



Repair-40x01x24x04-02x21-1-2-1.xml



XSL version : 3.02 du 22/07/11

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ELECTRICAL RESISTANCE SPOT WELDING CONNECTION WITH THREE THICKNESSES

Repairing an electric resistance spot welded joint in three thicknesses depends on the panels to be replaced, as well as the stack and access.

Before working on the vehicle, mark exactly the stack of panel(s) to be replaced and the access to the joint in order to use the appropriate method.

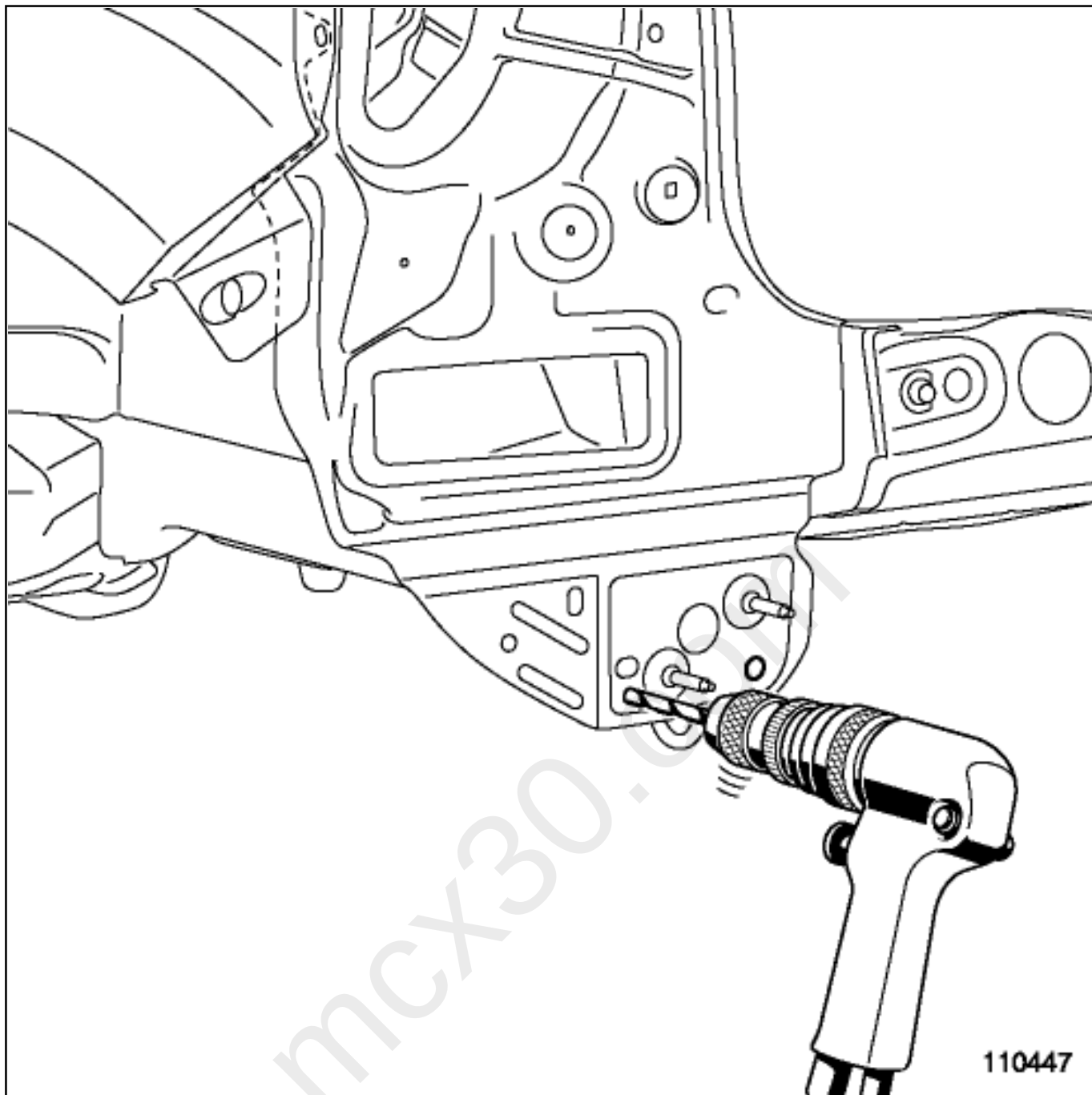
1. TWO FACE ACCESS

1- DISMANTLING

If necessary, scour the joint lines to bring out the spot welds.

(see 05B, Equipment and Tools, Tools for stripping very thick soft mastic: Use)

(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use)



Unpick the spot welds.

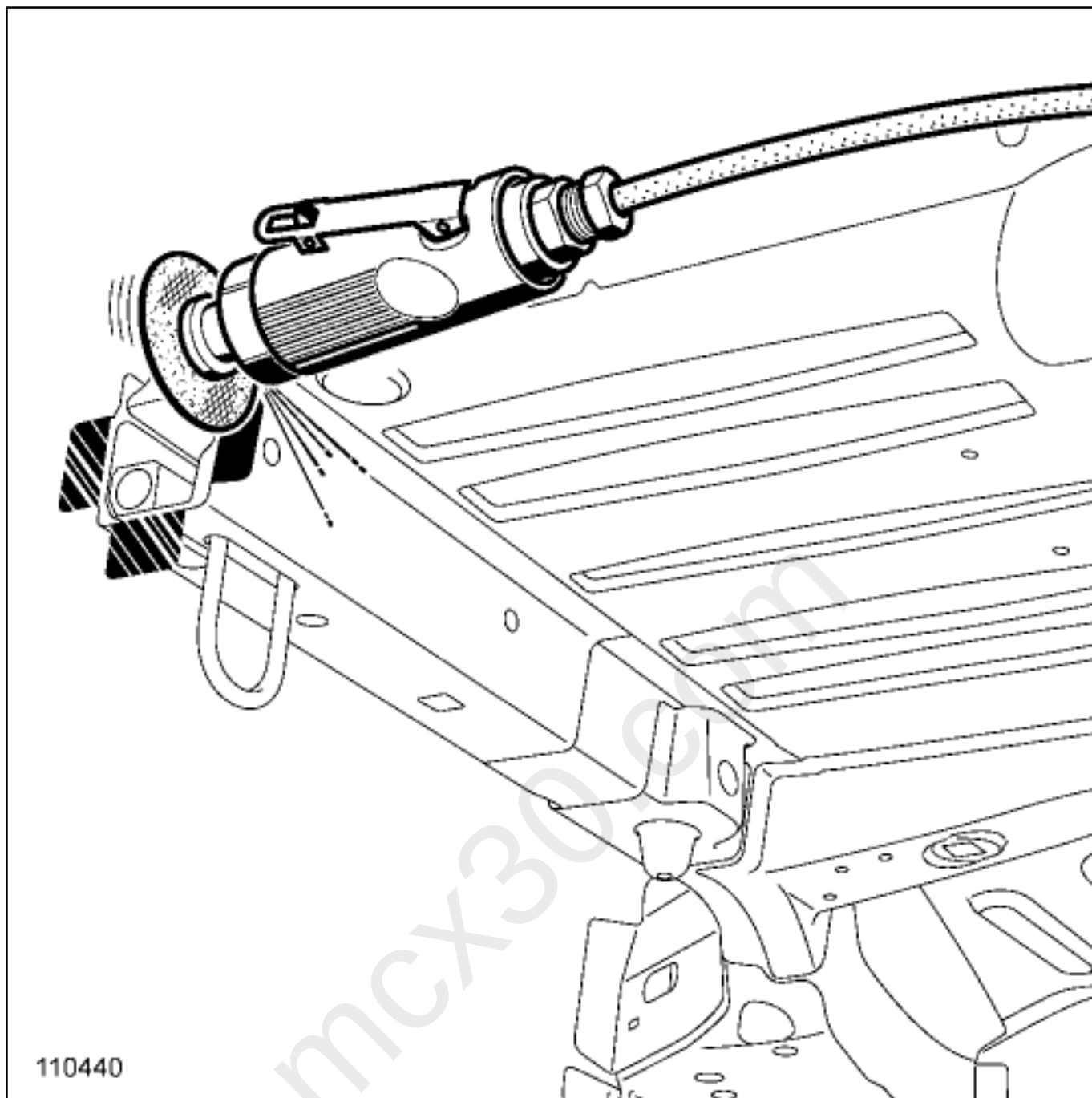
[\(see 05B, Equipment and Tools, Tools for unpicking a structural component: Use\)](#)

Remove the part to be replaced.



