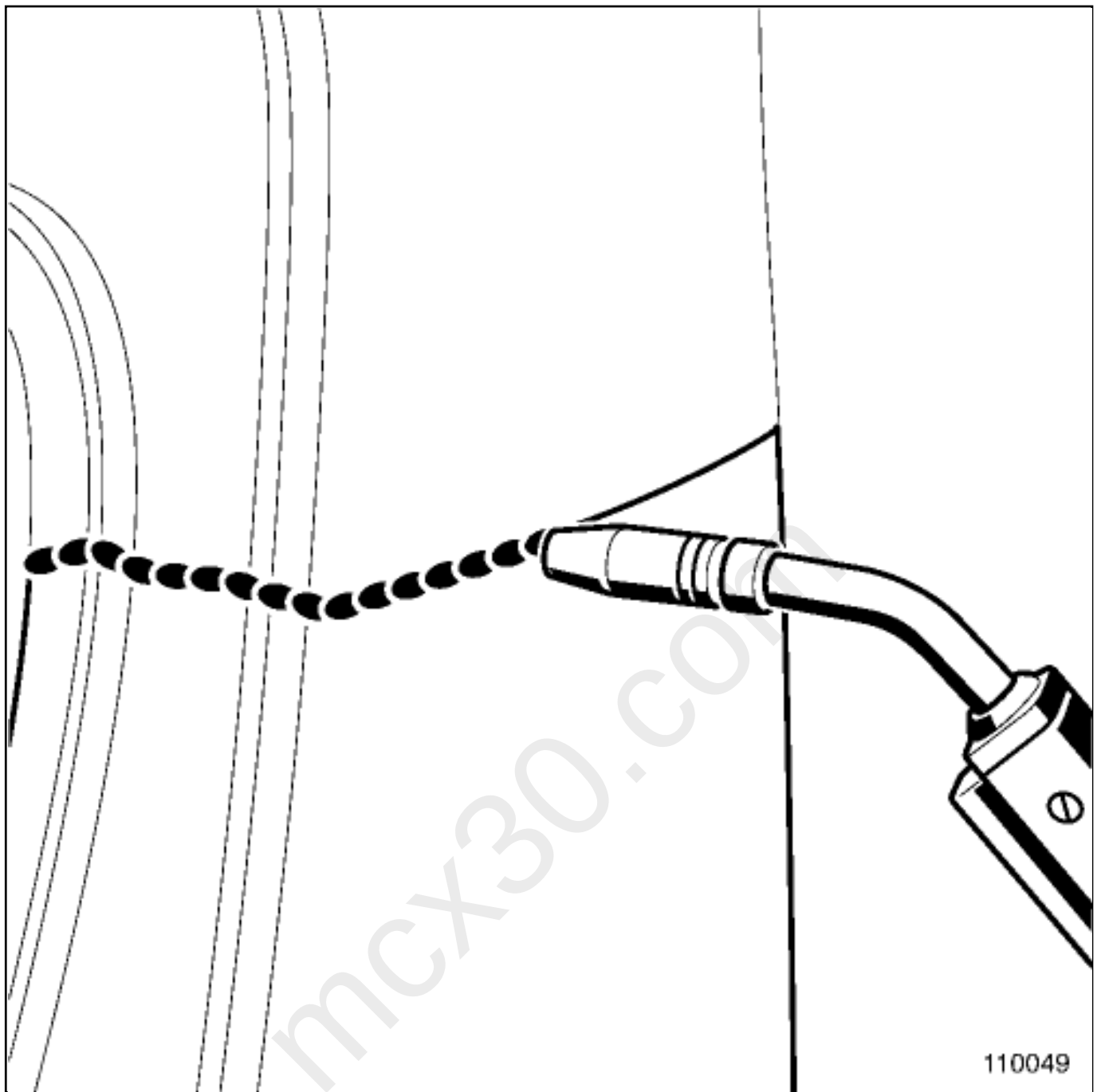


Do the SER points.



