# TRACTION BATTERY HIGH VOLTAGE CONNECTOR : REMOVAL - REFITTING

Note, one or more warnings are present in this procedure

| Special tooling required | |
|---|---|
| Set of trim removal levers. | Car. 1363 |

Locations and specifications (tightening torques, parts always to be replaced, etc.)(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) (see 19E, Traction battery, Traction battery housing assembly : Exploded view) .

**WARNING**

- To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair:
  - (see 19E, Traction battery, Traction battery : Precautions for the repair) ,
  - Vehicle: Precautions for the repair .

**WARNING**

DANGER: HIGH VOLTAGE VEHICLE.

Risks of serious burns or electric shock that may prove fatal.

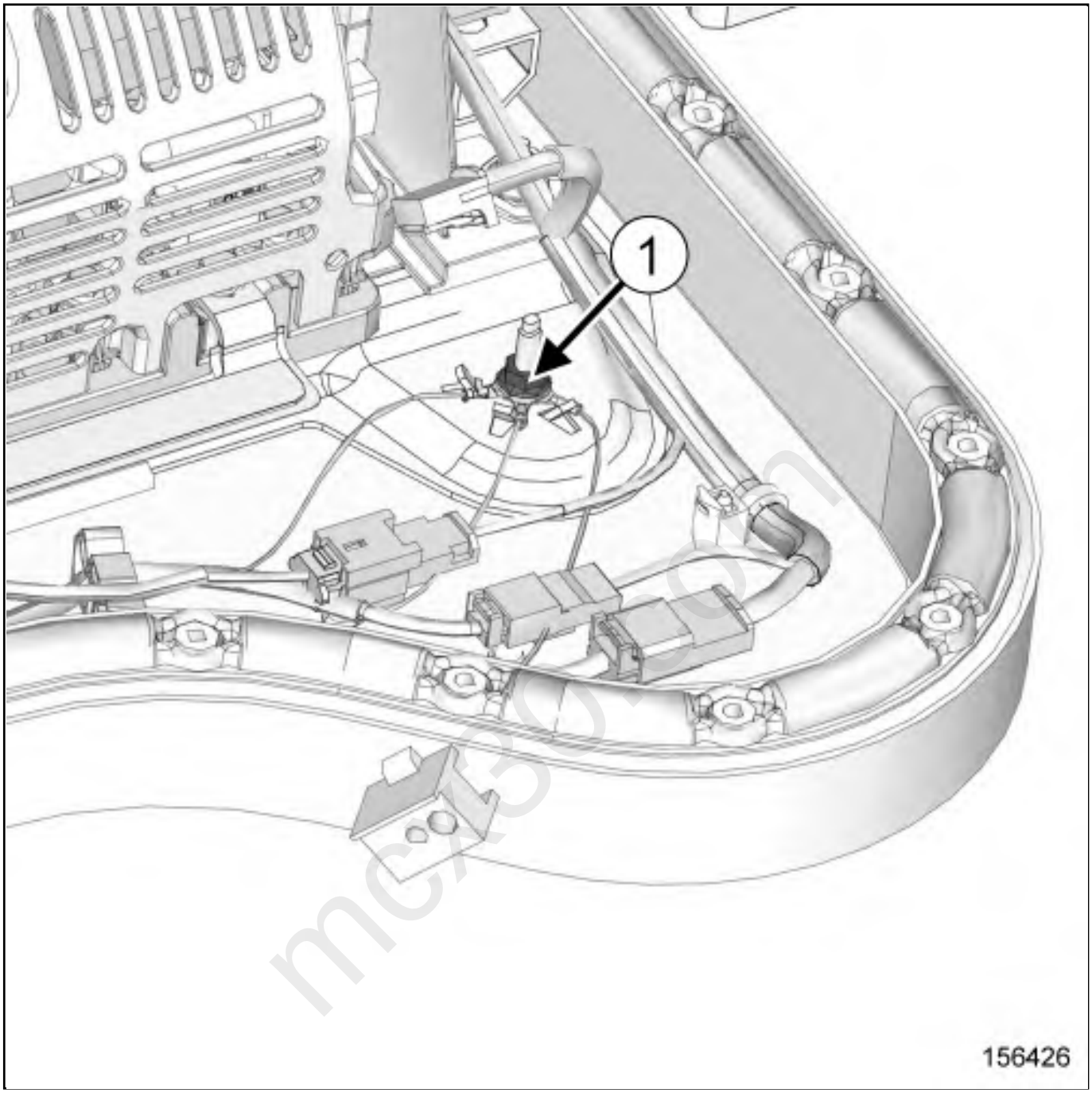
Before carrying out any work on the vehicle, it is essential that you adhere to the instructions regarding vehicle voltage cut-off. This work must be carried out by an employee who is qualified and authorized to work on a high-voltage onboard network.

## REMOVAL

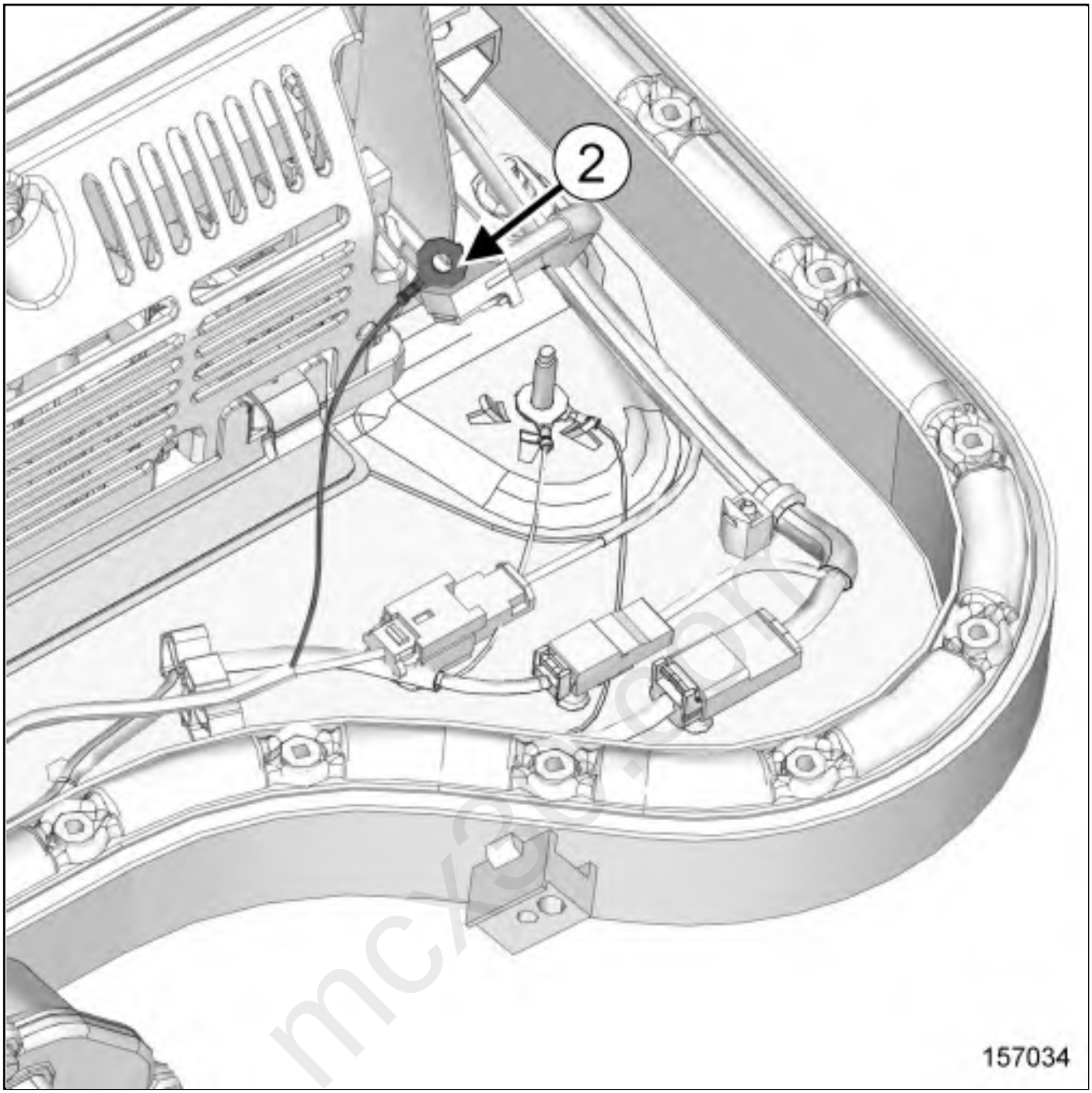
### 1. REMOVAL PREPARATION OPERATION

- Remove the traction battery upper cover(see 19E, Traction battery, Traction battery housing assembly : Exploded view ) .