Note:

Do not strike or damage the panel.



Grind the welding residue.

[\(see 05B, Equipment and Tools, Tool for levelling off weld residue: Use\)](#)

2- PREPARATION BEFORE ASSEMBLY

Position the replacement part, adjust it and fix it using the locking pliers.

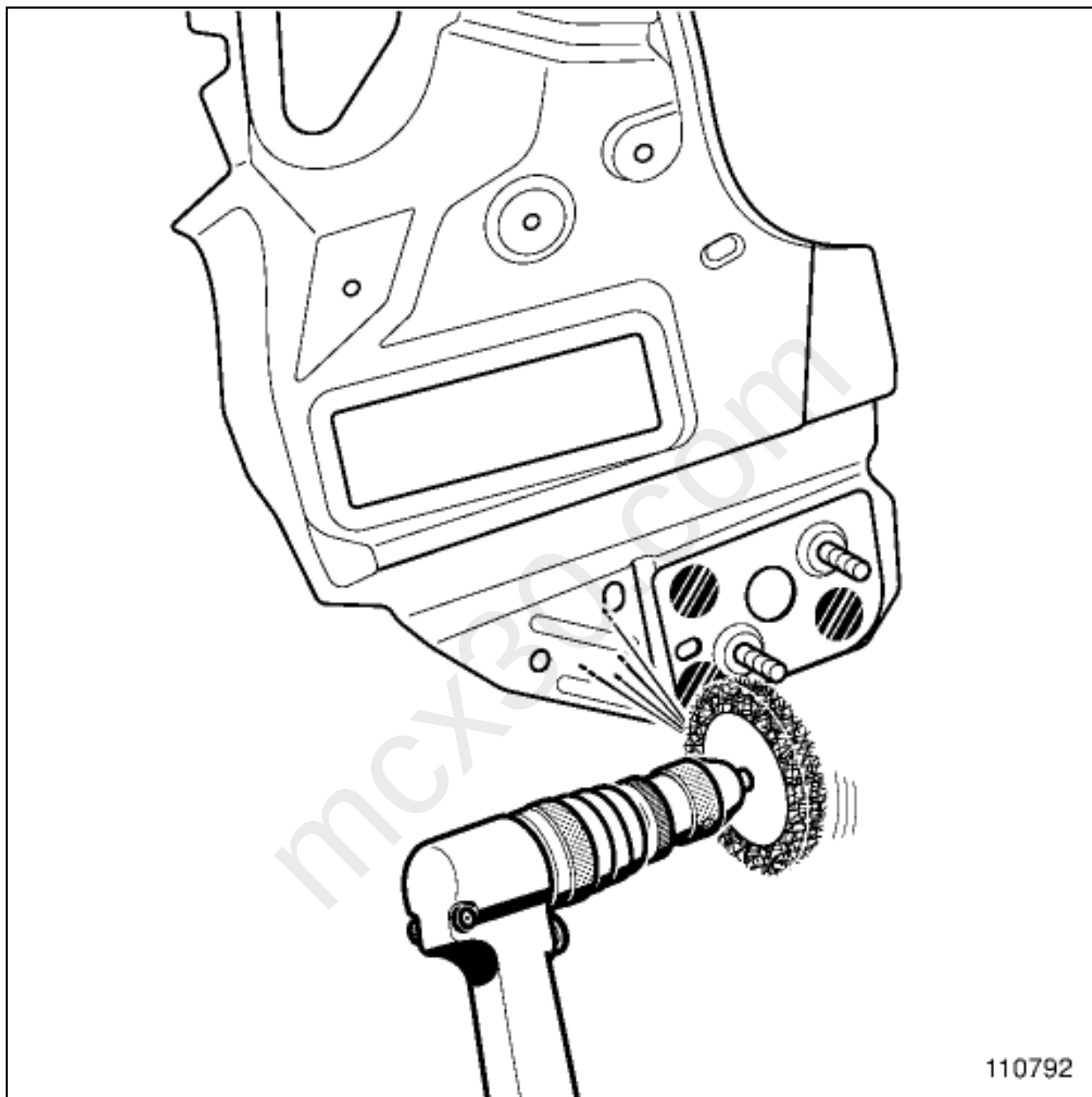
If necessary, reassemble the adjacent components and check the panel gaps.

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

Mark the joint areas.

Remove the replacement part.

1) PREPARATION OF THE MATING FACES



Scour the internal and external faces at the weld zones on the replacement part and on the vehicle.

[\(see 05B, Equipment and Tools, Tools for stripping very thick soft mastic: Use\)](#)

[\(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use\)](#)

2)APPLY THE PROTECTION BEFORE ASSEMBLY

Position the acoustic inserts in the hollow sections, if necessary.

(see 04F, Bodywork products and mountings, Soundproofing products before assembly: Use)

Apply the anti-corrosion protection to the internal mating faces according to the type of weld.

(see 04F, Bodywork products and mountings, Anti-corrosion protection product before assembly: Use)

3- ASSEMBLY

1)ADJUSTING THE WELDER

Resistance spot welded joints

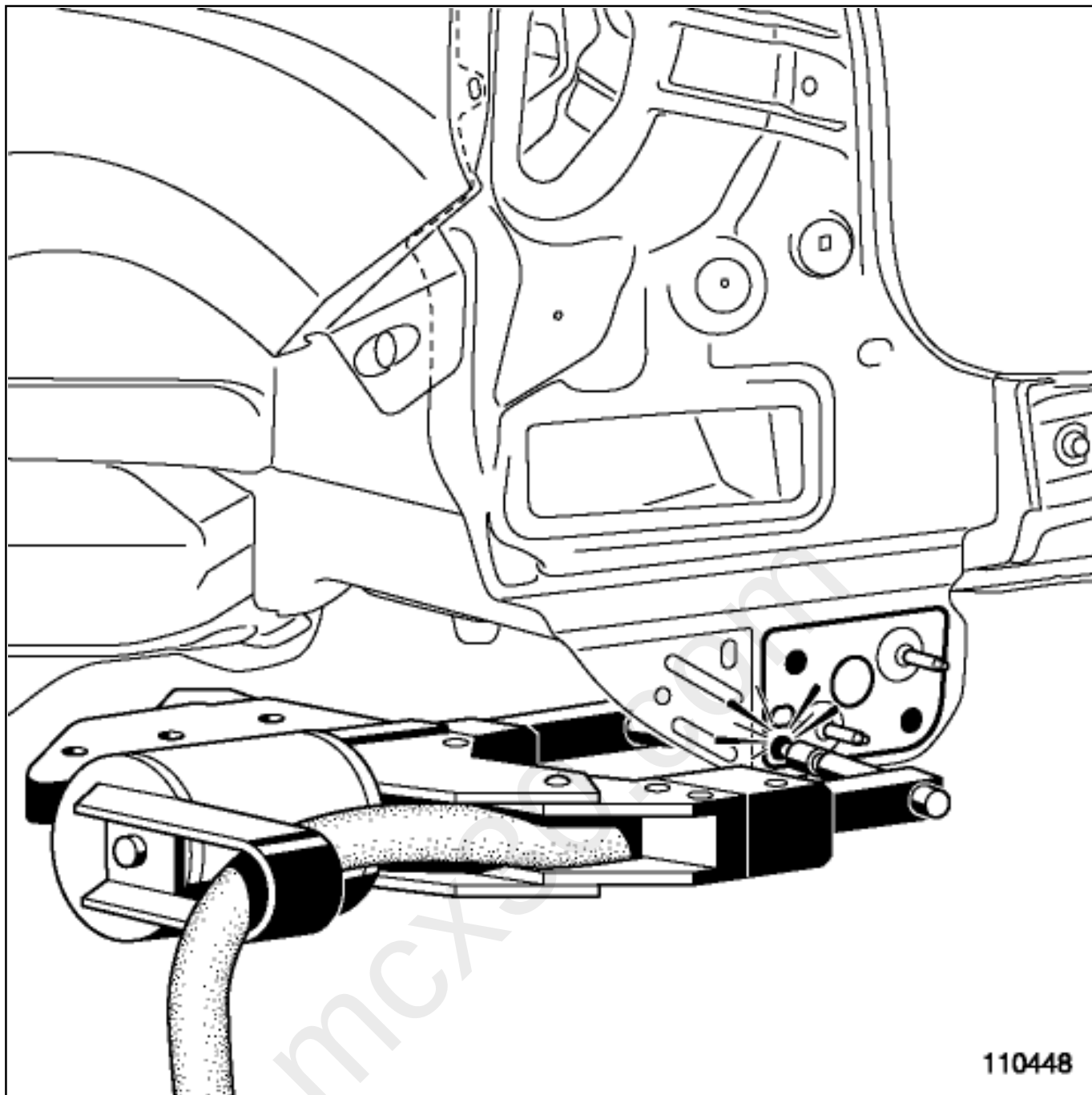
(see 40B, Electrical resistance welded connections, Electrical resistance spot welding connection: Precautions for the repair)