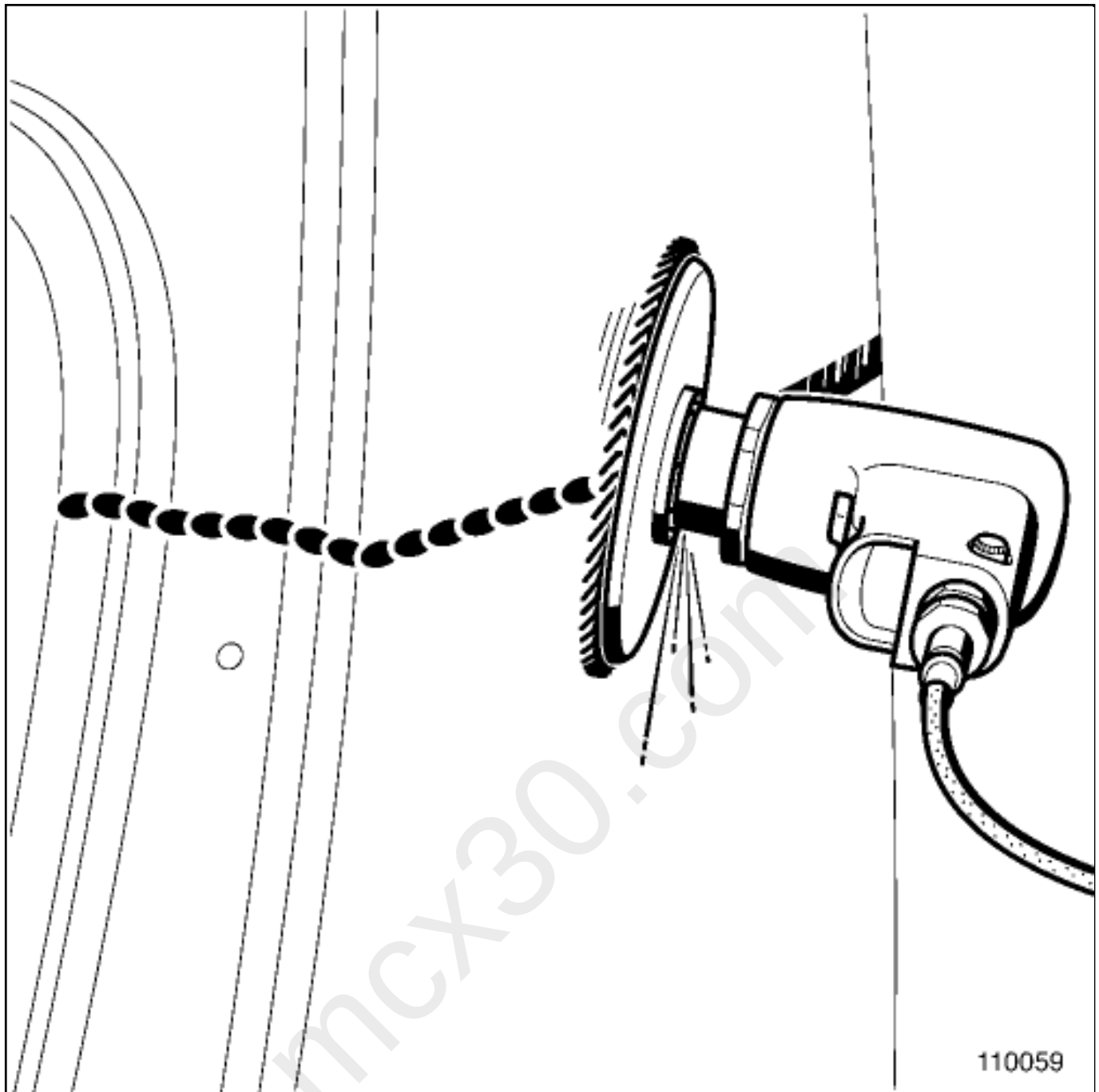
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Do the plug welds.