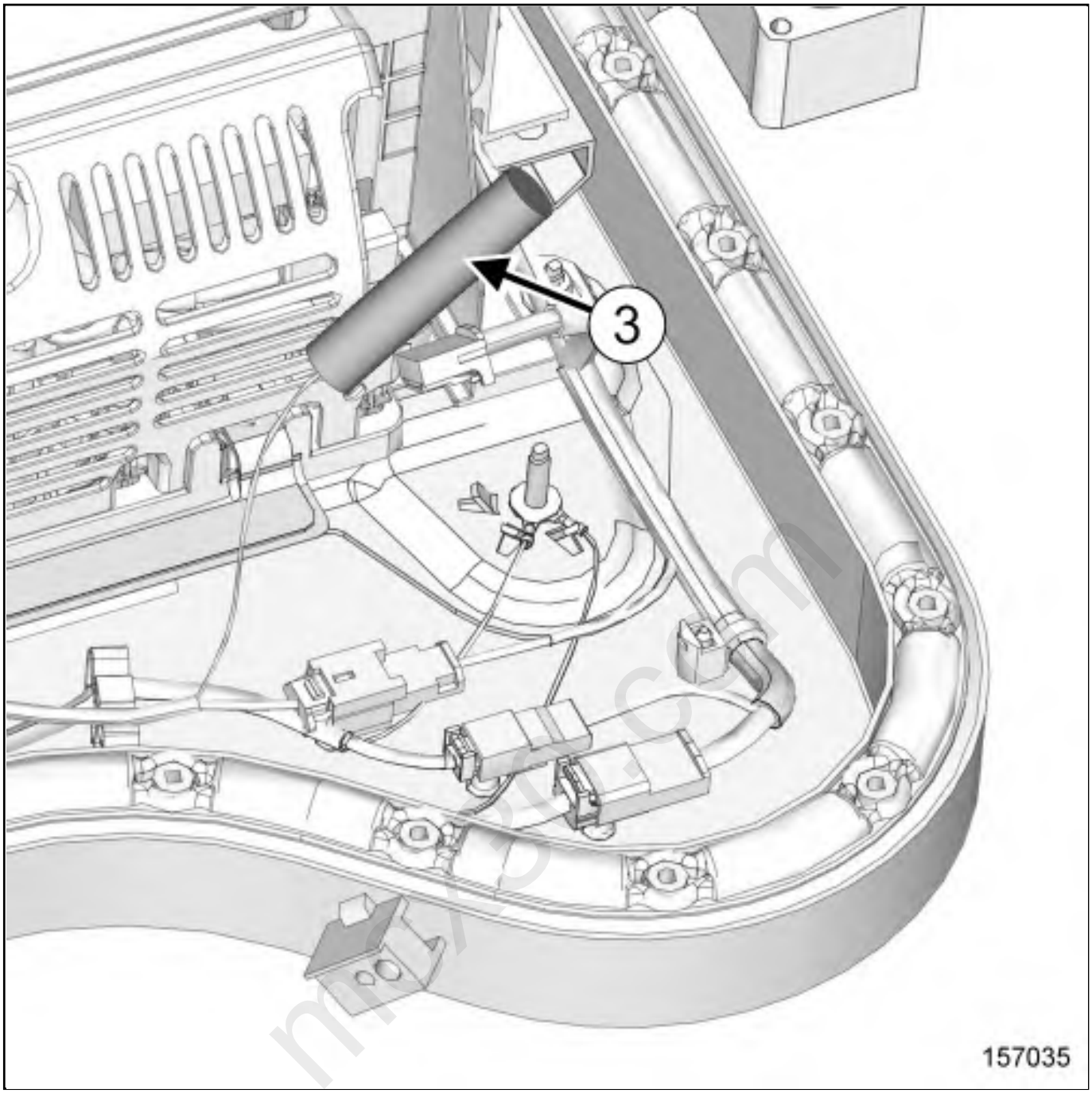
## 2. REMOVAL OPERATION



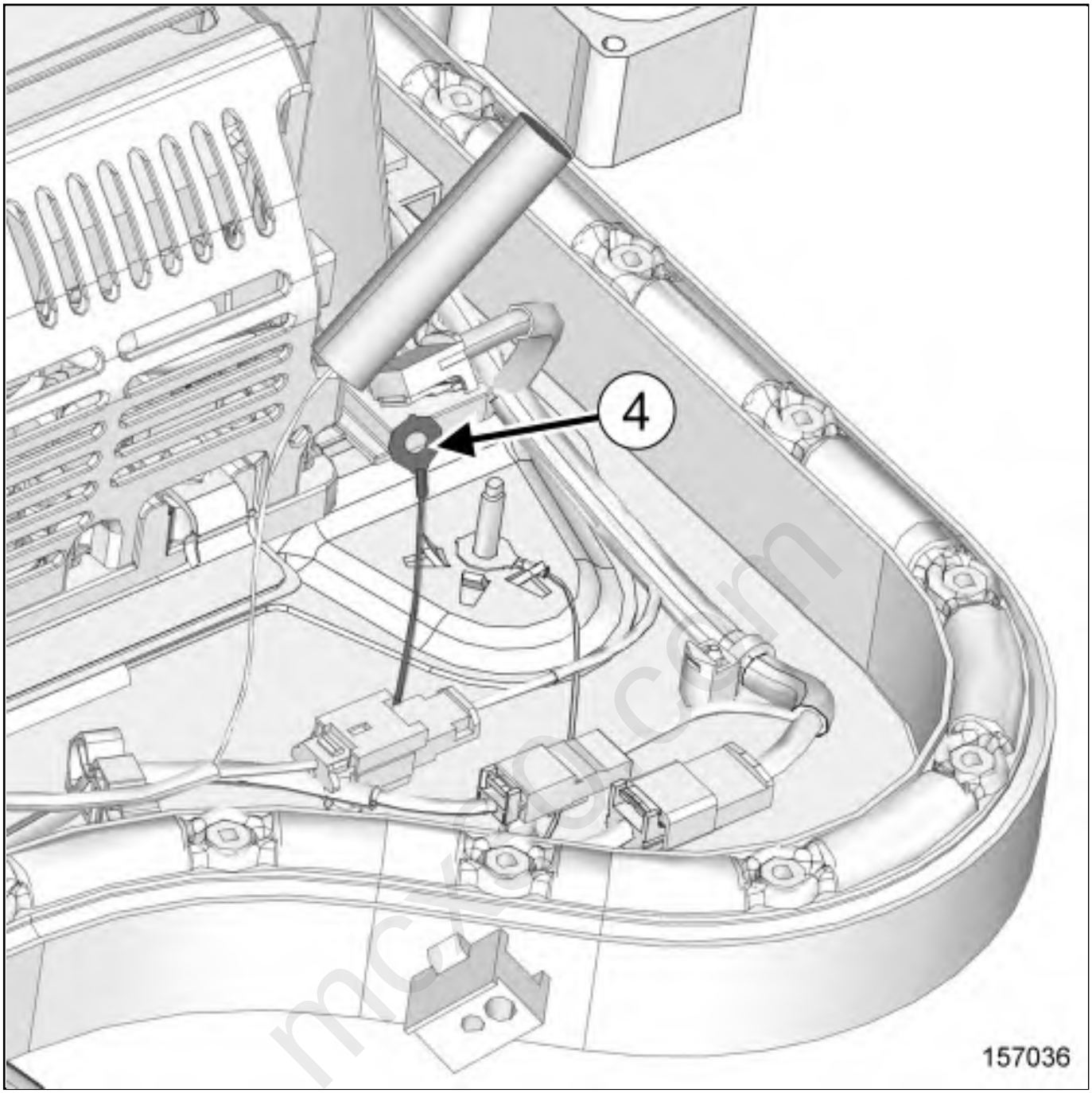

- Remove the earth electric connection nut(1) from the lower cover using an insulated magnetic socket **(see 19E, Traction battery, Traction battery module stack assembly : Exploded view)** .



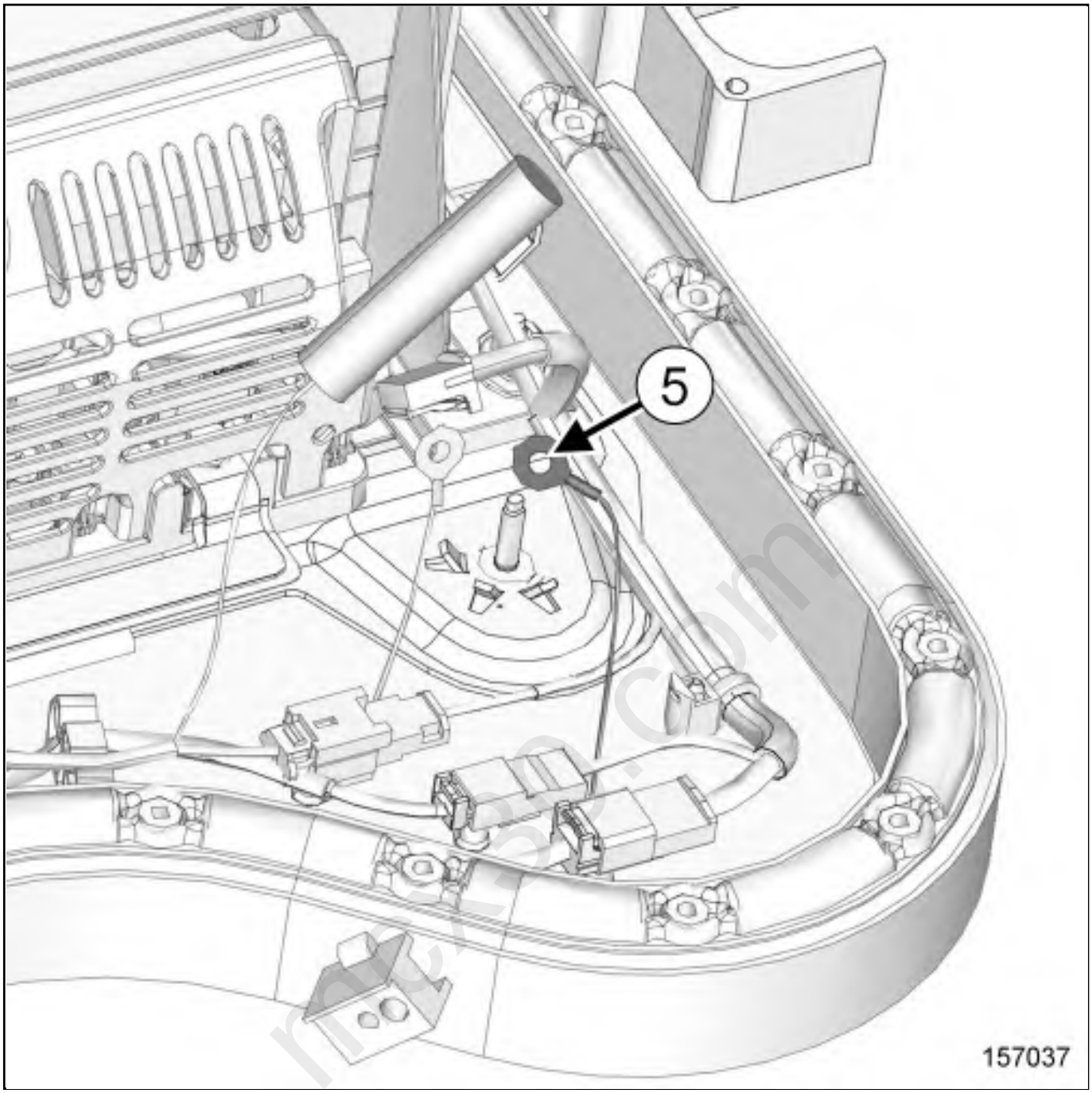

❏ Move the safety device switch socket interlock electric earth lug(2) from the electric earth stud using the toolSet of trim removal levers.(Car. 1363 ) .



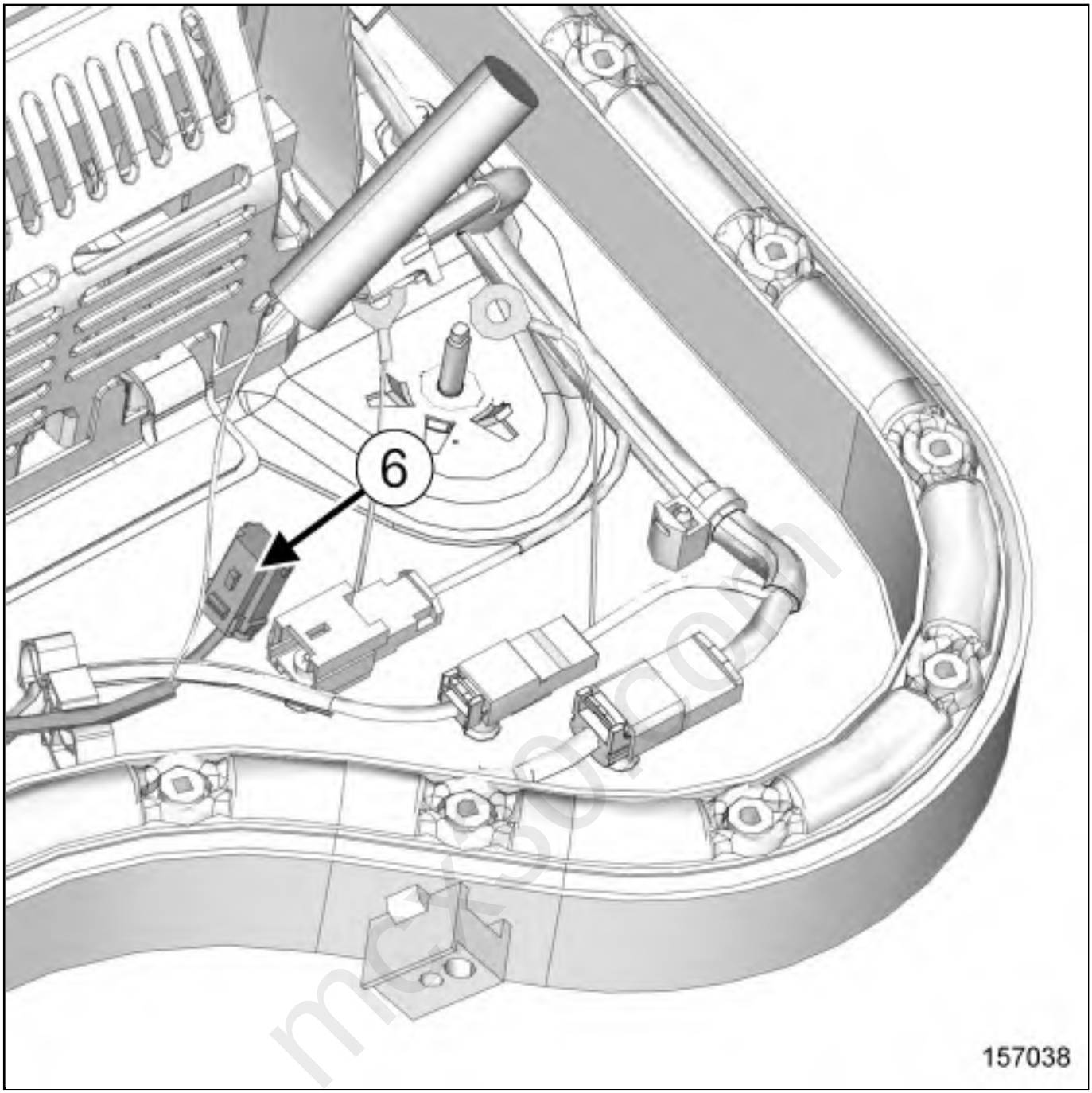

- Insulate the safety device switch socket interlock electric earth lug(3) .