2)WELDING

Reposition the replacement part, adjust it and fix it using the locking pliers.

Reassemble the adjacent components if necessary and check the panel gaps.

(see 05B, Equipment and Tools, Tools for adjusting and supporting a structural component: Use)



Weld the panels, making the points at the original locations.

There is no particular finish to be carried out on this type of weld; it must look the same as the original.

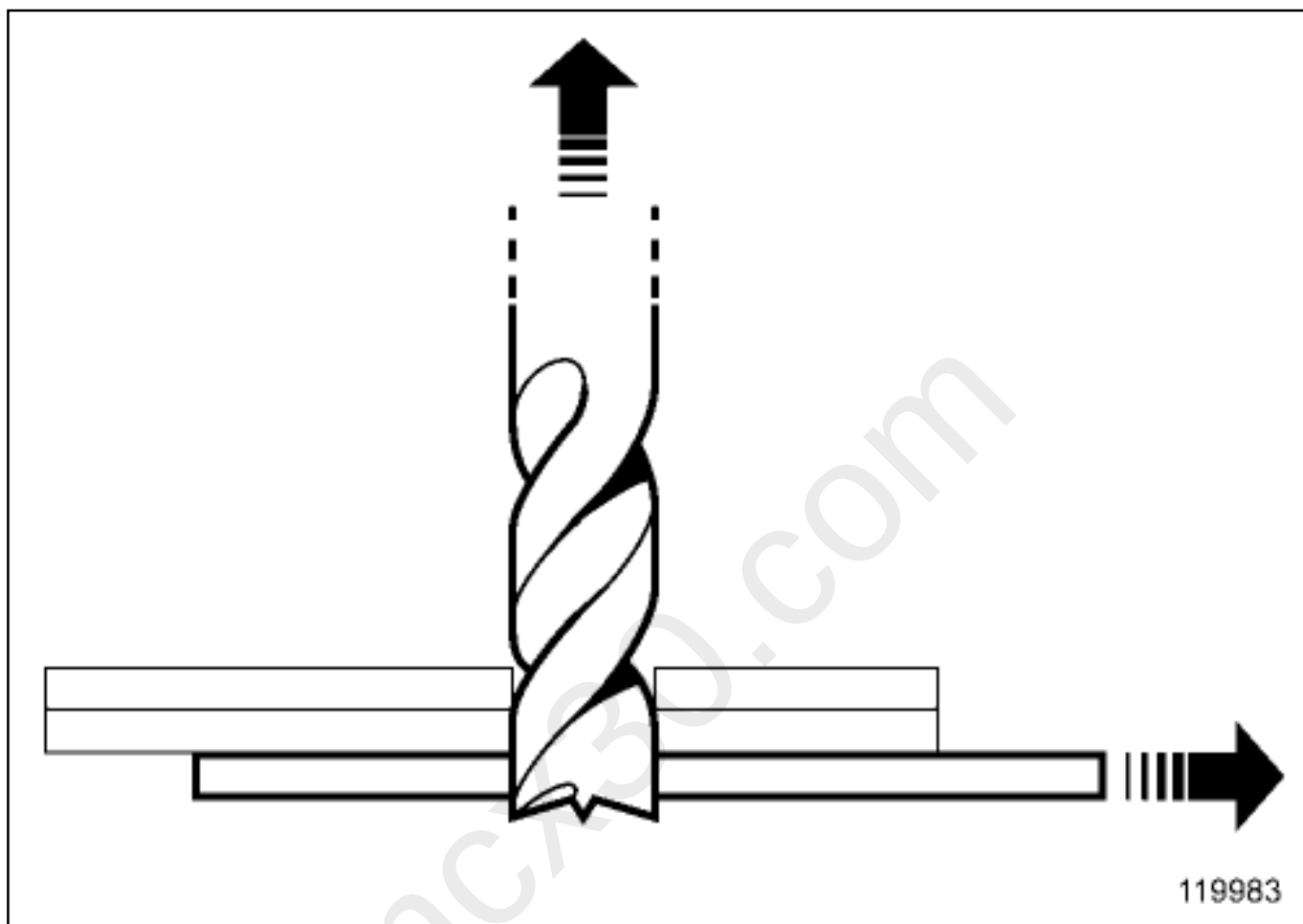
3)SPECIAL NOTE ON THE REPLACEMENT PART

The Parts Department provides replacement parts with a special preparation, the points to be welded into three layers during assembly on the vehicle are pre-welded in two layers on the new part.

During welding of the end points on the vehicle, the operator must perform exactly as the points where the points existing on the part, for correctly stacking during welding.

2. SINGLE FACE ACCESS, THIRD PANEL TO BE REPLACED

1- DISMANTLING



Detach the assembly at the spot weld.

(see 05B, Equipment and Tools, Tools for unpicking a structural component: Use)

Remove the damaged part.

2- PREPARATION BEFORE ASSEMBLY

Position the replacement part, adjust it and fix it using the locking pliers.

If necessary, reassemble the adjacent components and check the panel gaps.

(see 05B, Equipment and Tools, Tools for adjusting and supporting a structural component: Use)

Mark the joint areas.

Remove the replacement part.

1) PREPARATION OF THE REPLACEMENT PART

Scour the internal face at the plug welds.

(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use)

2) PREPARATION ON THE VEHICLE

Scour the edges of the drilling holes on the internal and external faces.

(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use)

(see 05B, Equipment and Tools, Tools for stripping very thick soft mastic: Use)

3- APPLYING PROTECTION BEFORE ASSEMBLY

Position the acoustic inserts in the hollow sections, if necessary.

(see 04F, Bodywork products and mountings, Soundproofing products before assembly: Use)

Apply the anti-corrosion protection to the internal mating faces according to the type of weld (see 04F, Bodywork products and mountings, Anti-corrosion protection product before assembly: Use) .

4- ASSEMBLY

1) ADJUSTING THE WELDER

GMAW plug welded joints.

