

ELECTRIC VEHICLE CHARGER AND CONVERTER HOUSINGS : REMOVAL - REFITTING



Note, one or more warnings are present in this procedure



Special tooling required	
Charger housing support	Ms. 2011

Locations and specifications (tightening torques, parts always to be replaced, etc.)([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) .



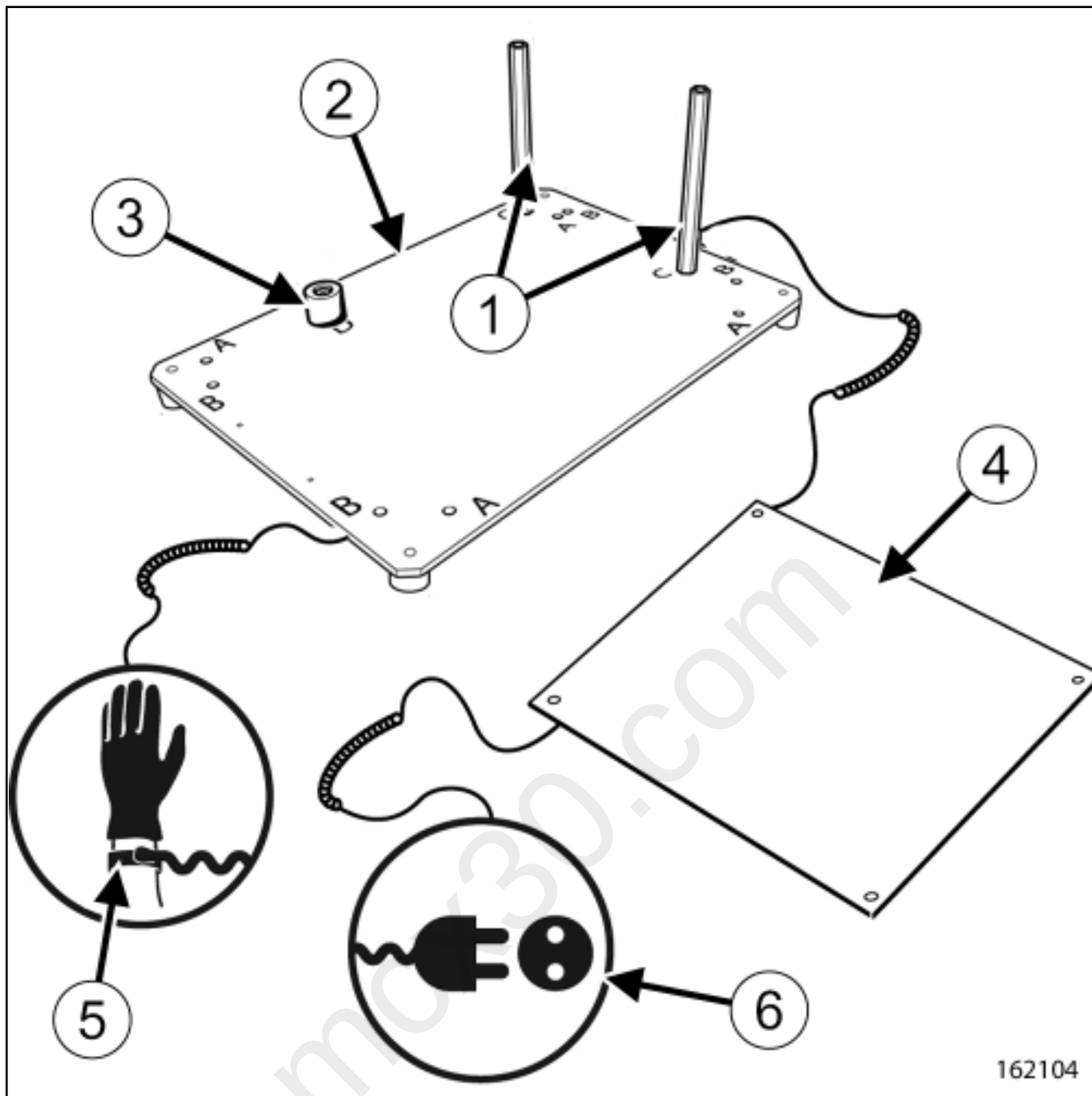
CAUTION

- To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair :
 - (see **Electric vehicle power electronics : Precautions for the repair**) ,
 - [Vehicle: Precautions for the repair](#) .