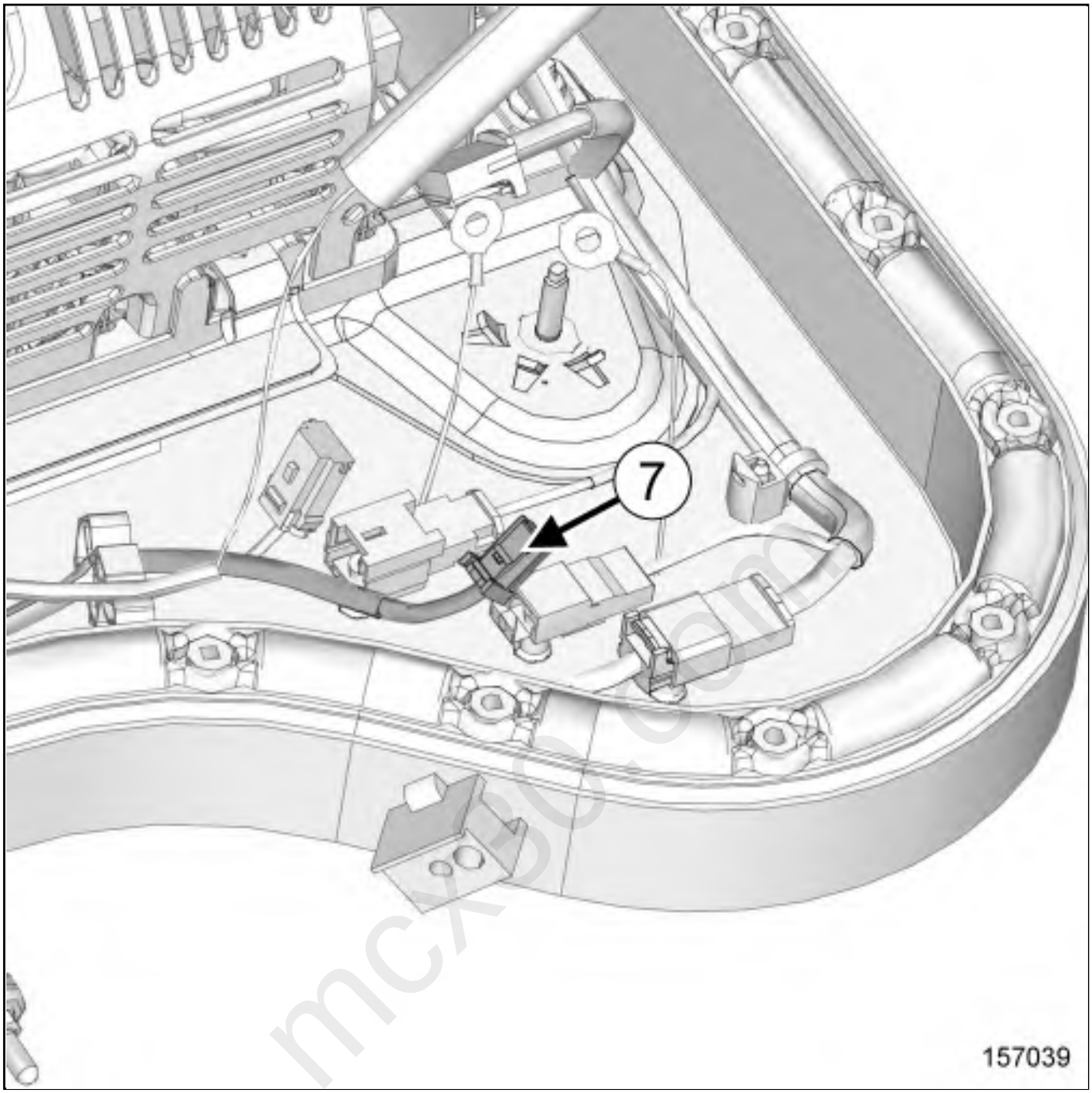

❑ Remove the interlock wiring lug of the high voltage connector(4) using the toolSet of trim removal levers. (Car. 1363 ) .




- Remove the lug of the low voltage connector(5) using the toolSet of trim removal levers.(Car. 1363 ) .

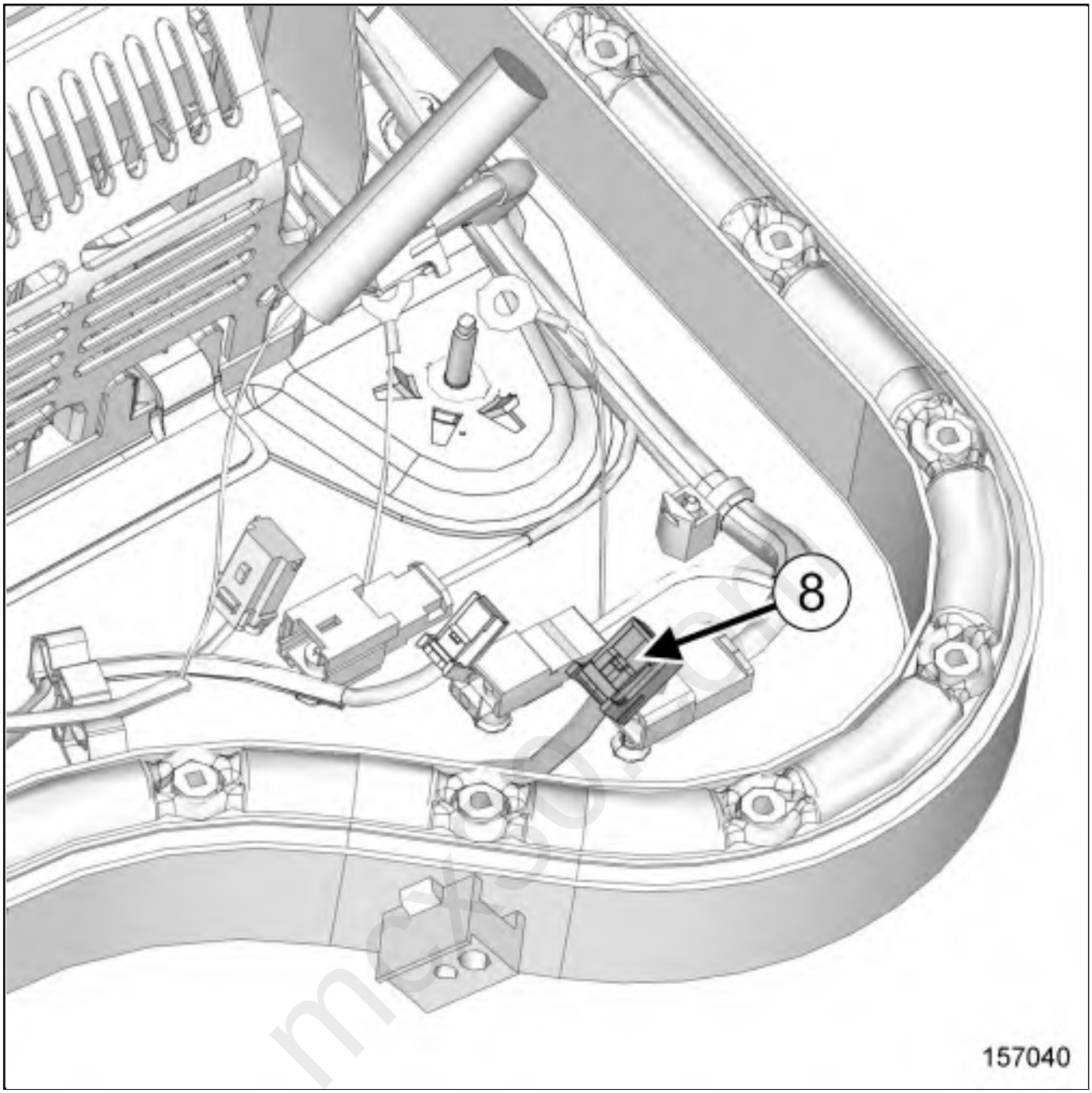



❑ Disconnect the safety device switch socket interlock wire plug(6) using the toolSet of trim removal levers. (Car. 1363 ) .

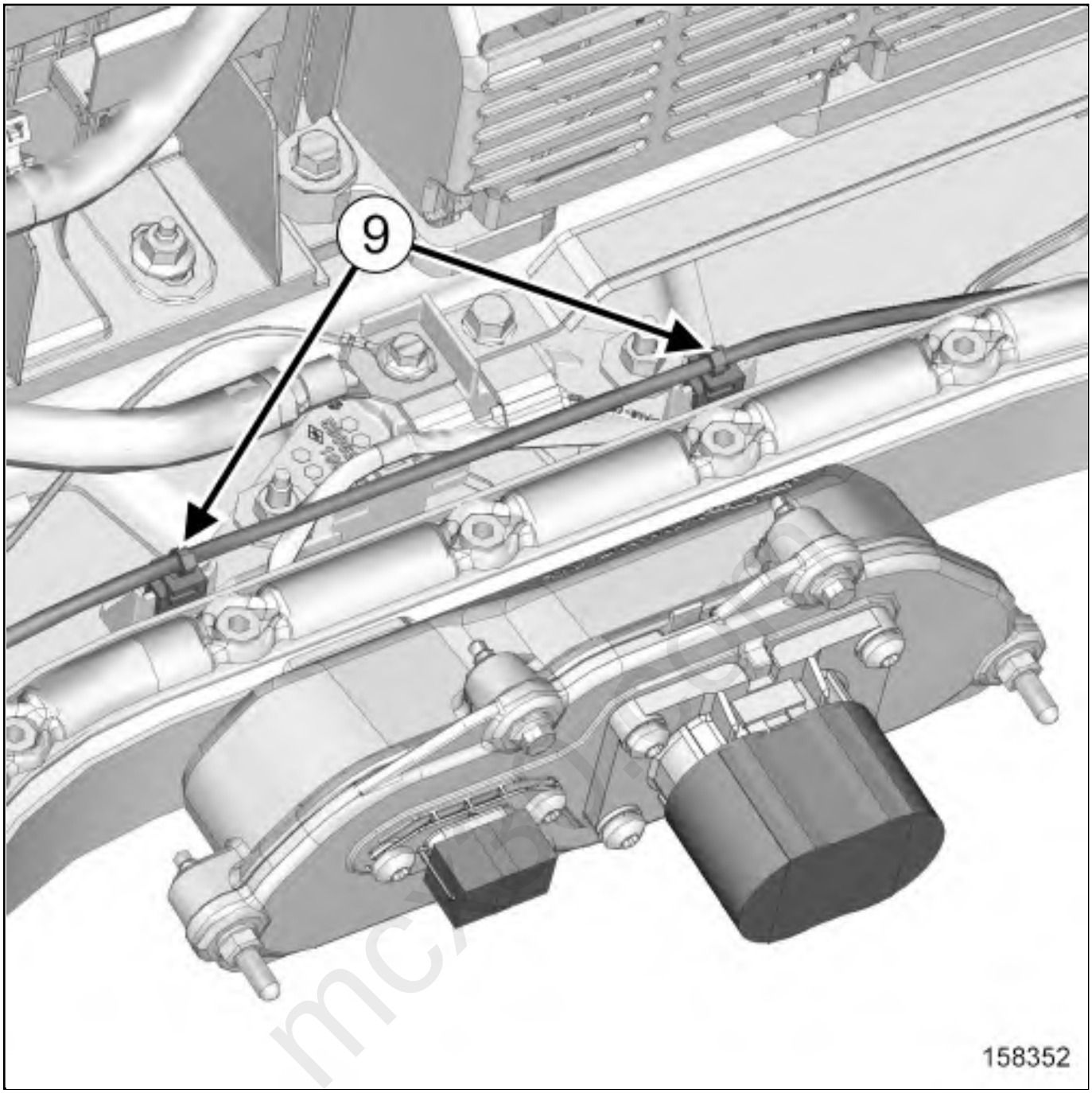



- Disconnect the high voltage connector(7) interlock wire plug using the toolSet of trim removal levers. (Car. 1363 ) .

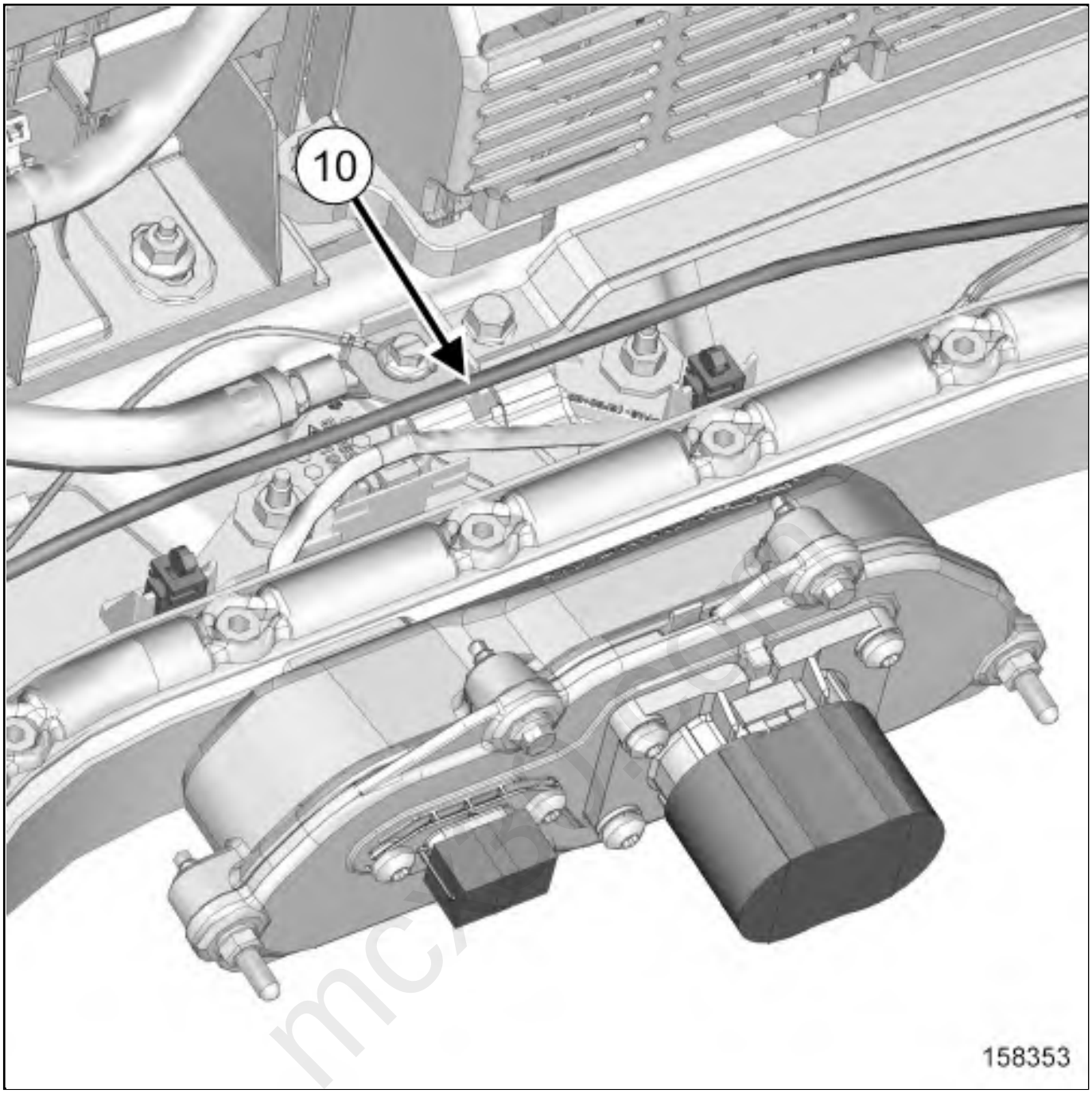
- Move the low voltage connector wiring.