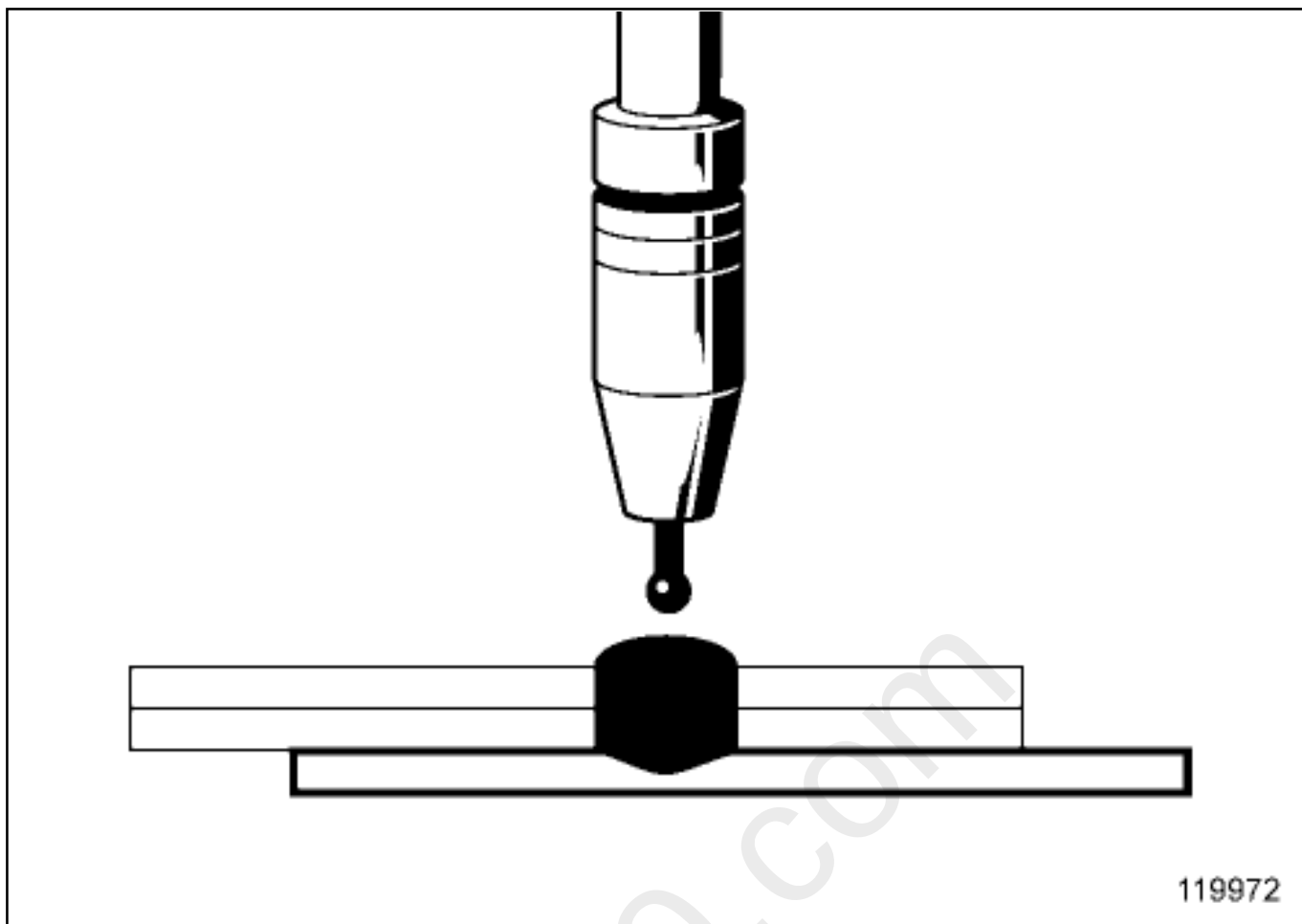
(see 40C, Gas metal arc welded connections, Connections by arc welding under shielding gas: Precautions for the repair)

2) CARRYING OUT THE WELDING

Reposition the replacement part, adjust it and fix it using the locking pliers.

Reassemble the adjacent components if necessary and check the panel gaps.

(see 05B, Equipment and Tools, Tools for adjusting and supporting a structural component: Use)



Do the plug welds.

[\(see 40C, Gas metal arc welded connections, Connections by arc welding under shielding gas: Description\)](#)

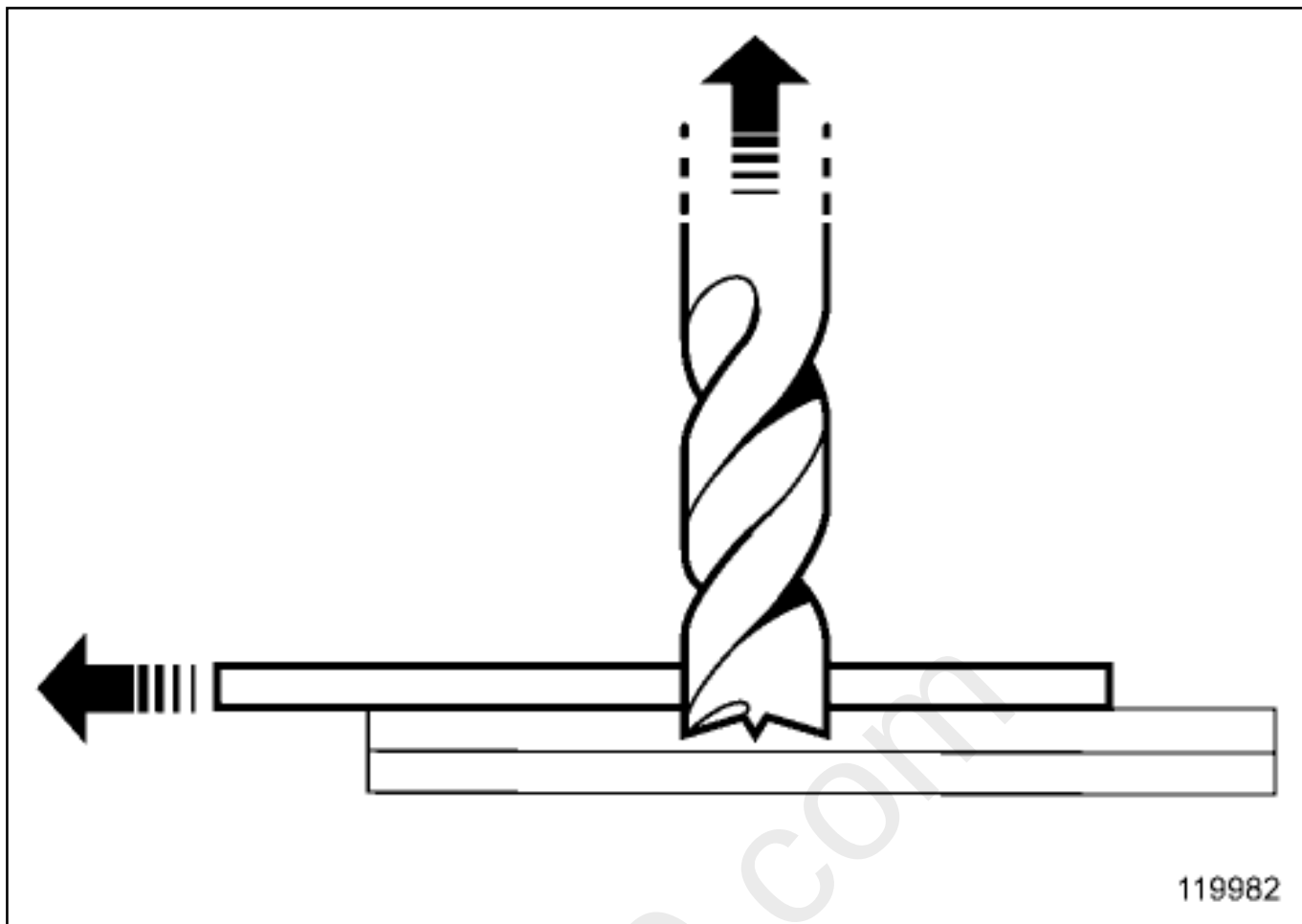
5- FINISHING

Surface finishing the plug welds.