REMOVAL

1. REMOVAL PREPARATION OPERATION

ASSEMBLING THE CHARGER HOUSING SUPPORT MS.2011



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■ Assemble the charger housing supportCharger housing support([Ms. 2011](#)) .

■ Fit:

- the two spacers(1) on the charger housing support(2) using holes C,
- the two mounting screws of the spacers.

■ Tighten the two mounting screws of the spacers.

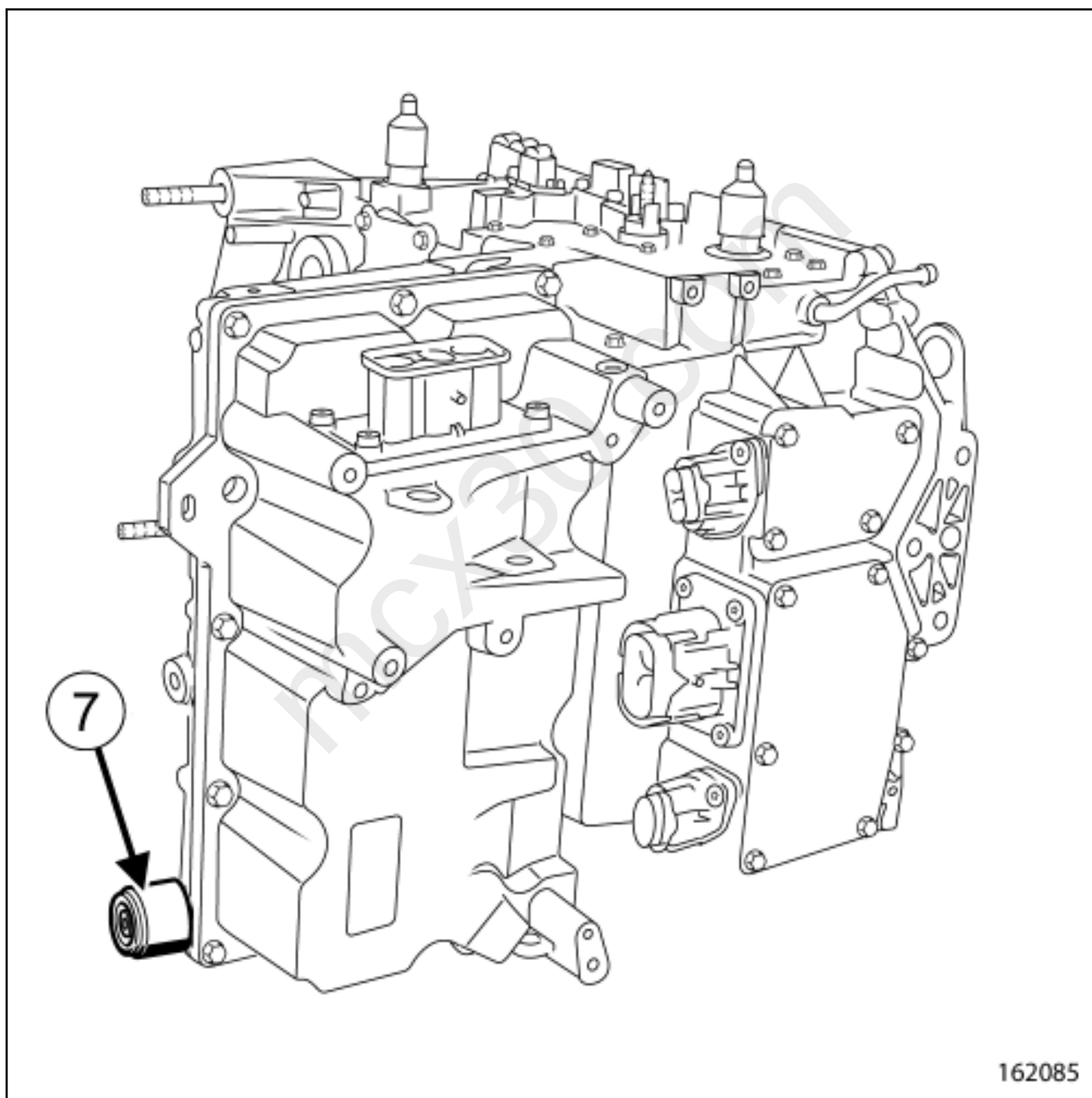
■ Fit:

- the silentbloc(3) on the charger housing support(2) using holes D,
- the mounting screw of the silentbloc.