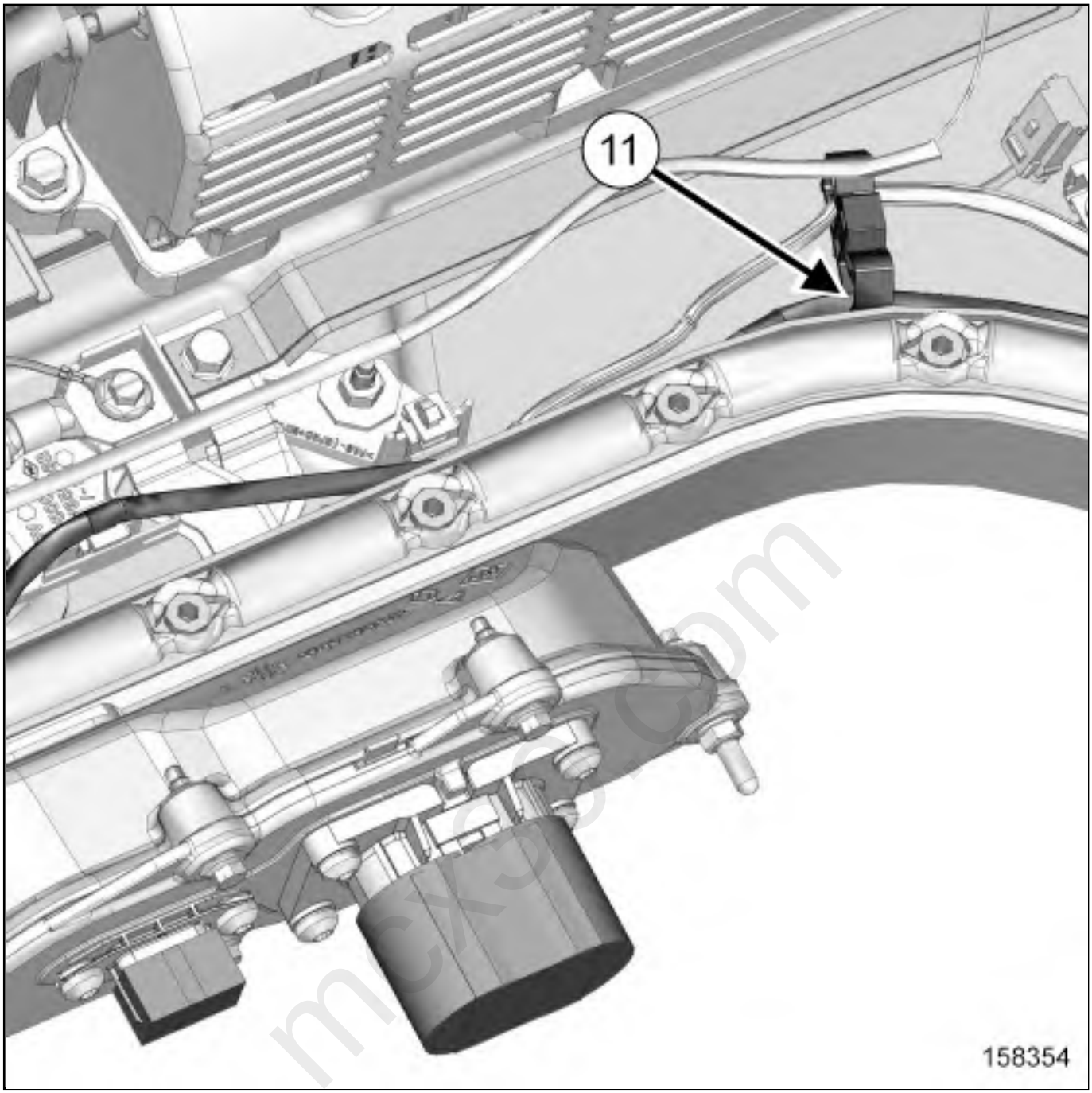

- Disconnect the low voltage connector(8) wire plug using the toolSet of trim removal levers.(Car. 1363 ) .




- Mark the location of the clamp on the safety device switch socket interlock wire using a paint marker.
- Cut the clamps(9) on the safety device switch socket interlock wire using the insulated cutting pliers.

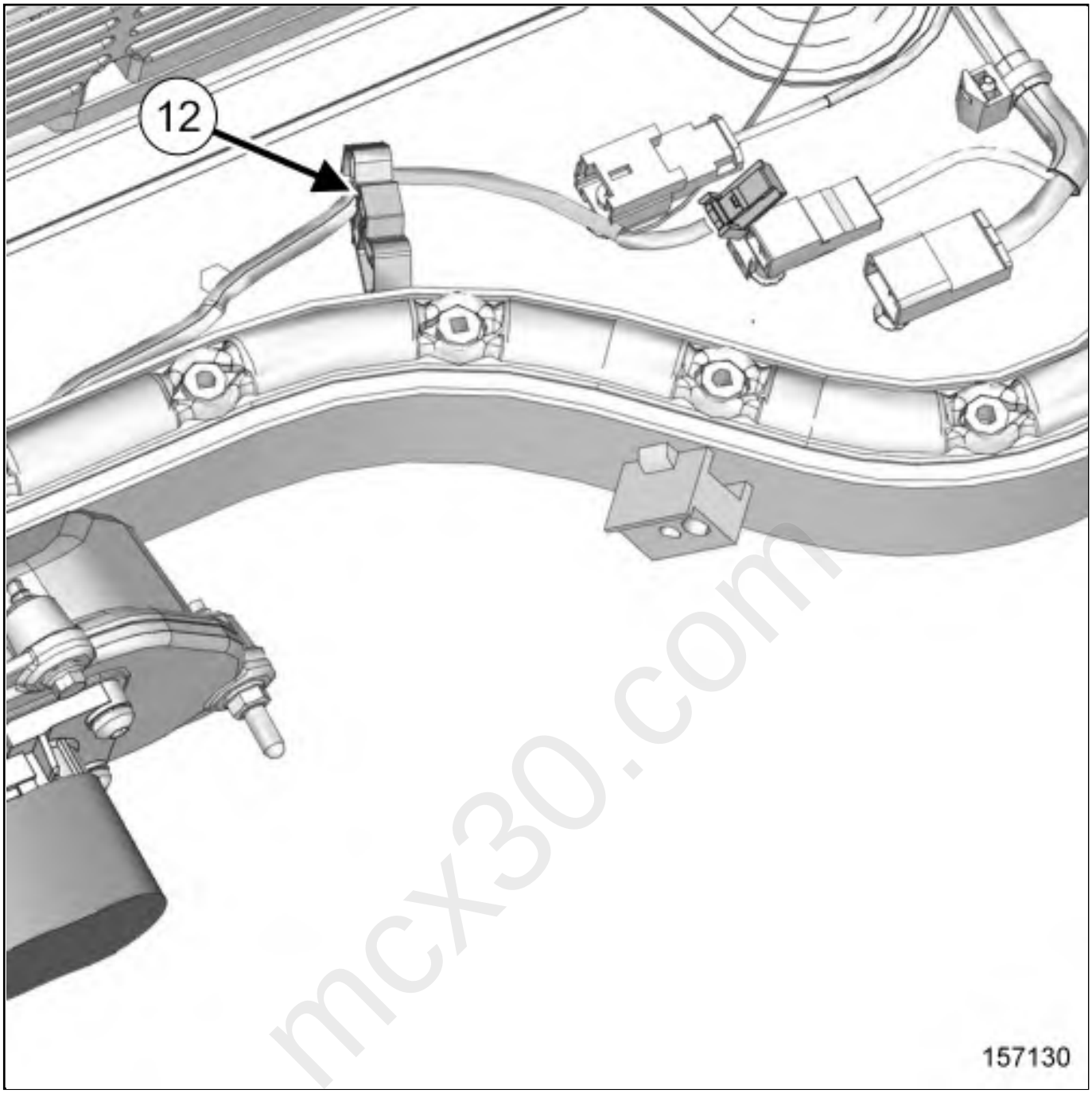



- Move the safety device switch socket interlock wire(10) .



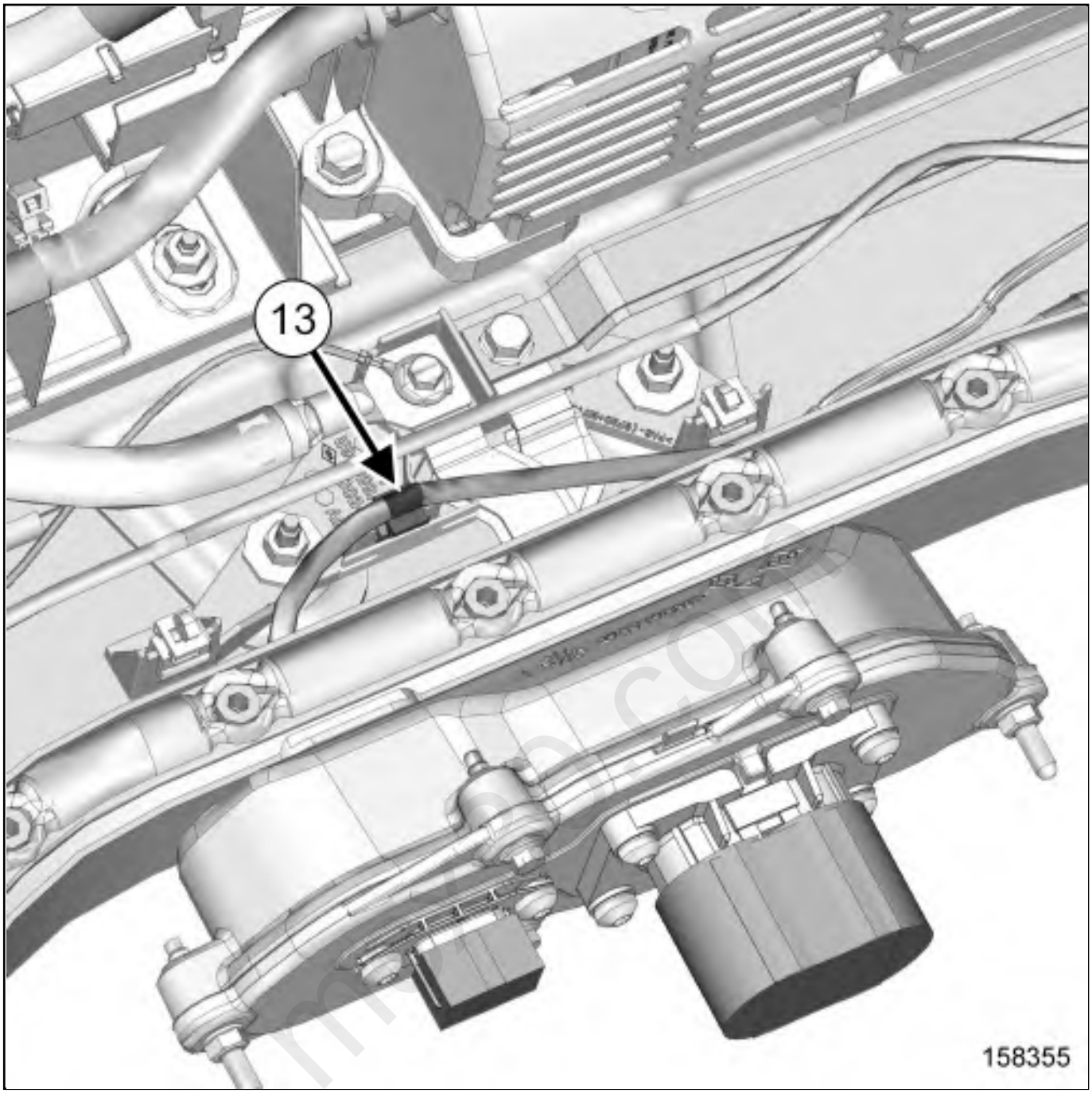

- Unclip the low voltage connector wirring from the twin clip(11) using the toolSet of trim removal levers. (Car. 1363 ) .