[\(see 05B, Equipment and Tools, Tool for surfacing mating faces: Use\)](#)

3. SINGLE FACE ACCESS, FIRST PANEL TO BE REPLACED

1- DISMANTLING



Detach the first panel of the assembly at the spot weld.

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

Remove the damaged part.

2- PREPARATION BEFORE ASSEMBLY

Position the replacement part, adjust it and fix it using the locking pliers.

If necessary, reassemble the adjacent components and check the panel gaps.

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

Mark the joint areas.

Remove the replacement part.

1) PREPARATION OF THE REPLACEMENT PART

Drill the panel via the internal face, respecting the following table:

Panel thickness (mm)	Ø drill bit (mm)
0.6 to 1	6
1 to 1.5	7
1.5 to 2	8
2 and more	10

Scour the edges of the drilling holes on the internal and external faces

[\(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use\)](#)

2) PREPARATION ON THE VEHICLE

Scour the internal face at the plug welds.

[\(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use\)](#)

3- APPLY THE PROTECTION BEFORE ASSEMBLY

Position the acoustic inserts in the hollow sections, if necessary.

[\(see 04F, Bodywork products and mountings, Soundproofing products before assembly: Use\)](#)

Apply the anti-corrosion protection to the internal mating faces according to the type of weld [\(see 04F, Bodywork products and mountings, Anti-corrosion protection product before assembly: Use\)](#) .

4- ASSEMBLY

1) ADJUSTING THE WELDER

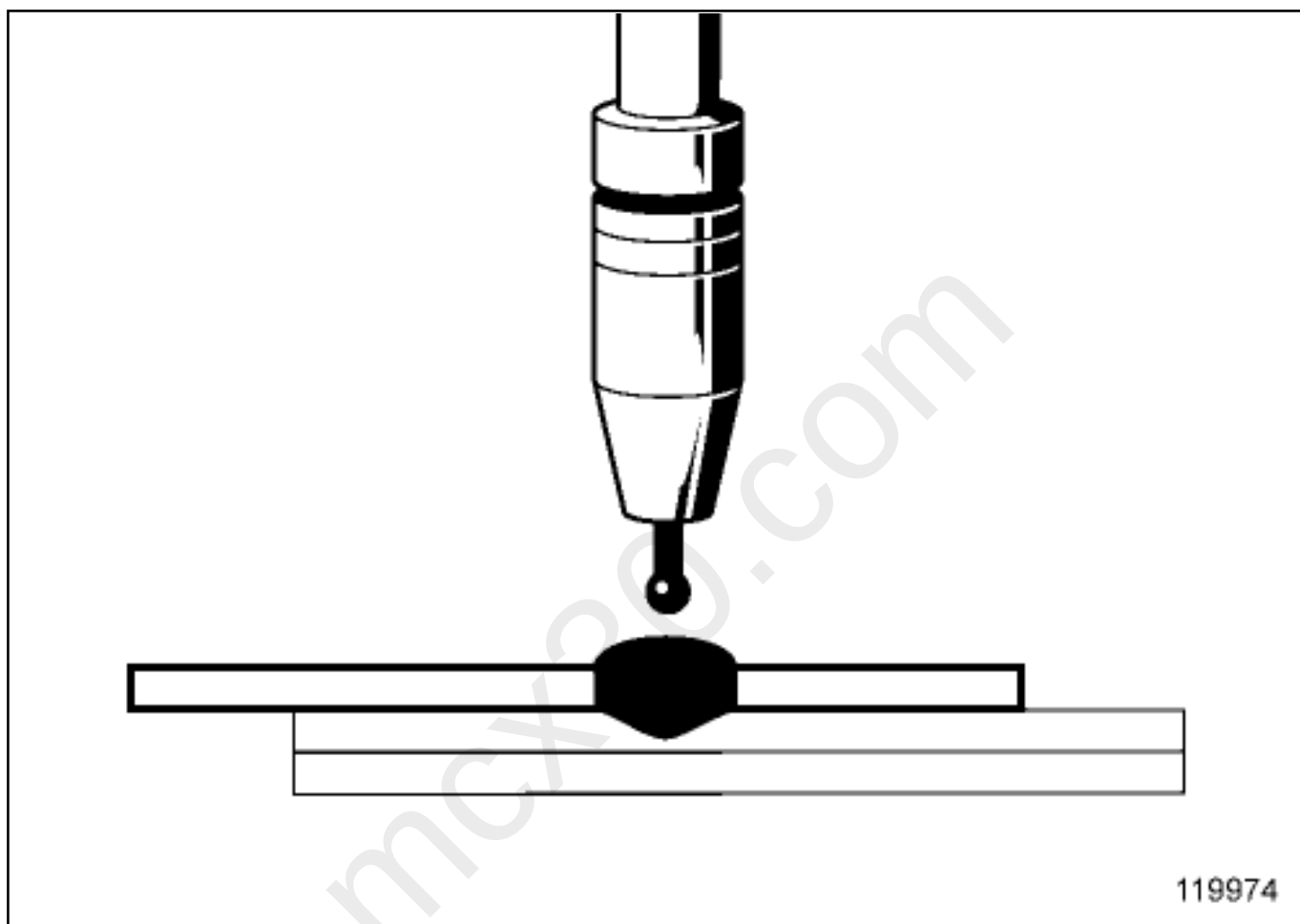
GMAW plug welded joints.

[\(see 40C, Gas metal arc welded connections, Connections by arc welding under shielding gas: Precautions for the repair\)](#)

Reposition the replacement part, adjust it and fix it using the locking pliers.

Reassemble the adjacent components if necessary and check the panel gaps.

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



Do the plug welds.

[\(see 40C, Gas metal arc welded connections, Connections by arc welding under shielding gas: Description\)](#)