■ Tighten the mounting screw of the silentbloc.

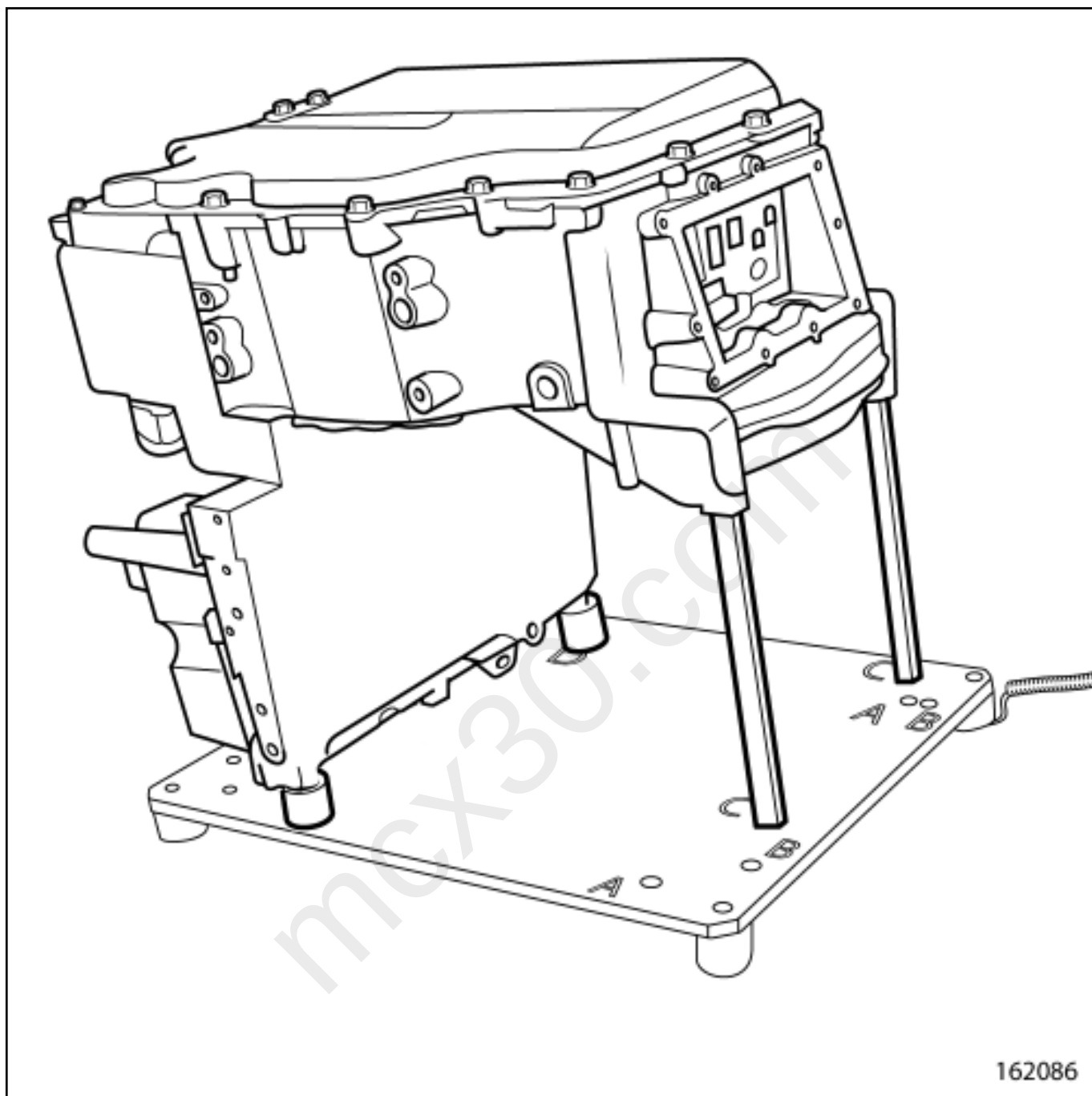
- Prepare the antistatic mat of the toolCharger housing support([Ms. 2011](#)) :
- lay down the antistatic mat([4](#)) on a clean working table,
 - plug the antistatic wrist strap wire([5](#)) on the electric socket([6](#)) ,
 - connect the electric socket wire([6](#)) on the antistatic mat([4](#)) ,
 - plug the electric socket([6](#)) in a wall plug,
 - connect the antistatic mat([4](#)) on the charger housing support([2](#)) .