- Move the low voltage connector wirring using the toolSet of trim removal levers.(Car. 1363 ) .



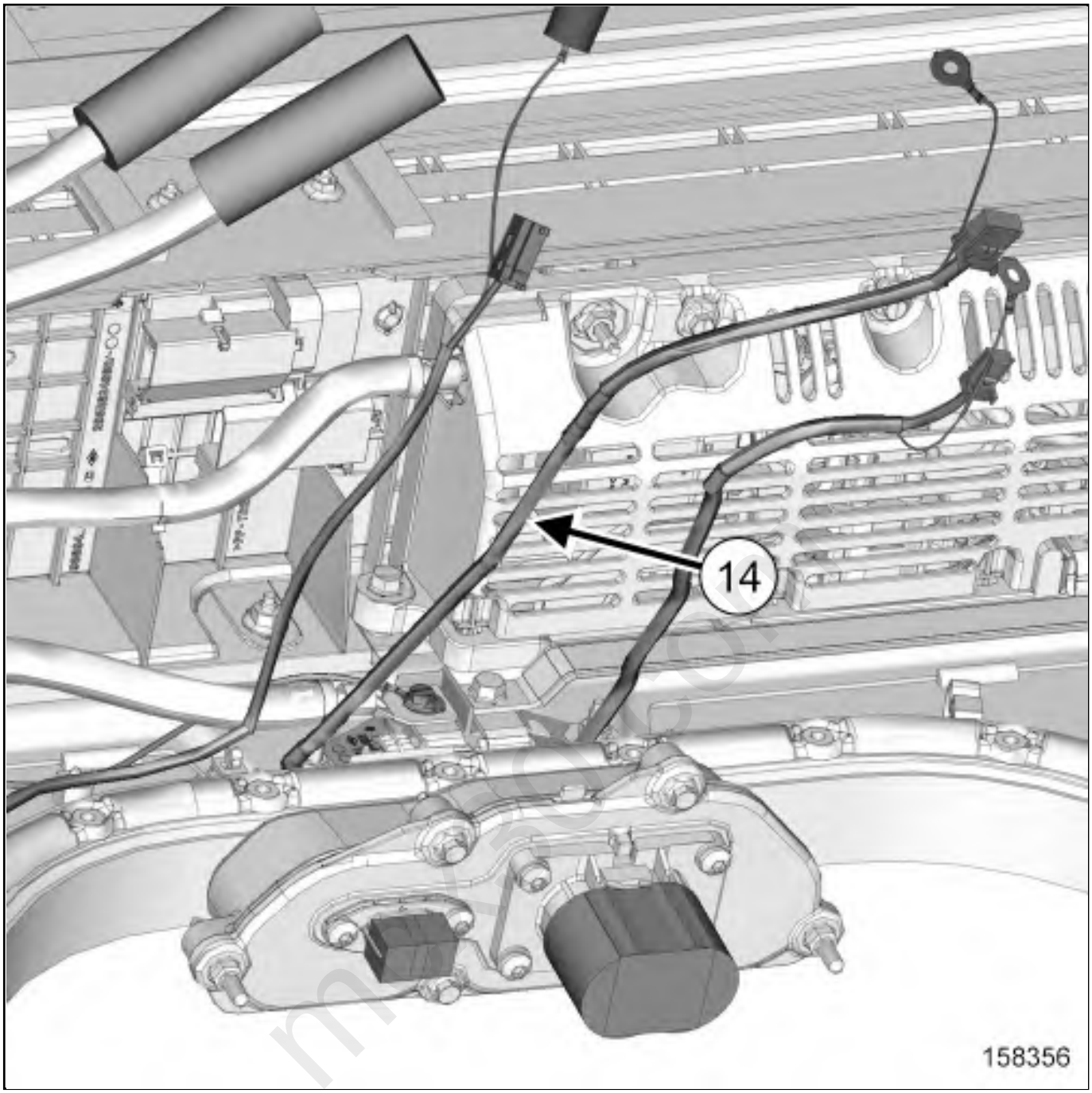

- Unclip the high voltage connector interlock wire from the twin clip(12) using the toolSet of trim removal levers.(Car. 1363 ) .

- Move the high voltage connector interlock wire using the toolSet of trim removal levers.(Car. 1363 ) .

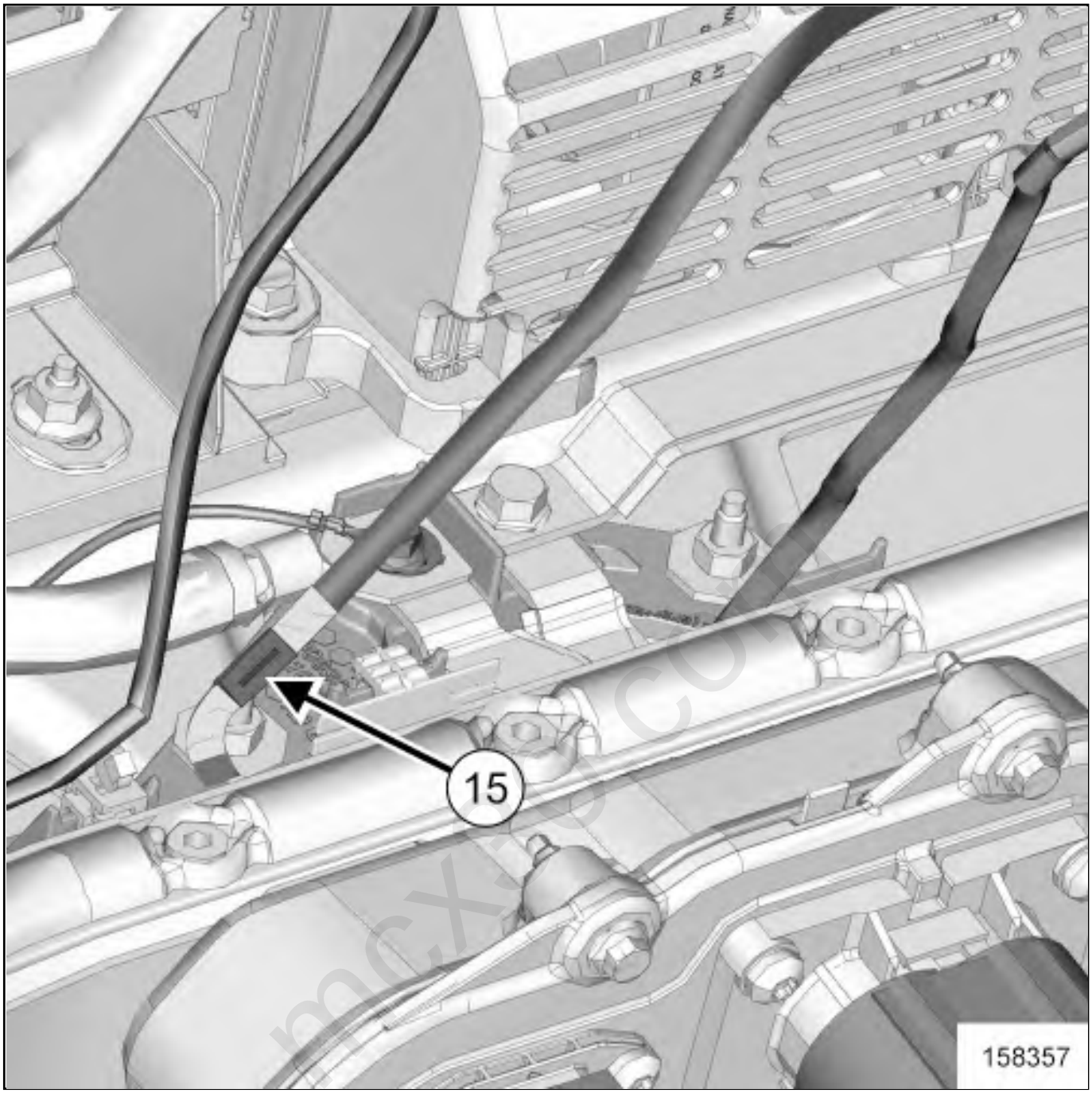



Mark the location of the clamp on the low voltage connector wiring using a paint marker.

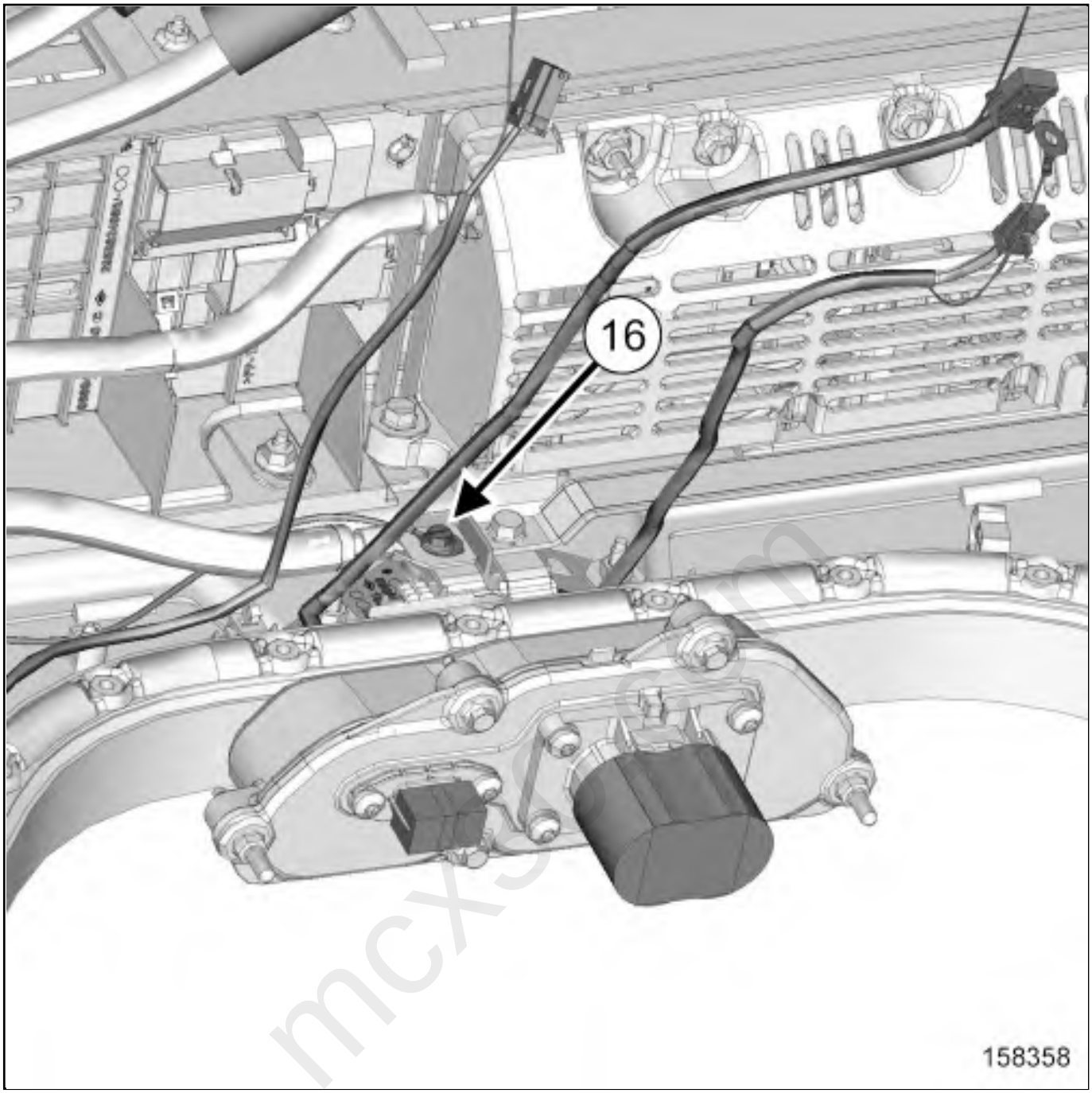
Unclip the clamp(13) on the low voltage connector wiring using the toolSet of trim removal levers. (Car. 1363 ) .