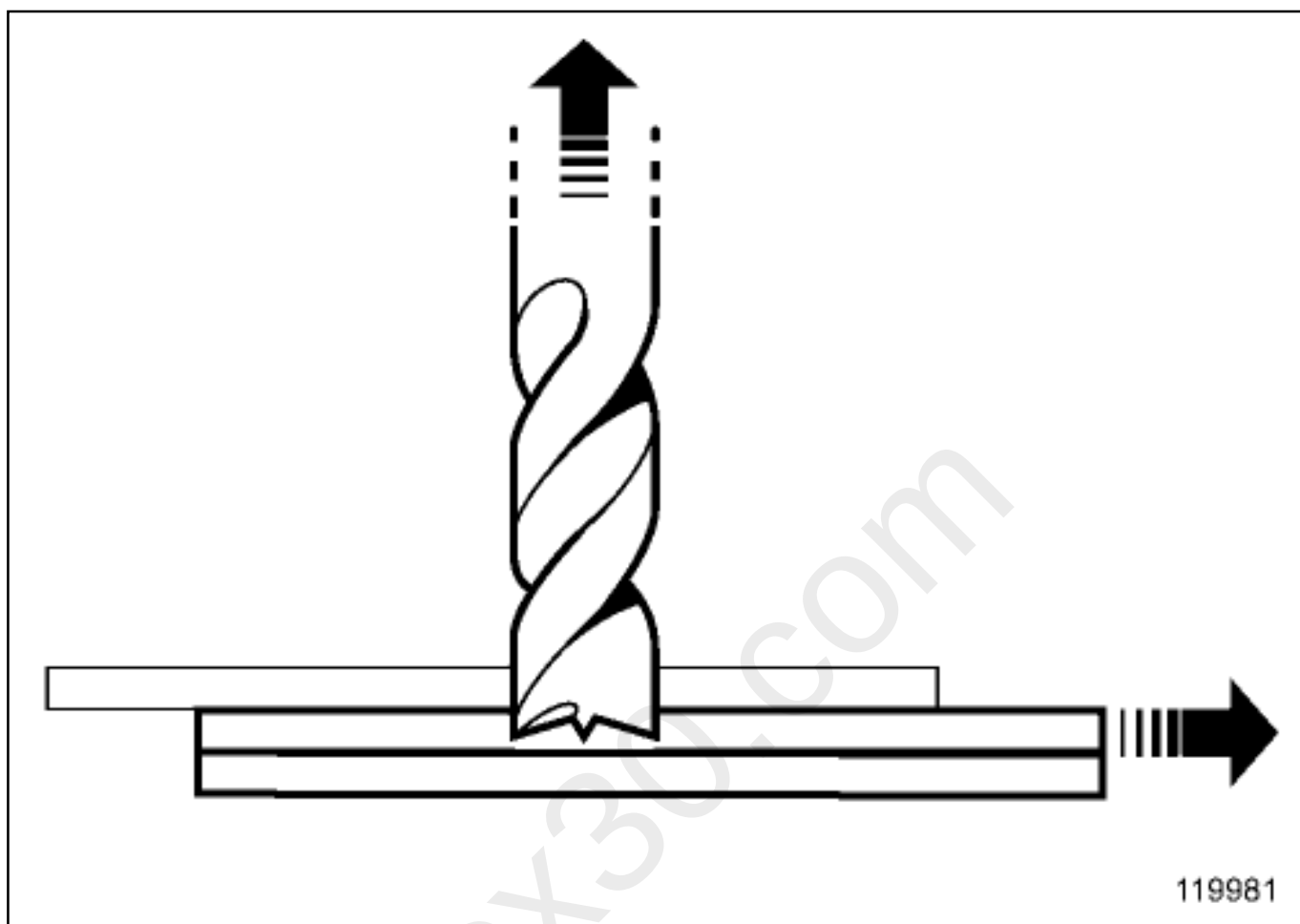
5-FINISHING

Surface finishing the plug welds.

[\(see 05B, Equipment and Tools, Tool for surfacing mating faces: Use\)](#)

4. SINGLE FACE ACCESS, SECOND AND THIRD PANELS TO BE REPLACED

1- DISMANTLING



Detach the first panel or the whole assembly at the spot weld.

(see 05B, Equipment and Tools, Tools for unpicking a structural component: Use)

Remove the damaged part.

2- PREPARATION BEFORE ASSEMBLY

Position the replacement part, adjust it and fix it using the locking pliers.

If necessary, reassemble the adjacent components and check the panel gaps.

(see 05B, Equipment and Tools, Tools for adjusting and supporting a structural component: Use)

Mark the joint areas.

Remove the replacement part.

1) PREPARATION OF THE REPLACEMENT PART

Scour the internal face at the plug welds.

[\(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use\)](#)

2) PREPARATION ON THE VEHICLE

Scour the edges of the drilling holes on the internal and external faces.

[\(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use\)](#)

3- APPLYING PROTECTION BEFORE ASSEMBLY

Position the acoustic inserts in the hollow sections, if necessary.

[\(see 04F, Bodywork products and mountings, Soundproofing products before assembly: Use\)](#)

Apply the anti-corrosion protection to the internal mating faces according to the type of weld [\(see 04F, Bodywork products and mountings, Anti-corrosion protection product before assembly: Use\)](#) .

4- ASSEMBLY

1) ADJUSTING THE WELDER

GMAW plug welded joints.

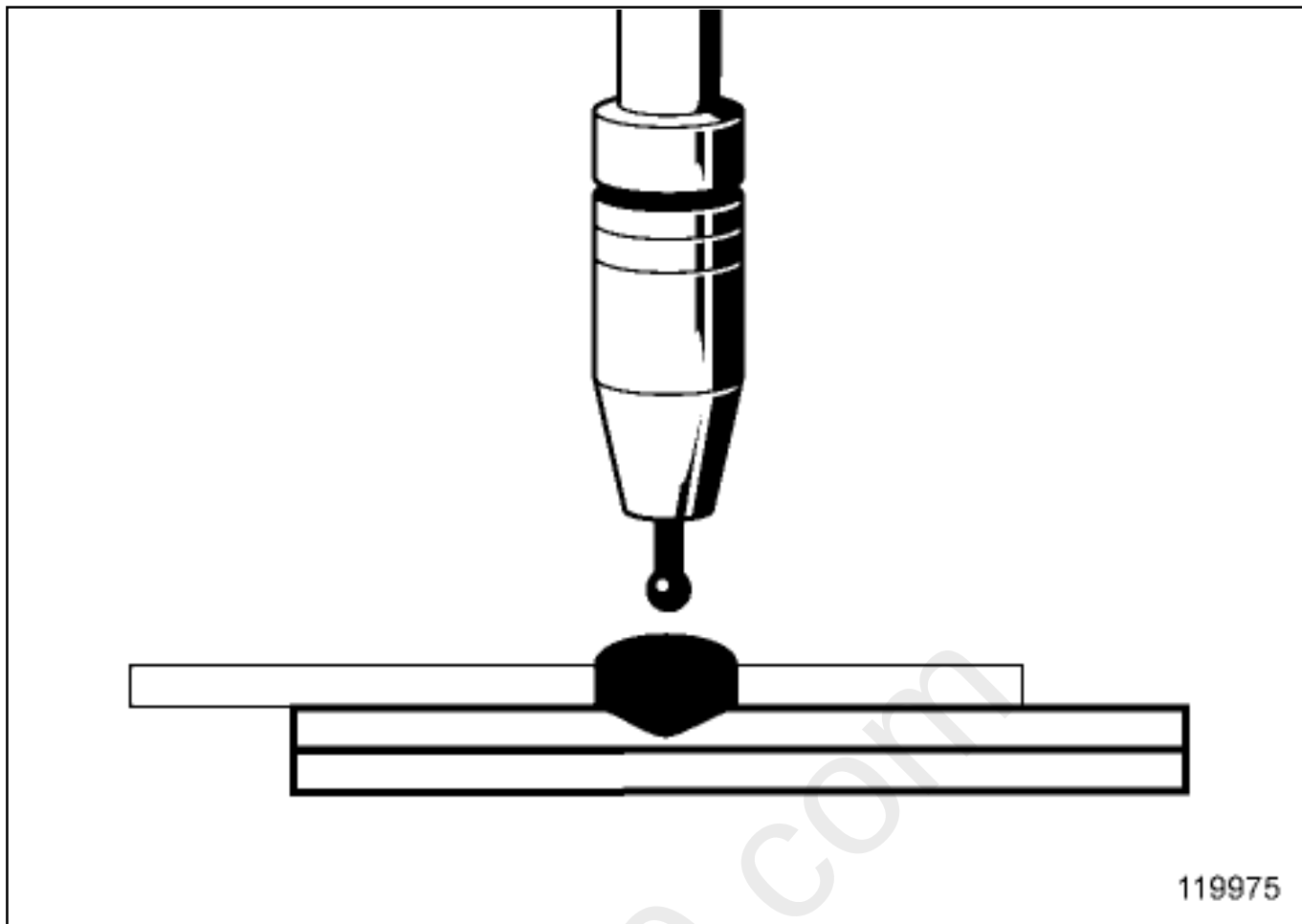
[\(see 40C, Gas metal arc welded connections, Connections by arc welding under shielding gas: Precautions for the repair\)](#)

2) CARRYING OUT THE WELDING

Reposition the replacement part, adjust it and fix it using the locking pliers.

Reassemble the adjacent components if necessary and check the panel gaps.

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



Do the plug welds.