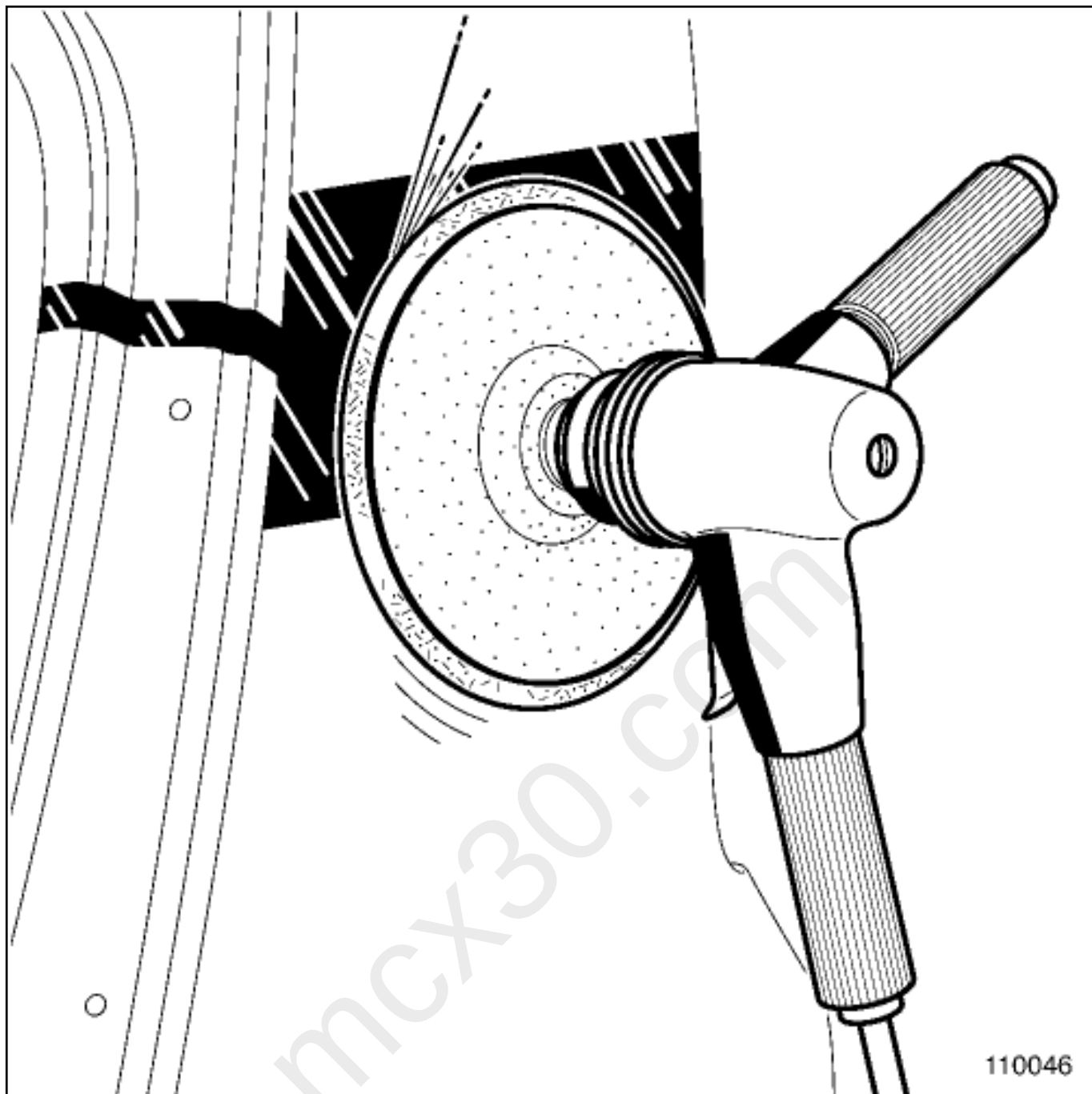
Carry out the butt welding using a bead of chain weld.

