

ELECTRIC VEHICLE CHARGER AND CONVERTER INTERNAL WIRING : REMOVAL-REFITTING



Note, one or more warnings are present in this procedure



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 :

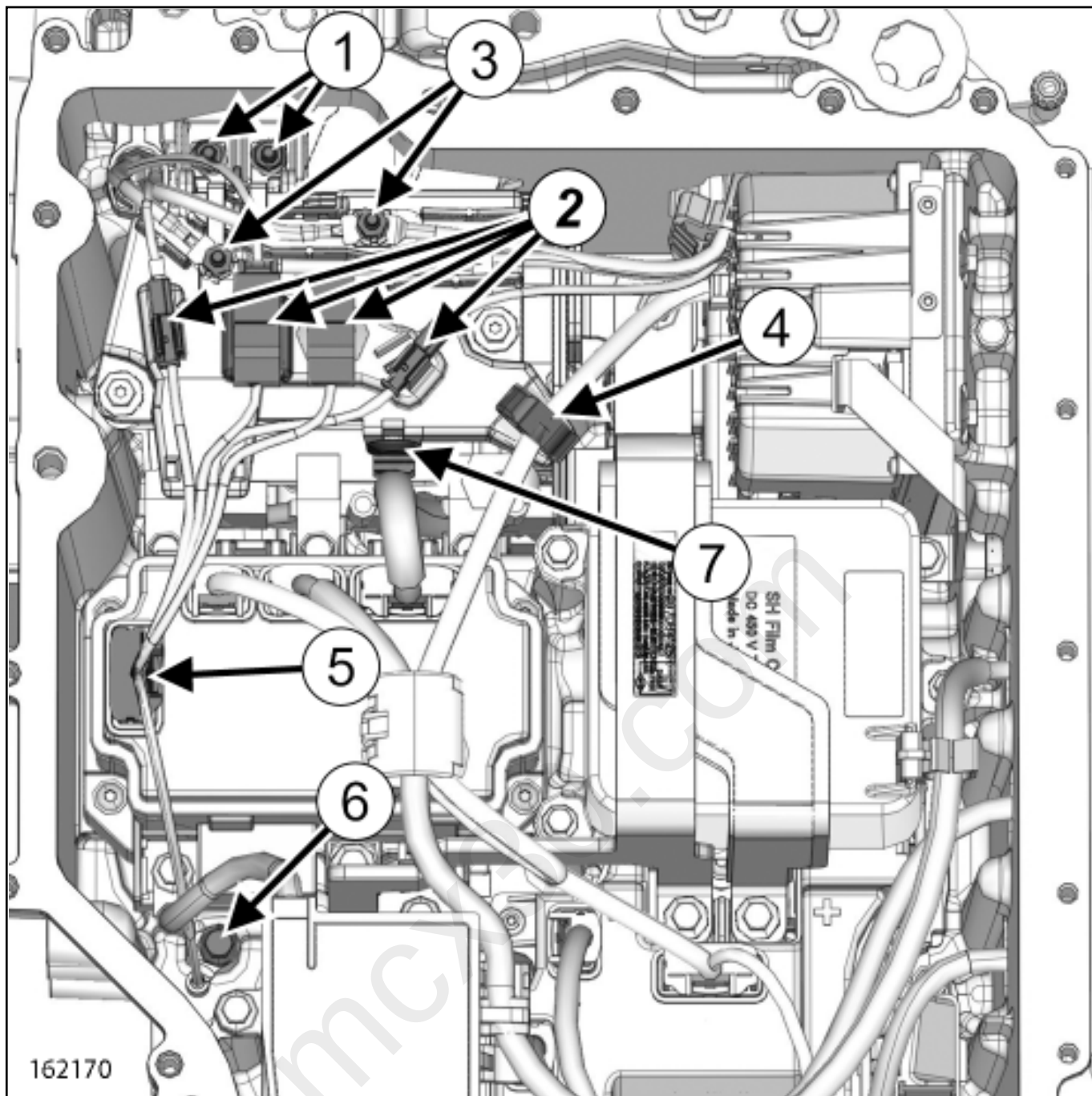
- (see **Electric vehicle power electronics : Precautions for the repair**) ,
- [Vehicle: Precautions for the repair](#) .