- Remove the electric vehicle charger and converter([see 17E, Power electronics, Electric vehicle charger and converter: Removal - Refitting](#)) .



- Fit:
- the silentbloc([7](#)) on the electric vehicle charger and converter,
 - the mounting screw of the silentbloc.

- Tighten the mounting screw of the silentbloc.



- Fit the electric vehicle charger and converter on the charger housing supportCharger housing support (Ms. 2011) .

2. REMOVAL OPERATION

- Remove [\(see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view\)](#) :
 - the 20 mounting screws of the housing cover of electric vehicle charger and converter,
 - the housing cover of electric vehicle charger and converter,

- the housing cover of electric vehicle charger and converter seal.

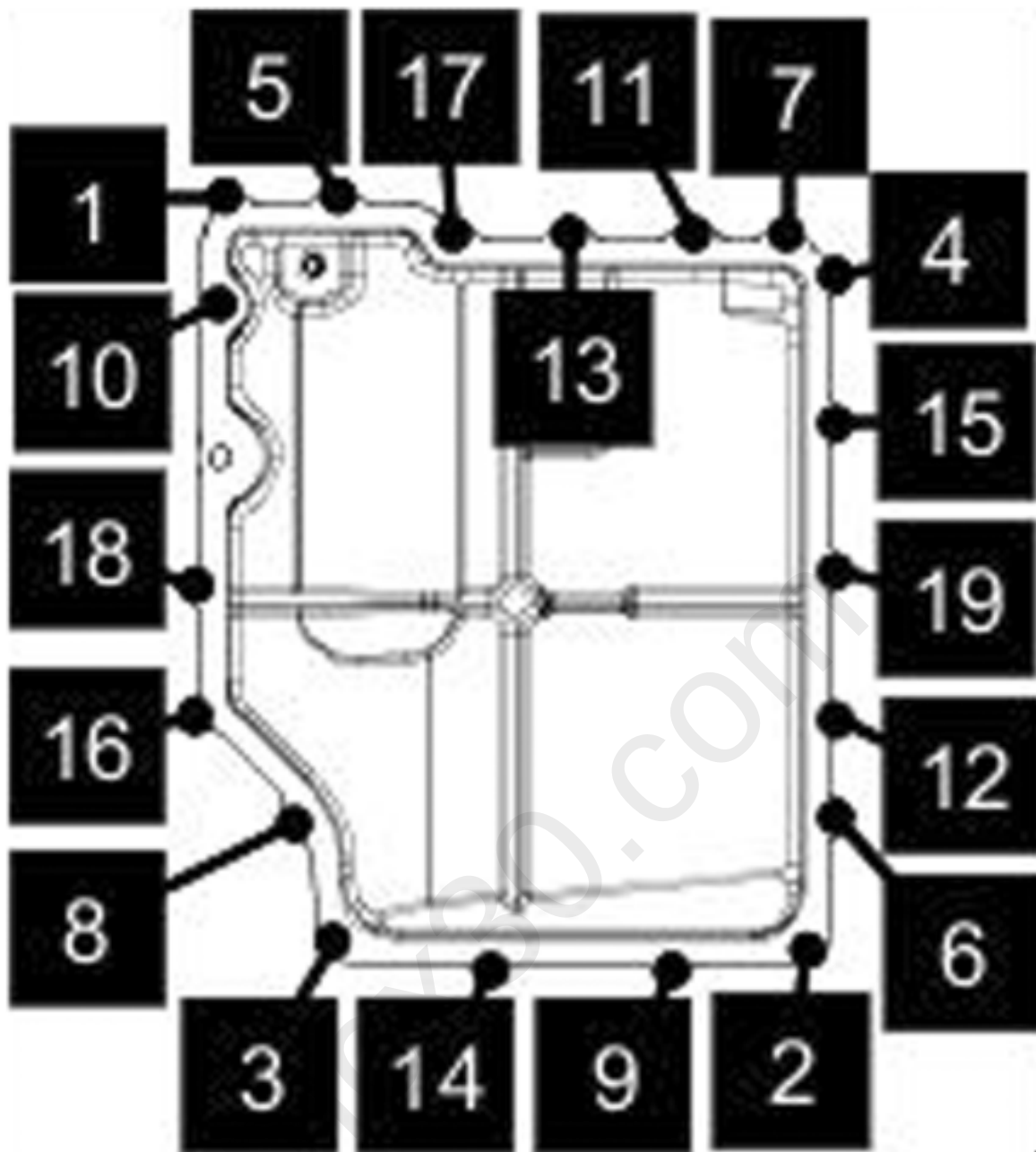
REFITTING

1. REFITTING PREPARATION OPERATION

- Part always to be replaced : the seal of the housing cover of electric vehicle charger and converter.