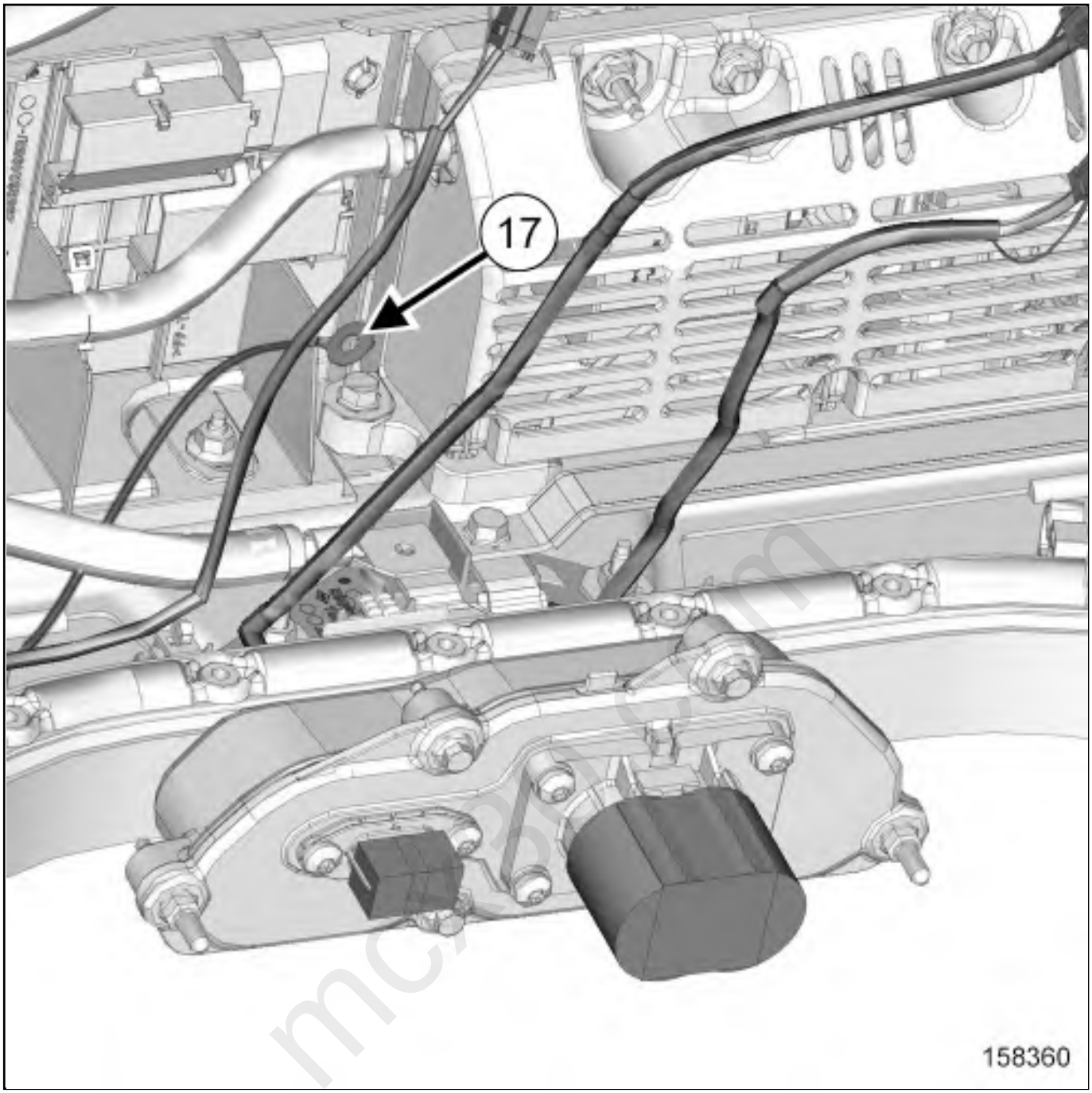

Move the low voltage connector wiring(14) .



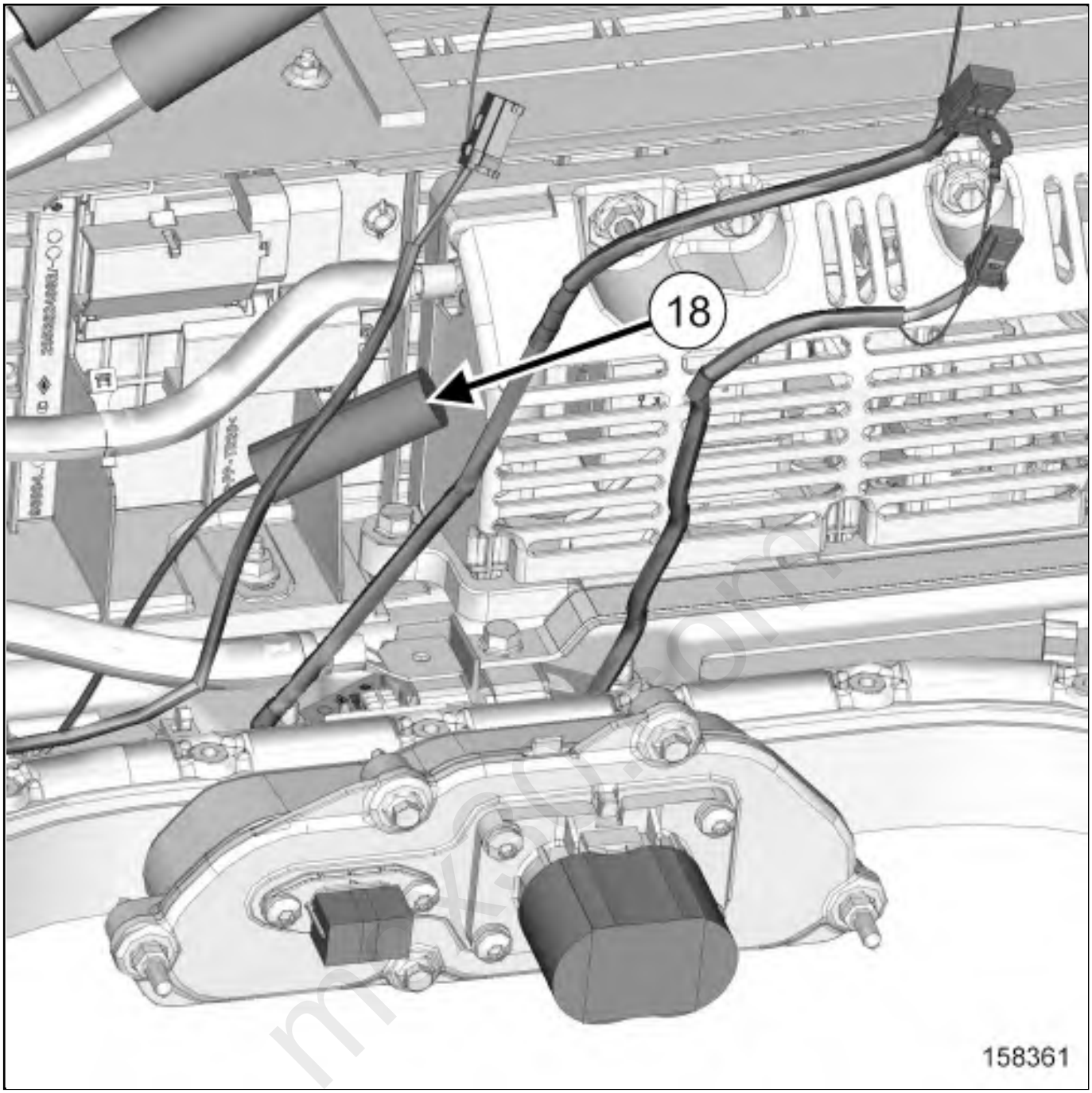

- Cut the adhesive tape on the clip on the low voltage connector wiring using an knife.
- Remove the clip from the low voltage connector wiring(15) .




Remove the electronic filter wiring and power wire number 4 connection screw(16) using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

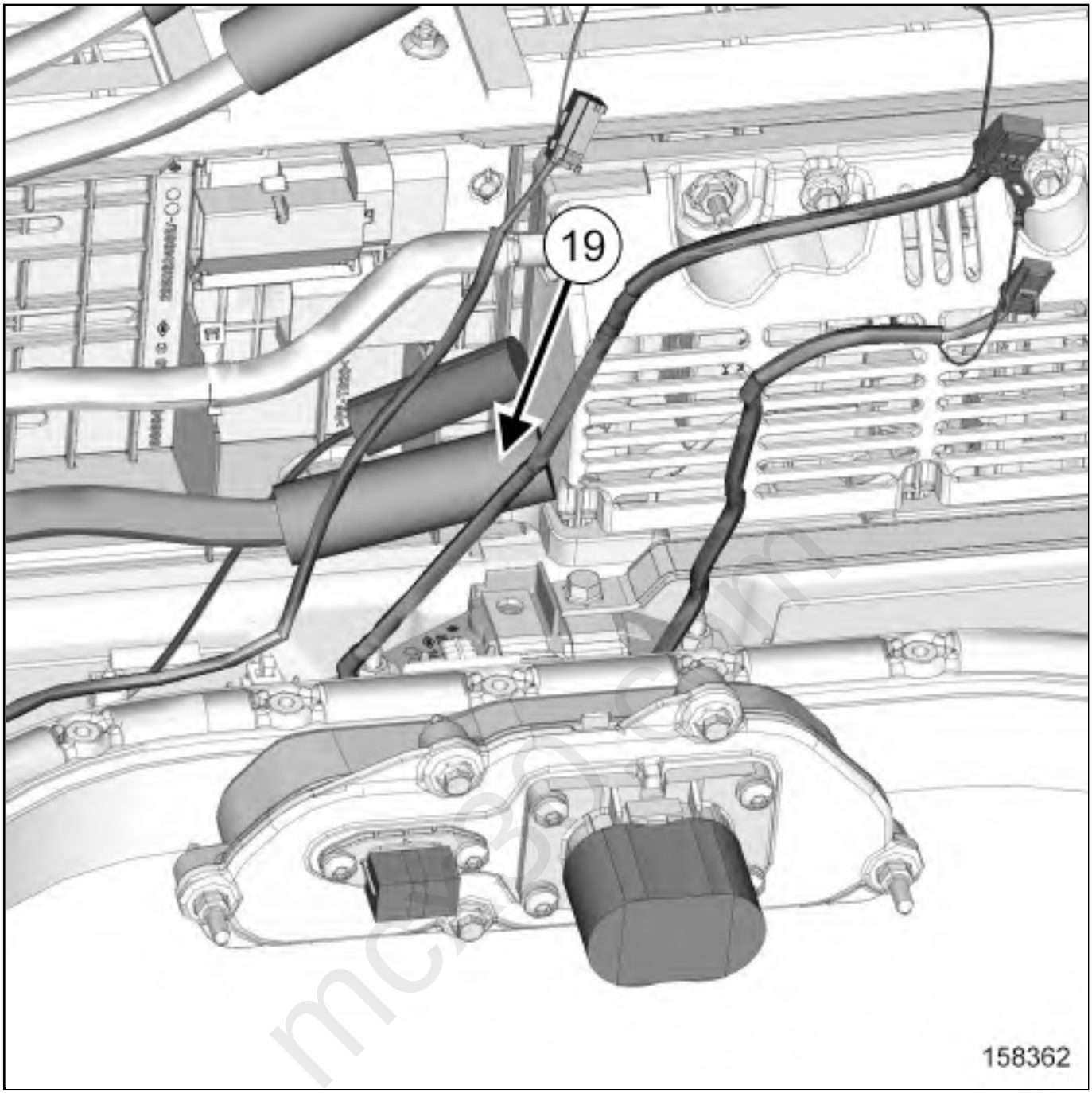



Move the electronic filter wiring(17) .