[\(see 40C, Gas metal arc welded connections, Connections by arc welding under shielding gas: Description\)](#)

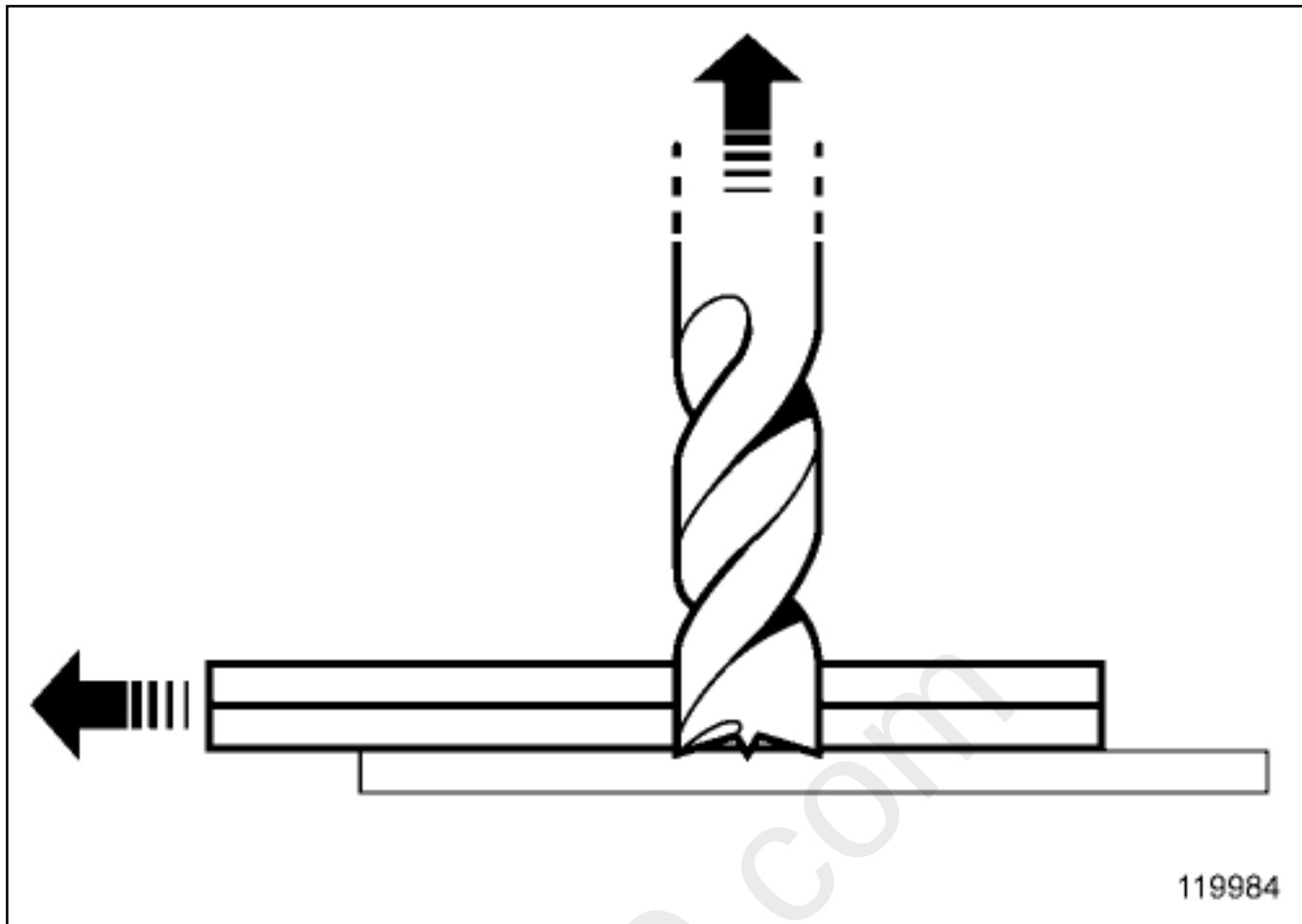
5- FINISHING

Surface finishing the plug welds.

[\(see 05B, Equipment and Tools, Tool for surfacing mating faces: Use\)](#)

5. SINGLE FACE ACCESS, FIRST AND SECOND PANELS TO BE REPLACED

1- DISMANTLING



Detach the first two panels of the assembly at the spot weld.

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

Remove the damaged part.

2- PREPARATION BEFORE ASSEMBLY

Position the replacement part, adjust it and fix it using the locking pliers.

If necessary, reassemble the adjacent components and check the panel gaps.

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

Mark the joint areas.

Remove the replacement part.

1) PREPARATION OF THE REPLACEMENT PART

Drill the panels via the internal face at the existing joint

If there is no resistance weld spot in two thicknesses on the replacement part, drill the panels, respecting the following table:

Panel thickness (mm)	Ø drill bit (mm)
0.6 to 1	6
1 to 1.5	7
1.5 to 2	8
2 and more	10

Scour the edges of the drilling holes on the internal and external faces

[\(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use\)](#)

2)PREPARATION ON THE VEHICLE

Scour the internal face at the plug welds.

[\(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use\)](#)

3- APPLYING PROTECTION BEFORE ASSEMBLY

Position the acoustic inserts in the hollow sections, if necessary.

[\(see 04F, Bodywork products and mountings, Soundproofing products before assembly: Use\)](#)

Apply the anti-corrosion protection to the internal mating faces according to the type of weld[\(see 04F, Bodywork products and mountings, Anti-corrosion protection product before assembly: Use\)](#) .

4- ASSEMBLY

1)ADJUSTING THE WELDER

GMAW plug welded joints.

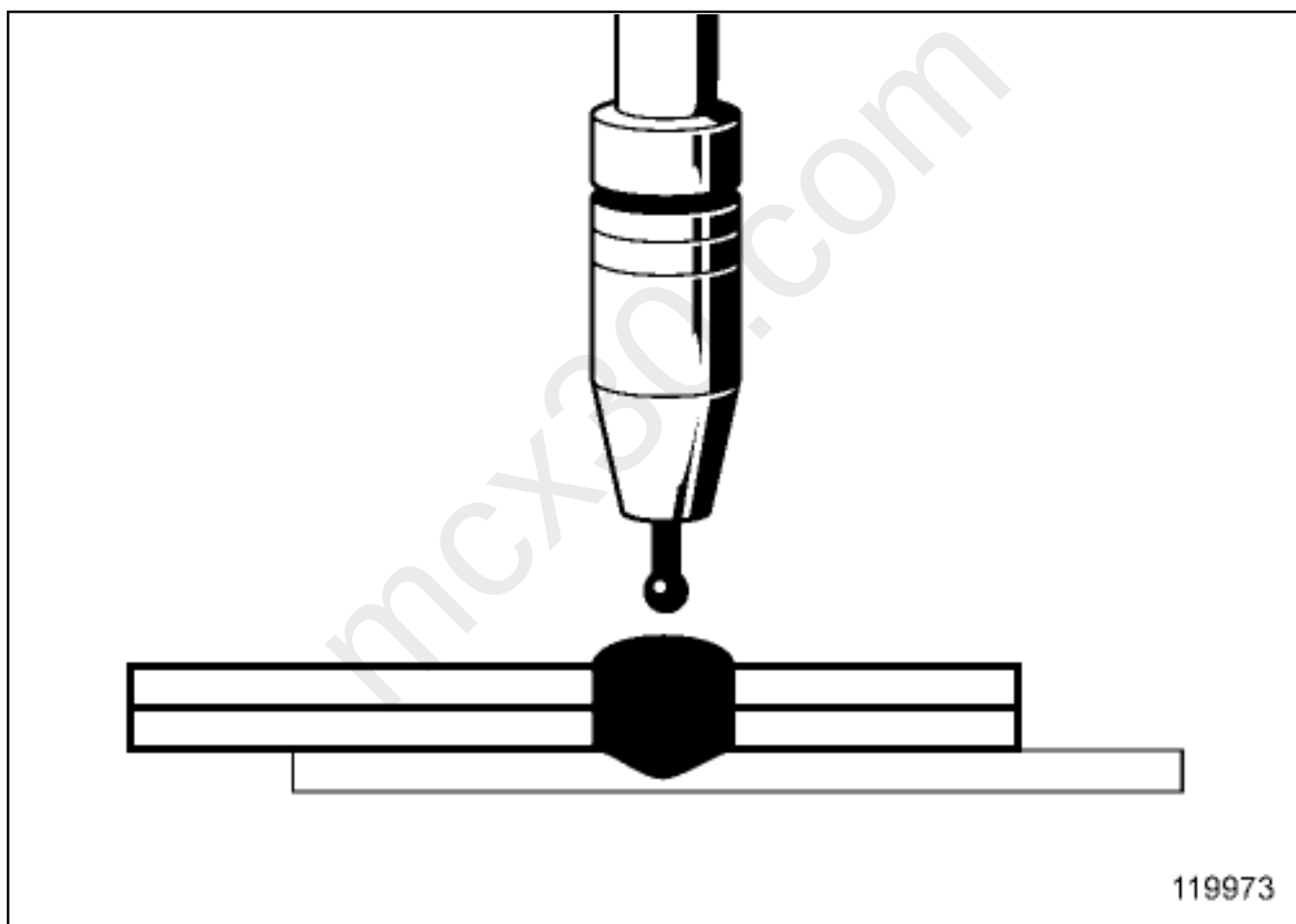
[\(see 40C, Gas metal arc welded connections, Connections by arc welding under shielding gas: Precautions for the repair\)](#)