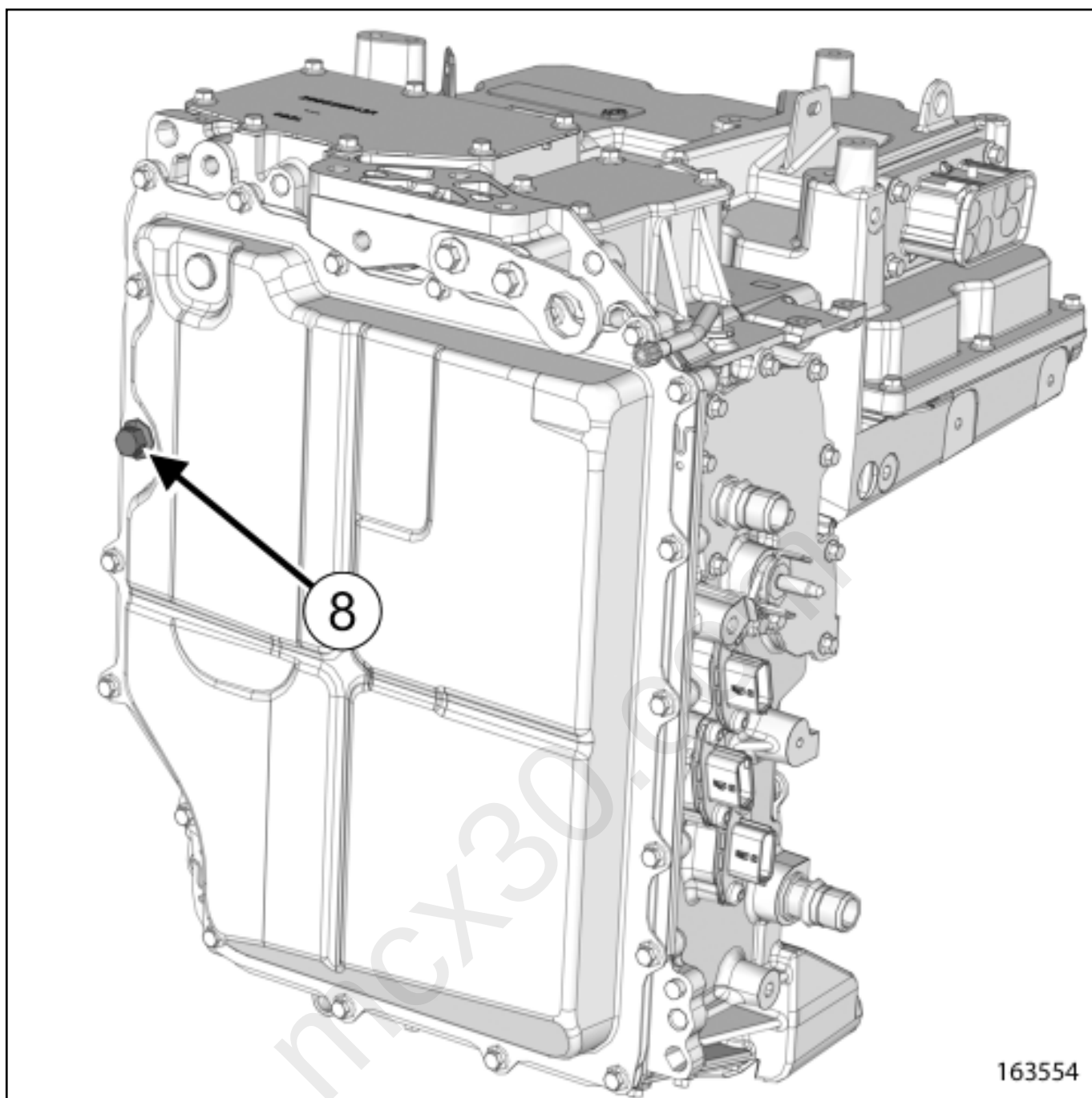
2. REFITTING OPERATION

- Refit [\(see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view\)](#) :
 - the new seal of housing cover of electric vehicle charger and converter,
 - the housing cover of electric vehicle charger and converter,
 - the 20 mounting screws of the housing cover of electric vehicle charger and converter.



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■ Torque tighten in order the 19 mounting screws of the housing cover of electric vehicle charger and converter. ([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) .



■ Torque tighten the mounting screw(8) of the housing cover of electric vehicle charger and converter.
([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) .

■ Mark always the screws using a paint marker of a color different from the original.

3. FINAL OPERATION

■ Refit the electric vehicle charger and converter([see 17E, Power electronics, Electric vehicle charger and converter: Removal - Refitting](#)) .

- Proceed in the reverse order to removal.

REMOVAL

1. REMOVAL PREPARATION OPERATION

- Remove the electric vehicle charger and converter([see 17E, Power electronics, Electric vehicle charger and converter: Removal - Refitting](#)) .
- Remove the housing cover of electric vehicle charger and converter([see 17E, Power electronics, Electric vehicle charger and converter housings : Removal - Refitting](#)) .
- Remove the upper bus bars([see 17E, Power electronics, Electric vehicle charger and converter high voltage bus bars : Removal - Refitting](#)) .