4- GRINDING THE WELDS

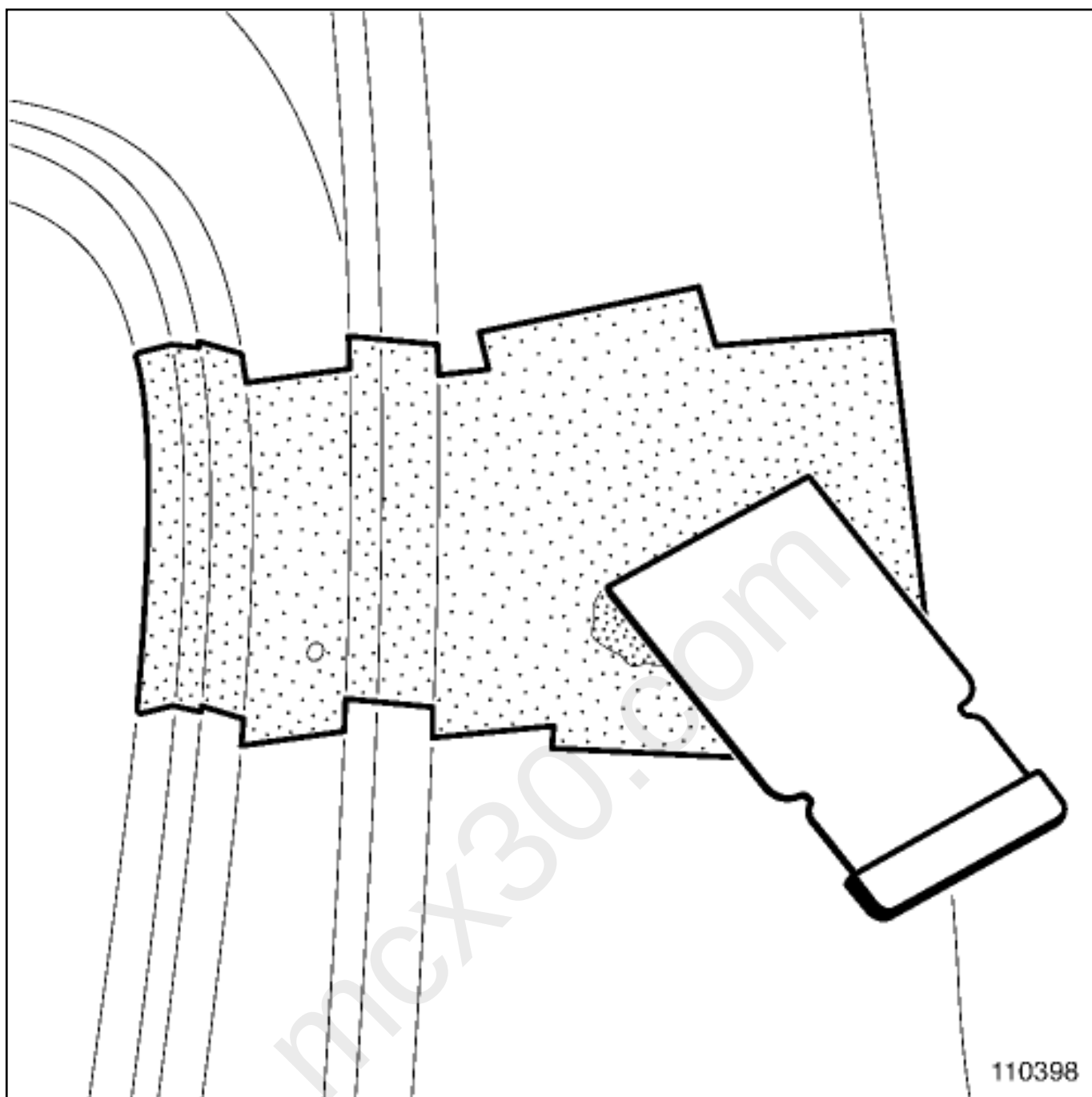


Level off the weld beads and the plug welds([see 05B, Equipment and Tools, Tool for levelling off weld residue: Use](#)) .

5- SHAPE FINISHING



Scour the areas which will receive sealant to provide adherence.



On the visible parts, finish with a coat of sealant on both sides.

Surface finish using a sander fitted with a P120 [\(see 04F, Bodywork products and mountings, Panelwork finishing products: Use\)](#) dry disc.