2)CARRYING OUT THE WELDING

Reposition the replacement part, adjust it and fix it using the locking pliers.

Reassemble the adjacent components if necessary and check the panel gaps.

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



Do the plug welds.

[\(see 40C, Gas metal arc welded connections, Connections by arc welding under shielding gas: Description\)](#)

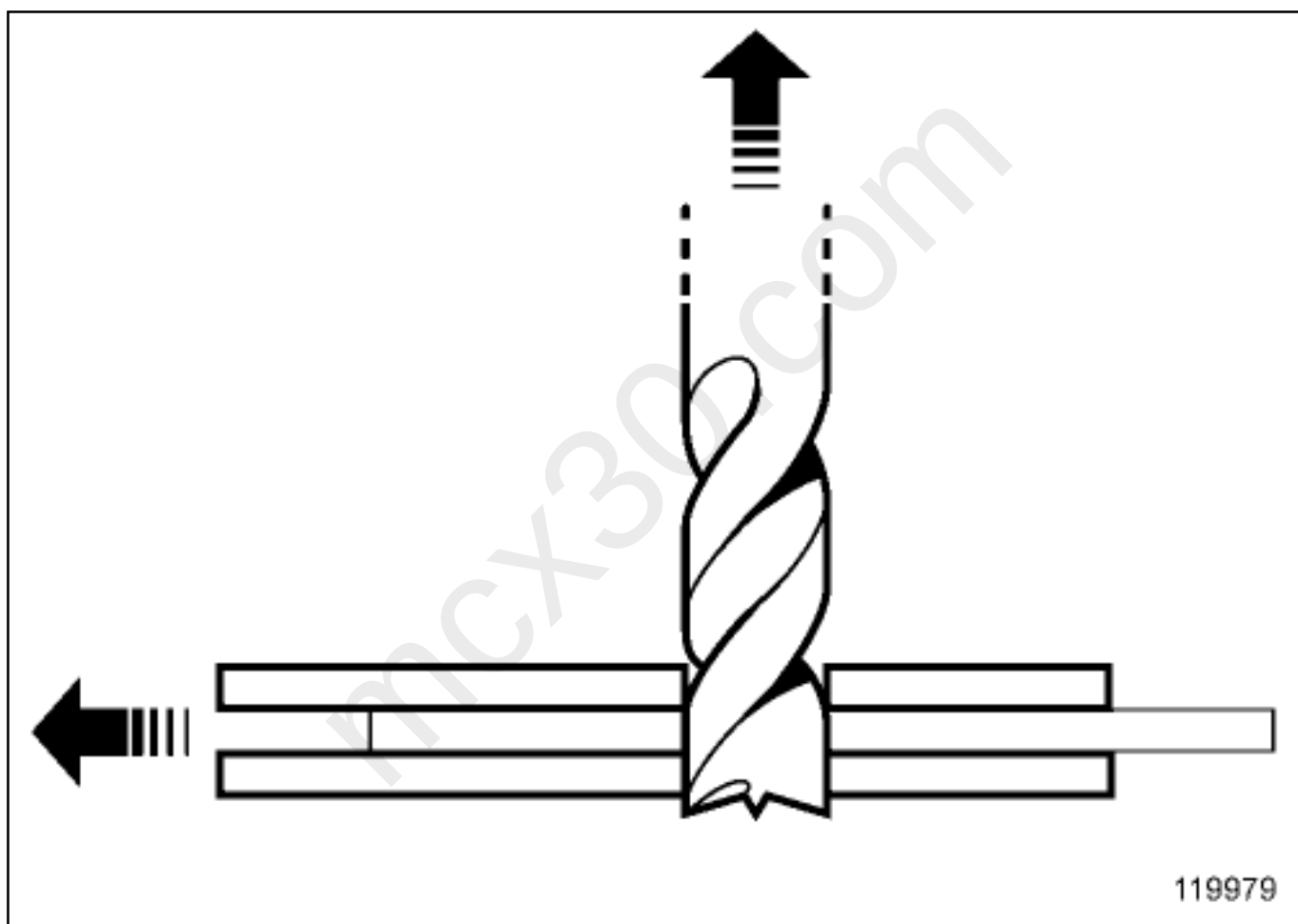
5- FINISHING

Surface finishing the plug welds.

(see 05B, Equipment and Tools, Tool for surfacing mating faces: Use)

6. SINGLE FACE ACCESS, FIRST AND THIRD PANELS TO BE REPLACED

1- DISMANTLING



Detach the assembly at the spot weld.

(see 05B, Equipment and Tools, Tools for unpicking a structural component: Use)

Remove the damaged part.

Position the replacement part, adjust it and fix it using the locking pliers.

If necessary, reassemble the adjacent components and check the panel gaps.

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

Mark the joint areas.

Remove the replacement part.

1) PREPARATION OF THE REPLACEMENT PART

Drill the external panel without touching the second, respecting the following table:

Panel thickness (mm)	Ø drill bit (mm)
0.6 to 1	6
1 to 1.5	7
1.5 to 2	8
2 and more	10

Scour the edges of the drilling holes on the external faces

If possible, scour the interface between the two panels of the replacement part, without damaging the mating faces.

[\(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use\)](#)

2) PREPARATION ON THE VEHICLE

Scour the edges of the drilling holes on the internal and external faces.

[\(see 05B, Equipment and Tools, Tools for scraping rigid adhesives and paint: Use\)](#)

3- APPLY THE PROTECTION BEFORE ASSEMBLY

Position the acoustic inserts in the hollow sections, if necessary.

(see 04F, Bodywork products and mountings, Soundproofing products before assembly: Use)

Apply the anti-corrosion protection to the internal mating faces according to the type of weld (see 04F, Bodywork products and mountings, Anti-corrosion protection product before assembly: Use) .

4- ASSEMBLY

1)ADJUSTING THE WELDER

GMAW plug welded joints.

(see 40C, Gas metal arc welded connections, Connections by arc welding under shielding gas: Precautions for the repair)

2)CARRYING OUT THE WELDING

Reposition the replacement part, adjust it and fix it using the locking pliers.

Reassemble the adjacent components if necessary and check the panel gaps.

(see 05B, Equipment and Tools, Tools for adjusting and supporting a structural component: Use)