- Remove the internal low voltage wiring([see 17E, Power electronics, Electric vehicle charger and converter internal wiring : Removal - Refitting](#)) .
- Remove the fuse box([see 17E, Power electronics, Electric vehicle charger and converter fuse box : Removal - Refitting](#)) .
- Remove the lower bus bar([see 17E, Power electronics, Electric vehicle charger and converter high voltage bus bars : Removal - Refitting](#)) .
- Remove the input engine capacitance module([see 17E, Power electronics, Electric vehicle charger and converter electronic power modules : Removal - Refitting](#)) .
- Remove ([see 17E, Power electronics, Electric vehicle charger and converter connector sockets : Removal - Refitting](#)) :
 - the 12V positive terminal of electric vehicle charger and converter,
 - the charging plug signal connector socket,
 - the electric vehicle charger and converter signal connector socket,
 - the engine signal wiring connector socket.
- Remove ([see 17E, Power electronics, Electric vehicle charger and converter electronic power modules : Removal - Refitting](#)) :
 - the inductance module,
 - the inverter module,
 - the direct current converter module,
 - the capacitance module,
 - the rectifier module.
- Remove the electronic filter([see 17E, Power electronics, Electric vehicle charger and converter electronic filter modules : Removal - Refitting](#)) .
- Remove the electronic filter wiring([see 17E, Power electronics, Electric vehicle charger and converter internal](#)