REMOVAL

1. REMOVAL PREPARATION OPERATION

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

2. REMOVAL OPERATION



- Remove the two connection nuts(1) between the fuse box and the internal low voltage wiring([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) .
- Disconnect the four interlock connectors(2) of the internal low voltage wiring.
- Loosen the two captive nuts(3) of the heating connector socket of the internal low voltage wiring.
- Remove of the internal low voltage wiring([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) :
 - the heating connector wiring,
 - the air conditioning connector wiring.
- Remove the wiring between the converter module and the rectifier module and the inverter module of

the maintaining(4) of the internal low voltage wiring.

- Unclip the internal low voltage wiring connector(5) of the rectifier module.
- Remove the heating sensor connection screw(6) of the internal low voltage wiring of the electric vehicle charger and converter housing.
- Unclip the electronic filter wiring(7) of the internal low voltage wiring.
- Remove [\(see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view\)](#) :
 - the two screws of the internal low voltage wiring,
 - the internal low voltage wiring.

REFITTING

1. REFITTING OPERATION

- Refit the internal low voltage wiring.
- Clip the electronic filter wiring of the internal low voltage wiring.
- Refit the two screws of the internal low voltage wiring.
- Torque tighten the two screws of the internal low voltage wiring([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.
- Refit the heating sensor connection screw of the internal low voltage wiring of the electric vehicle charger and converter housing.
- Torque tighten the heating sensor connection screw of the internal low voltage wiring of the electric vehicle charger and converter housing([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) .
- Mark always the screw using a paint marker of a color different from the original.
- Clip the internal low voltage wiring connector of the rectifier module.
- Check the electrical connection with a push-pull test(see **Electric vehicle power electronics : Precautions for the repair**) .
- Refit the wiring between the converter module and the rectifier module and the inverter module in the

maintaining internal low voltage wiring.

- Refit on the internal low voltage wiring([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) :
 - the heating connector wiring,
 - the air conditioning connector wiring.
- Torque tighten the two captive nuts of the heating connector socket of the internal low voltage wiring([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) .
- Mark always the nuts using a paint marker of a color different from the original.
- Connect the four interlock connectors of the internal low voltage wiring.
- Check the electrical connection with a push-pull test(see **Electric vehicle power electronics : Precautions for the repair**) .
- Refit the two connection nuts between the fuse box and the internal low voltage wiring([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) .
- Torque tighten the two connection nuts between the fuse box and the internal low voltage wiring([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.