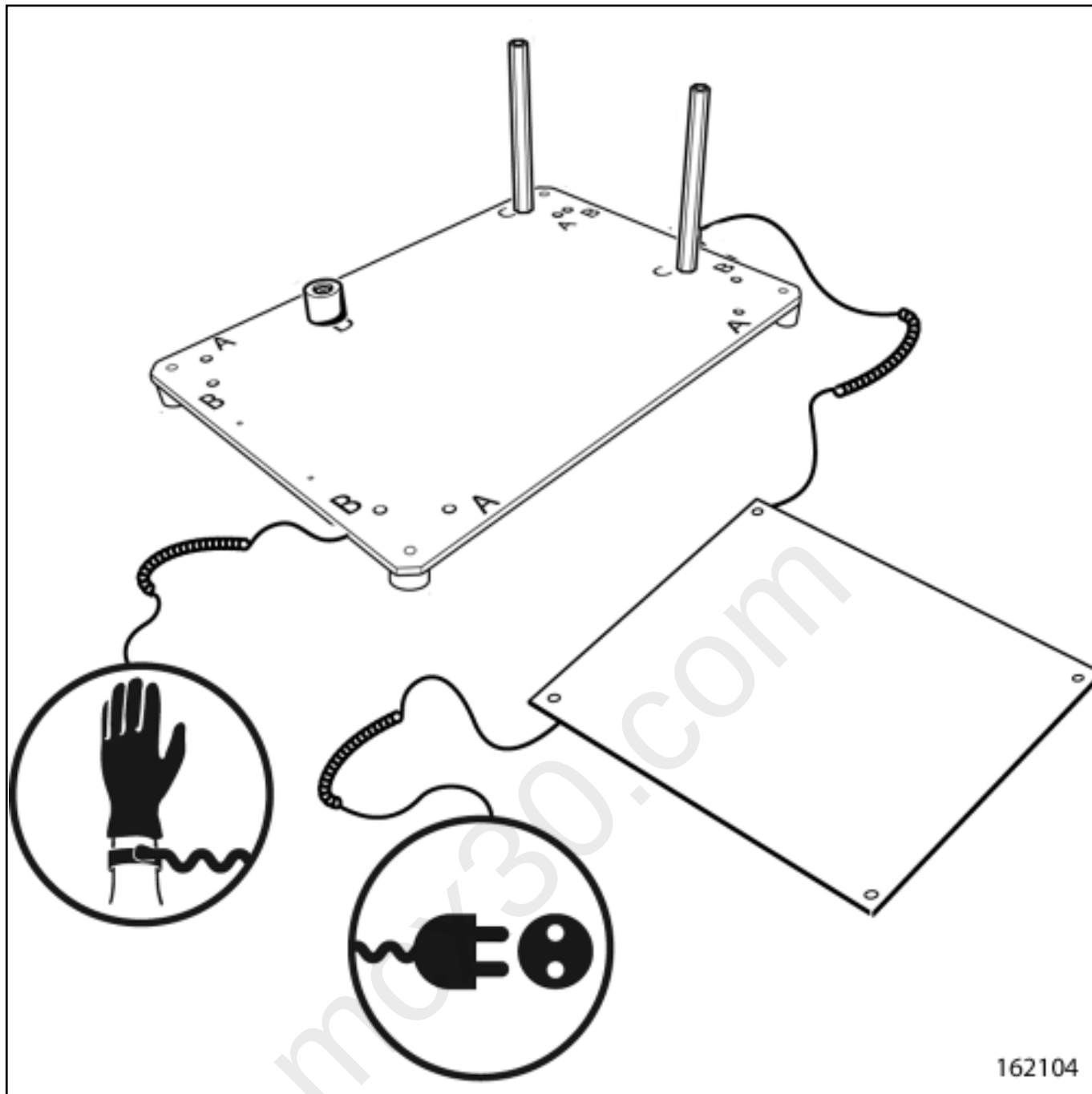
- Remove [\(see 17E, Power electronics, Electric vehicle charger and converter connector sockets : Removal - Refitting\)](#) :
- the heating connector socket,
 - the traction battery connector socket,
 - the air conditioning connector socket.

2. REMOVAL OPERATION

- Remove [\(see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view\)](#) :
- the lifting eye screws,
 - the lifting eye,
 - the two studs on the housing of electric vehicle charger and converter,
 - the housing of electric vehicle charger and converter.

REFITTING

1. REMOVAL PREPARATION OPERATION



■ Assemble the charger housing supportCharger housing support([Ms. 2011](#)) .

■ Fit:

- the two spacers on the charger housing support using holes C,
- the two mounting screws of the spacers.

■ Tighten the two mounting screws of the spacers.

■ Fit:

- the silentbloc on the charger housing support using holes D,
- the mounting screw of the silentbloc.

■ Tighten the mounting screw of the silentbloc.

- Prepare the antistatic mat of the toolCharger housing support([Ms. 2011](#)) :
 - lay down the antistatic mat on a clean working table,
 - plug the antistatic wrist strap wire on the electric socket,
 - connect the electric socket wire on the antistatic mat,
 - plug the electric socket in a wall plug,
 - connect the antistatic mat on the charger housing support.
- Fit:
 - the silentbloc on the new housing of electric vehicle charger and converter,
 - the mounting screw of the silentbloc.
- Tighten the mounting screw of the silentbloc.
- Refit the two studs on the new housing of electric vehicle charger and converter([see 17E, Power electronics, Electric powertrain assembly : Exploded view](#)) .
- Torque tighten the two studs on the new housing of electric vehicle charger and converter([see 17E, Power electronics, Electric powertrain assembly : Exploded view](#)) .
- Mark always the studs using a paint markerof a color different from the original.
- Fit the housing of electric vehicle charger and converter on the charger housing supportCharger housing support ([Ms. 2011](#)) .

2. REFITTING OPERATION

- Refit ([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) :
 - the lifting eye,
 - the lifting eye screws.
- Torque tighten the lifting eye screws([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) .
- Mark always the screws using a paint markerof a color different from the original.
- Refit ([see 17E, Power electronics, Electric vehicle charger and converter electronic power modules : Removal - Refitting](#)) :
 - the inverter module,
 - the rectifier module.
- Refit the electronic filter wiring([see 17E, Power electronics, Electric vehicle charger and converter internal wiring : Removal - Refitting](#)) .
- Refit the electronic filter([see 17E, Power electronics, Electric vehicle charger and converter electronic filter modules : Removal - Refitting](#)) .

- Refit the air conditioning connector socket([see 17E, Power electronics, Electric vehicle charger and converter connector sockets : Removal - Refitting](#)) .
- Refit ([see 17E, Power electronics, Electric vehicle charger and converter electronic power modules : Removal - Refitting](#)) :
 - the direct current converter module,
 - the capacitance module.
- Refit ([see 17E, Power electronics, Electric vehicle charger and converter connector sockets : Removal - Refitting](#)) :
 - the heating connector socket,
 - the traction battery connector socket.
- Refit the lower bus bar([see 17E, Power electronics, Electric vehicle charger and converter high voltage bus bars : Removal - Refitting](#)) .
- Refit the fuse box([see 17E, Power electronics, Electric vehicle charger and converter fuse box : Removal - Refitting](#)) .
- Refit the internal low voltage wiring([see 17E, Power electronics, Electric vehicle charger and converter high voltage bus bars : Removal - Refitting](#)) .
- Refit the 12V positive terminal of electric vehicle charger and converter([see 17E, Power electronics, Electric vehicle charger and converter connector sockets : Removal - Refitting](#)) .
- Refit ([see 17E, Power electronics, Electric vehicle charger and converter electronic power modules : Removal - Refitting](#)) :
 - the input engine capacitance module,
 - the inductance module.
- Remove the upper bus bars([see 17E, Power electronics, Electric vehicle charger and converter high voltage bus bars : Removal - Refitting](#)) .
- Refit ([see 17E, Power electronics, Electric vehicle charger and converter connector sockets : Removal - Refitting](#)) :
 - the charging plug signal connector socket,
 - the electric vehicle charger and converter signal connector socket,
 - the engine signal wiring connector socket.
- Refit the housing cover of electric vehicle charger and converter([see 17E, Power electronics, Electric vehicle charger and converter housings : Removal - Refitting](#)) .

3. FINAL OPERATION

- Refit the electric vehicle charger and converter([see 17E, Power electronics, Electric vehicle charger and converter: Removal - Refitting](#)) .



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