2. FINAL OPERATION

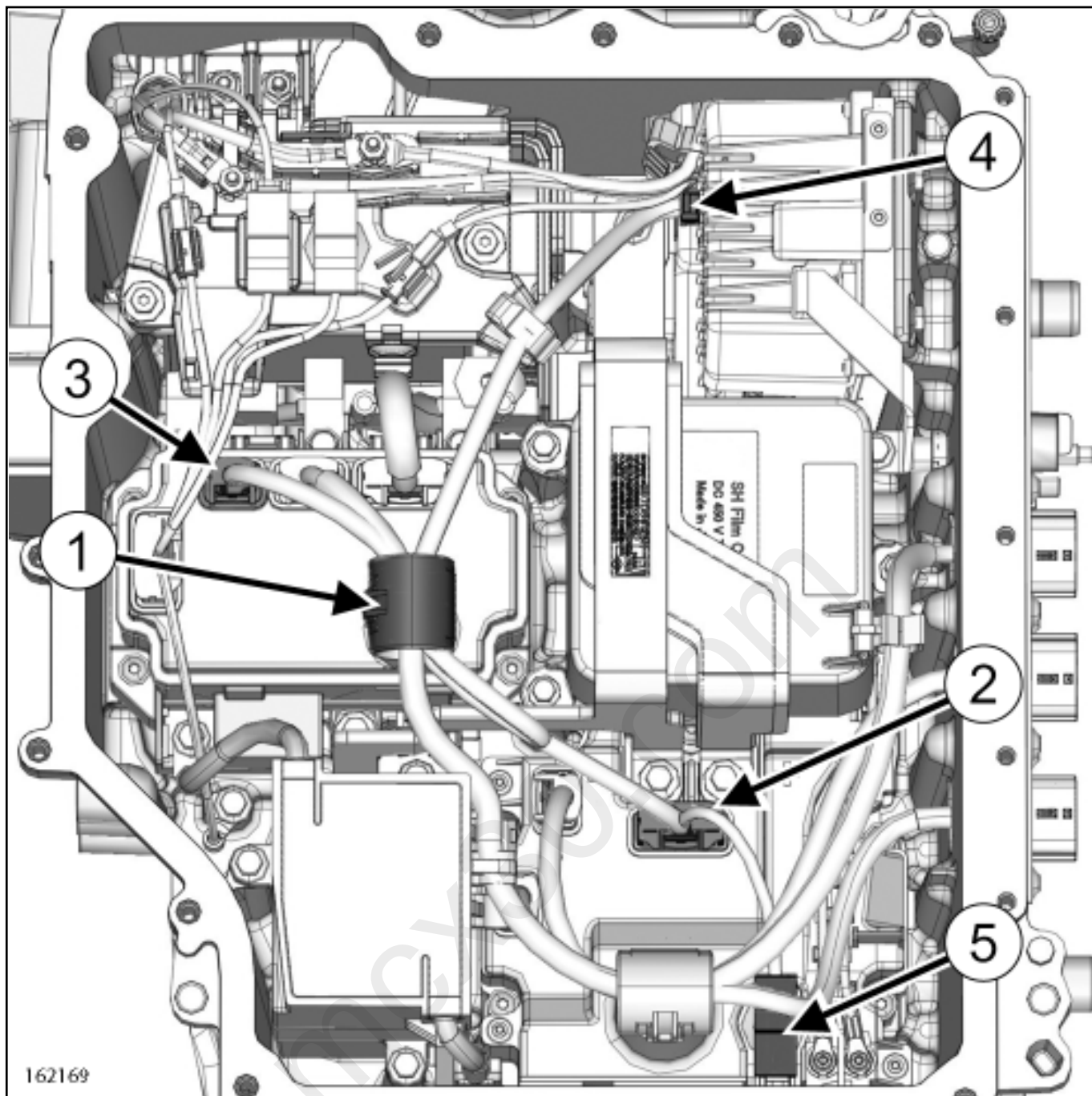
- Proceed in the reverse order to removal.

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](#)) .

2. REMOVAL OPERATION



■ Open the cable retaining clip(1) of the rectifier module.

■ Disconnect the wiring connectors between the converter module and the rectifier module and the inverter module of([see 17E. Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) :

- the inverter module(2) ,
- the rectifier module(3) ,
- the direct current converter module(4) .

■ Disconnect the wiring between the converter module and the rectifier module and the inverter module from the inverter module(5) .

■ Remove the wiring between the converter module and the rectifier module and the inverter module.

REFITTING

1. REFITTING OPERATION

- Refit the wiring between the converter module and the rectifier module and the inverter module.
- Connect the wiring between the converter module and the rectifier module and the inverter module on the inverter module.
- Connect the wiring connectors between the converter module and the rectifier module and the inverter module on [\(see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view\)](#) :
 - the inverter module ,
 - the rectifier module ,
 - the direct current converter module .
- Check the electrical connection with a push-pull test [\(see Electric vehicle power electronics : Precautions for the repair\)](#) .
- Close the cable retaining clip of the rectifier module.

2. FINAL OPERATION

- 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 bars([see 17E, Power electronics, Electric vehicle charger and converter high voltage bus bars : Removal - Refitting](#)) .

❑ Remove the capacitance module([see 17E, Power electronics, Electric vehicle charger and converter electronic power modules : Removal - Refitting](#)) .

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

2. REMOVAL OPERATION

❑ Disconnect the electronic filter wiring from the electronic filter([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) .

REFITTING

1. REFITTING OPERATION

❑ Connect the electronic filter wiring on the electronic filter([see 17E, Power electronics, Electric vehicle charger and converter assembly : Exploded view](#)) .

❑ Check the electrical connection with a push-pull test(see **Electric vehicle power electronics : Precautions for the repair**) .

2. FINAL OPERATION

❑ Proceed in the reverse order to removal.



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