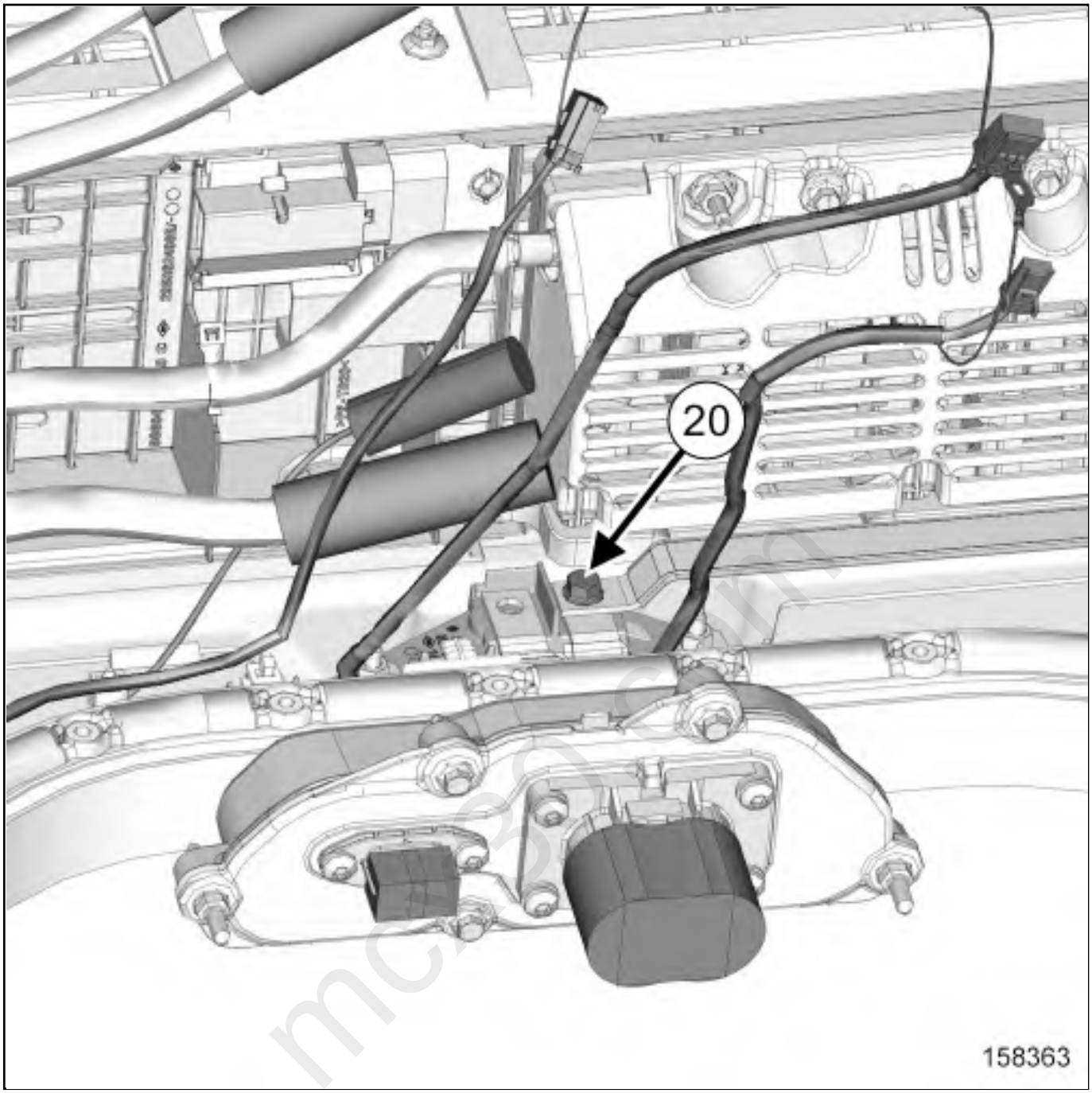



- Insulate the electronic filter wiring lug with an insulated cover.

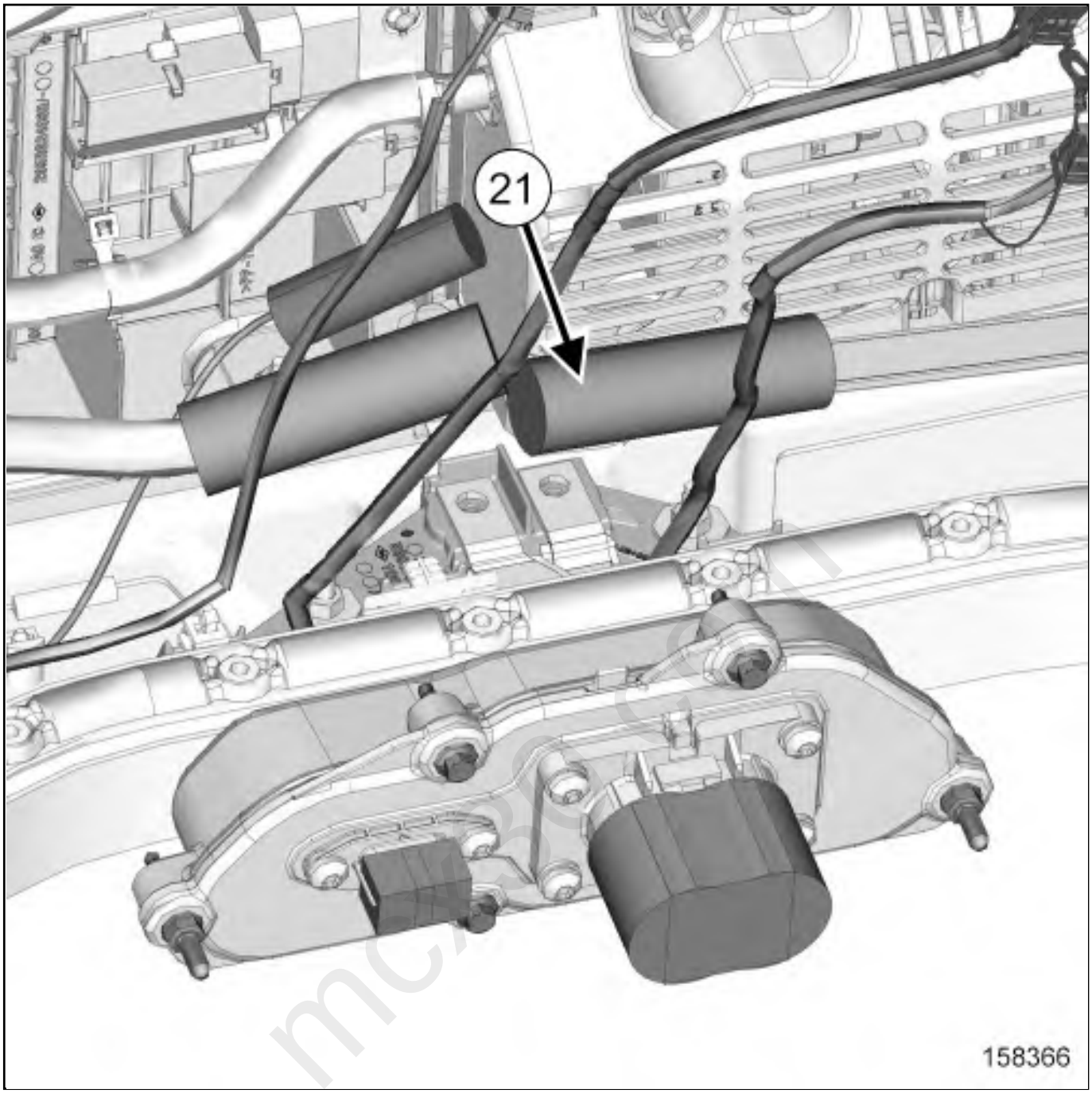
- Move the power wire number 4.



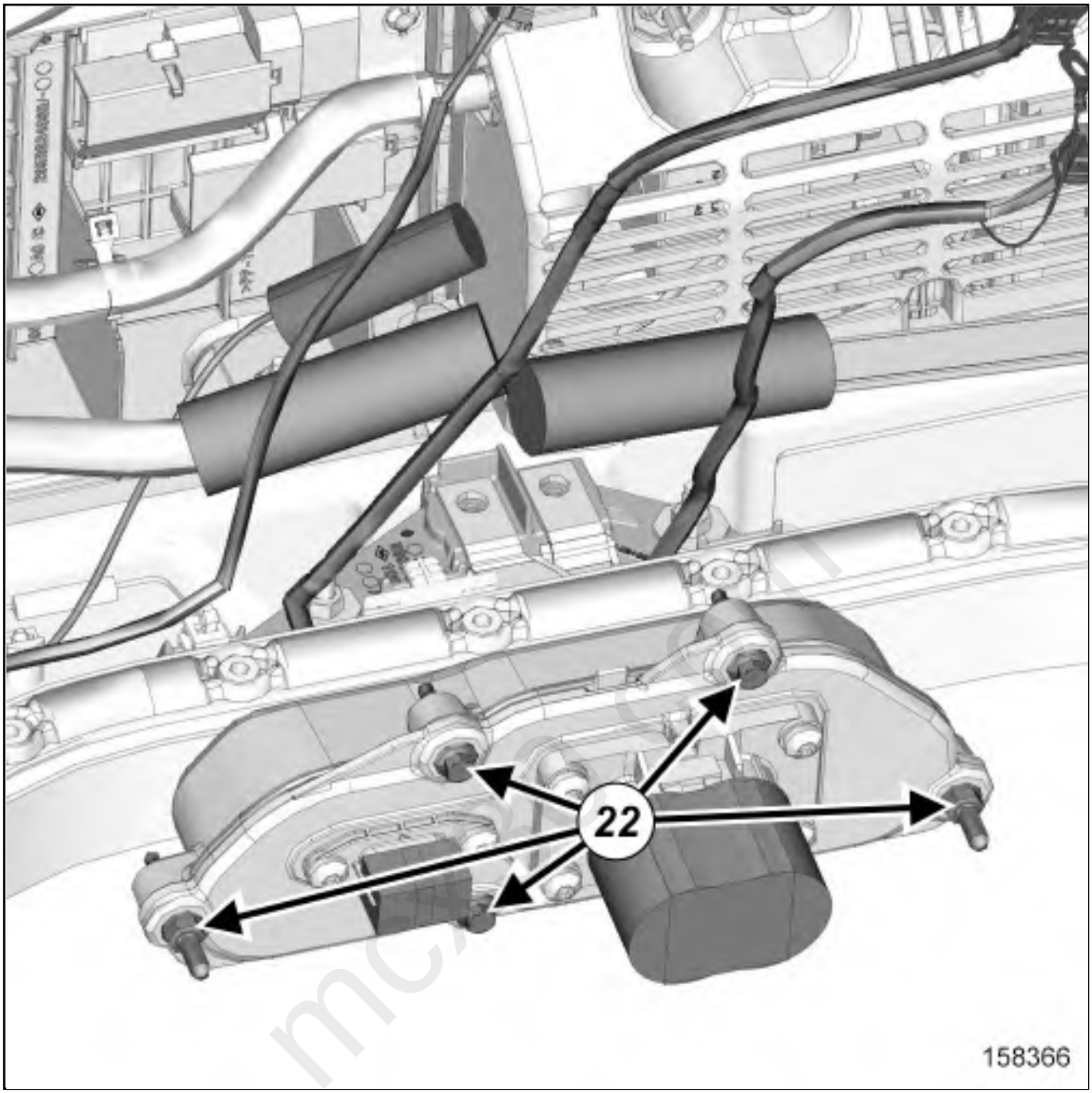

Insulate the power wire 4 terminal(19) .



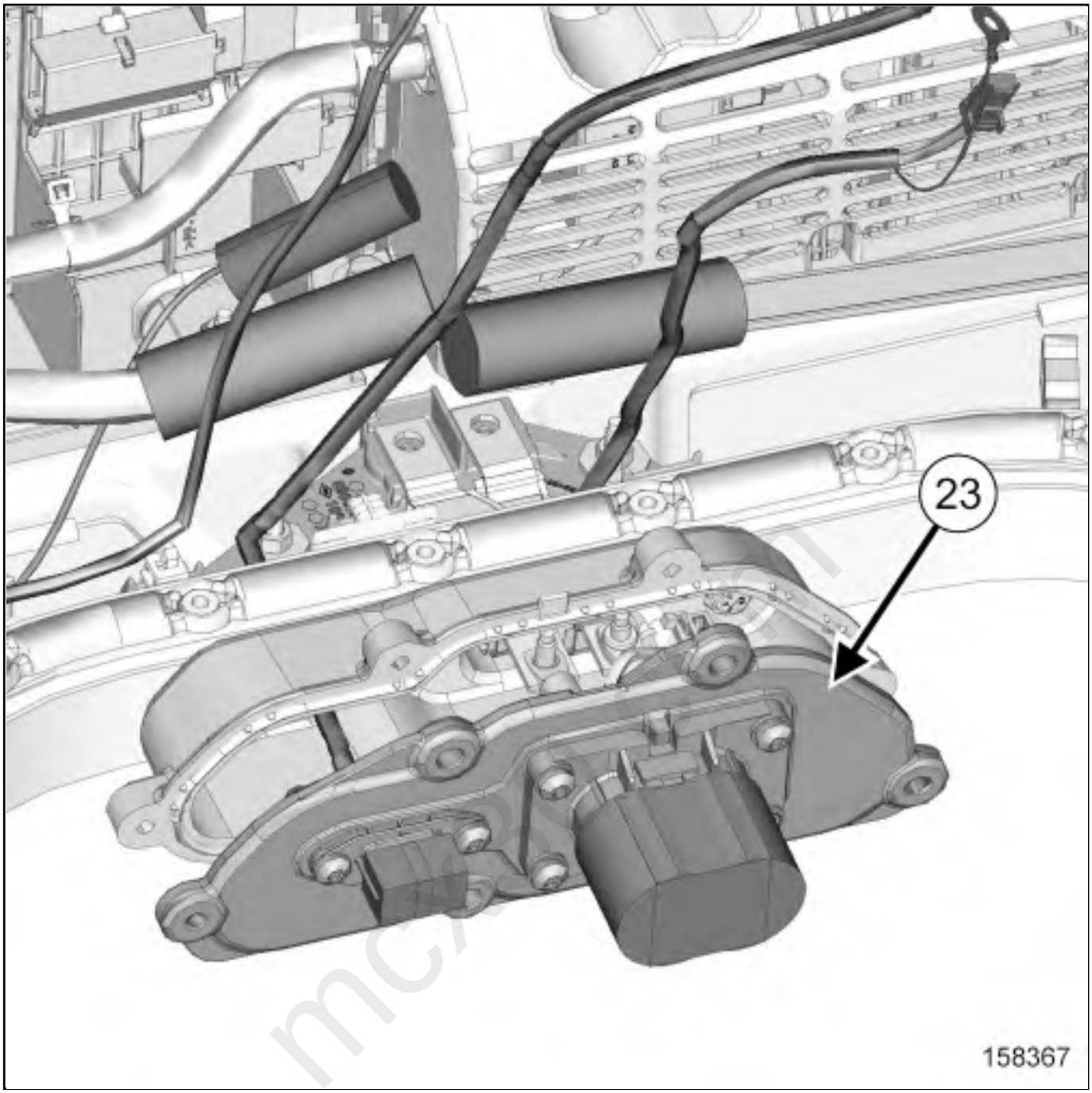

Remove bus bar screw(20) using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .




Insulate the bus bar(21) .



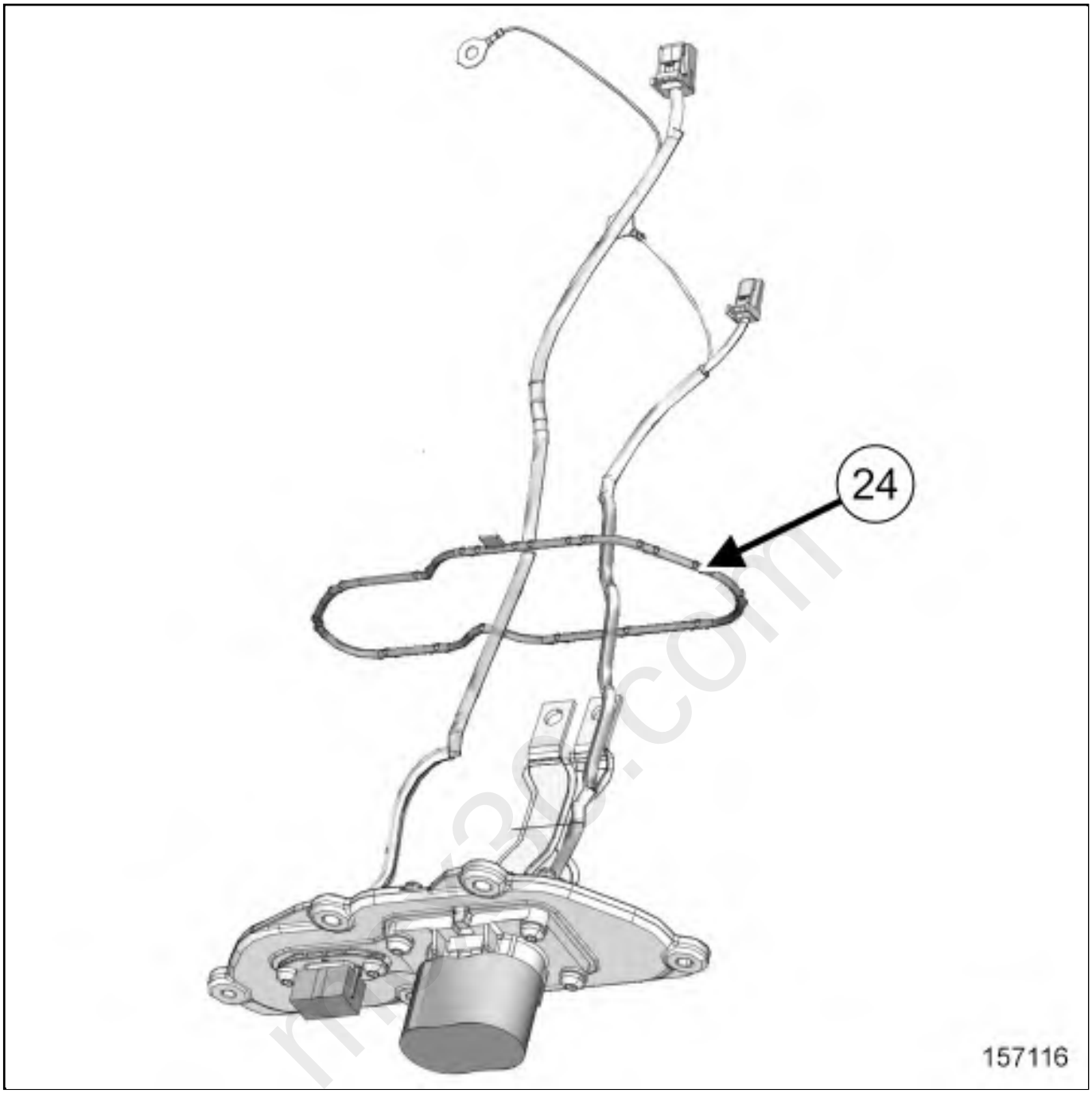

Remove the connectors support plate screws(22) using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .



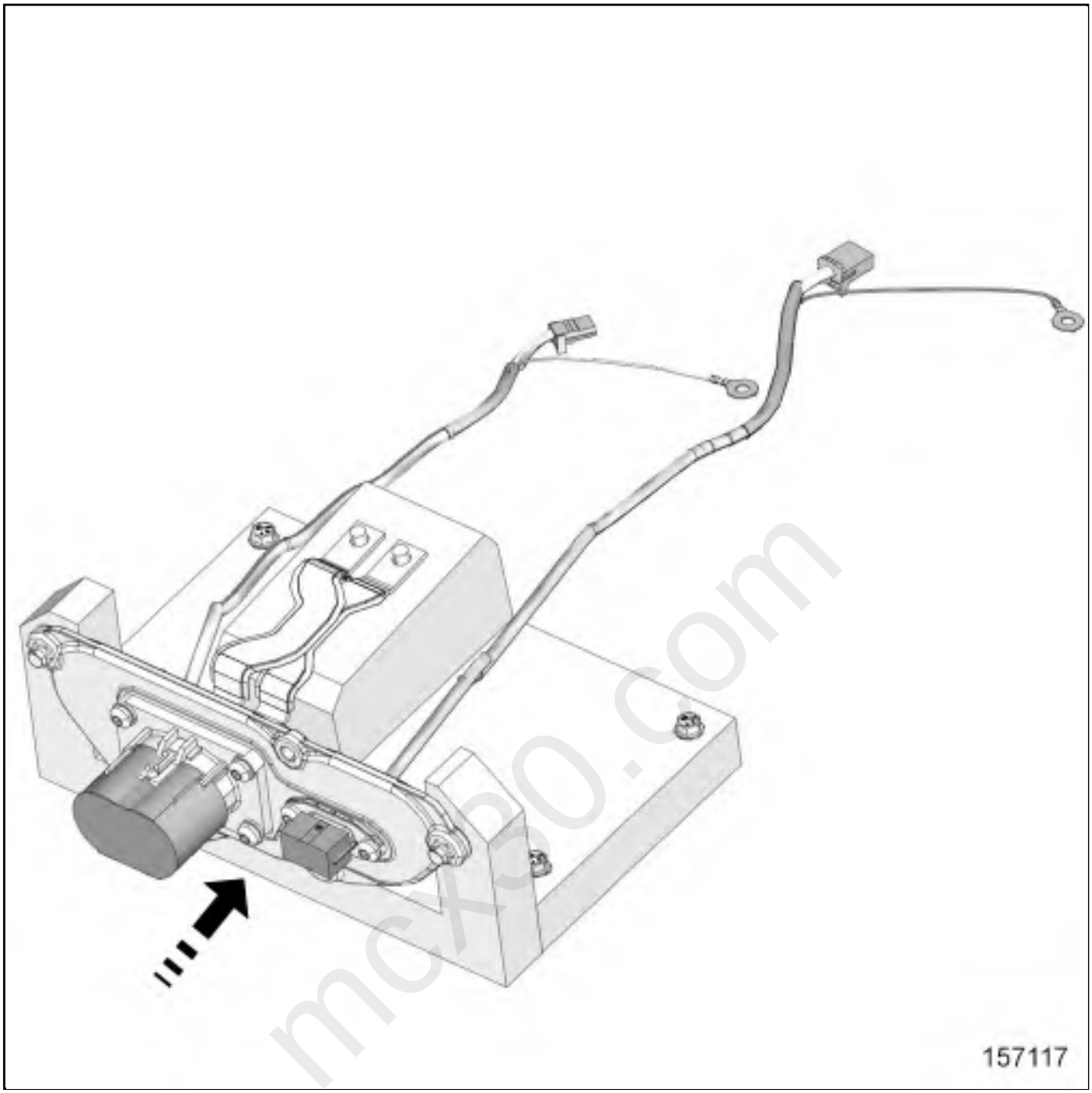

Remove the connectors(23) support plate assembly(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

Note:

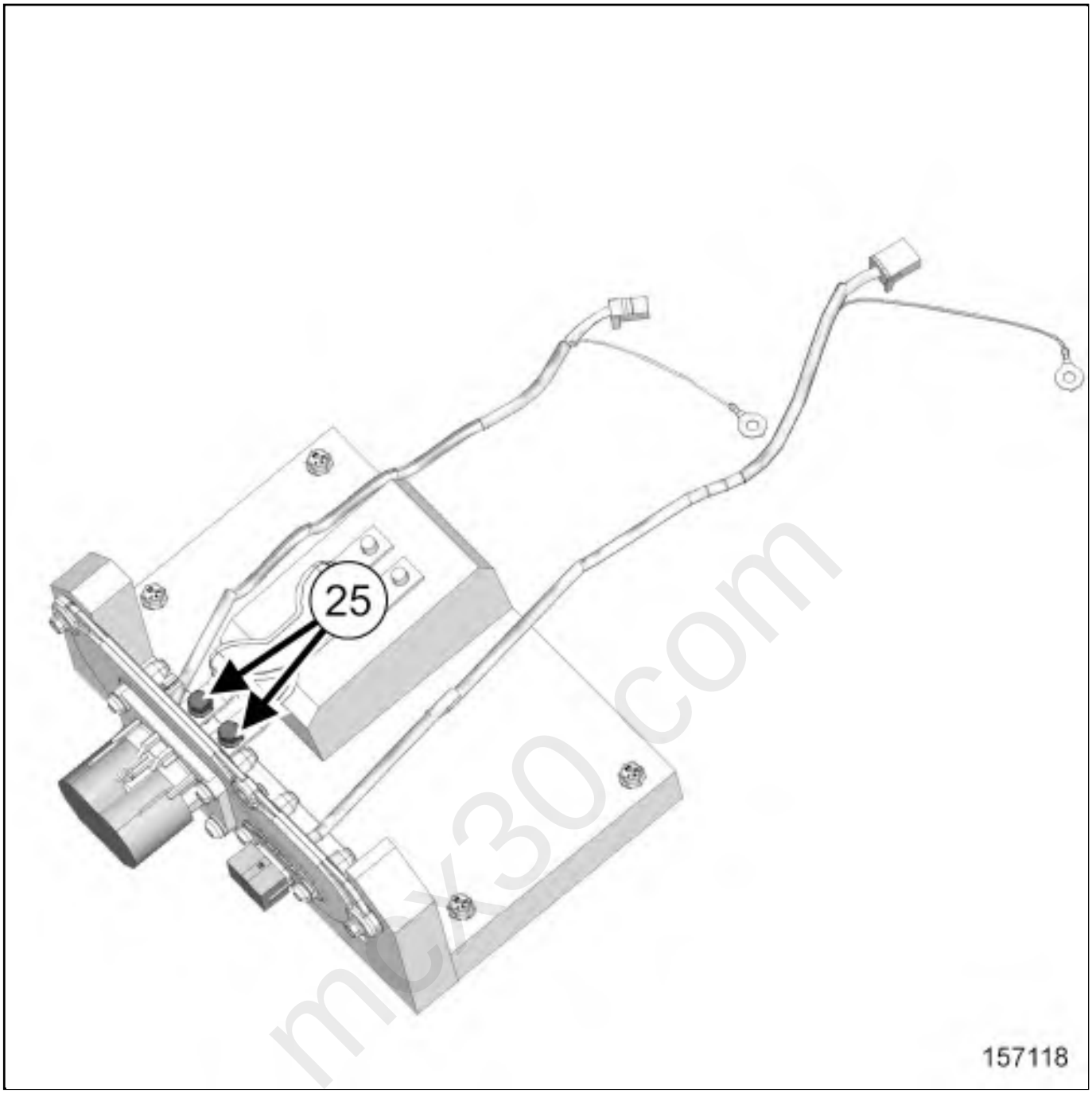
Pay attention to the wire during removal.



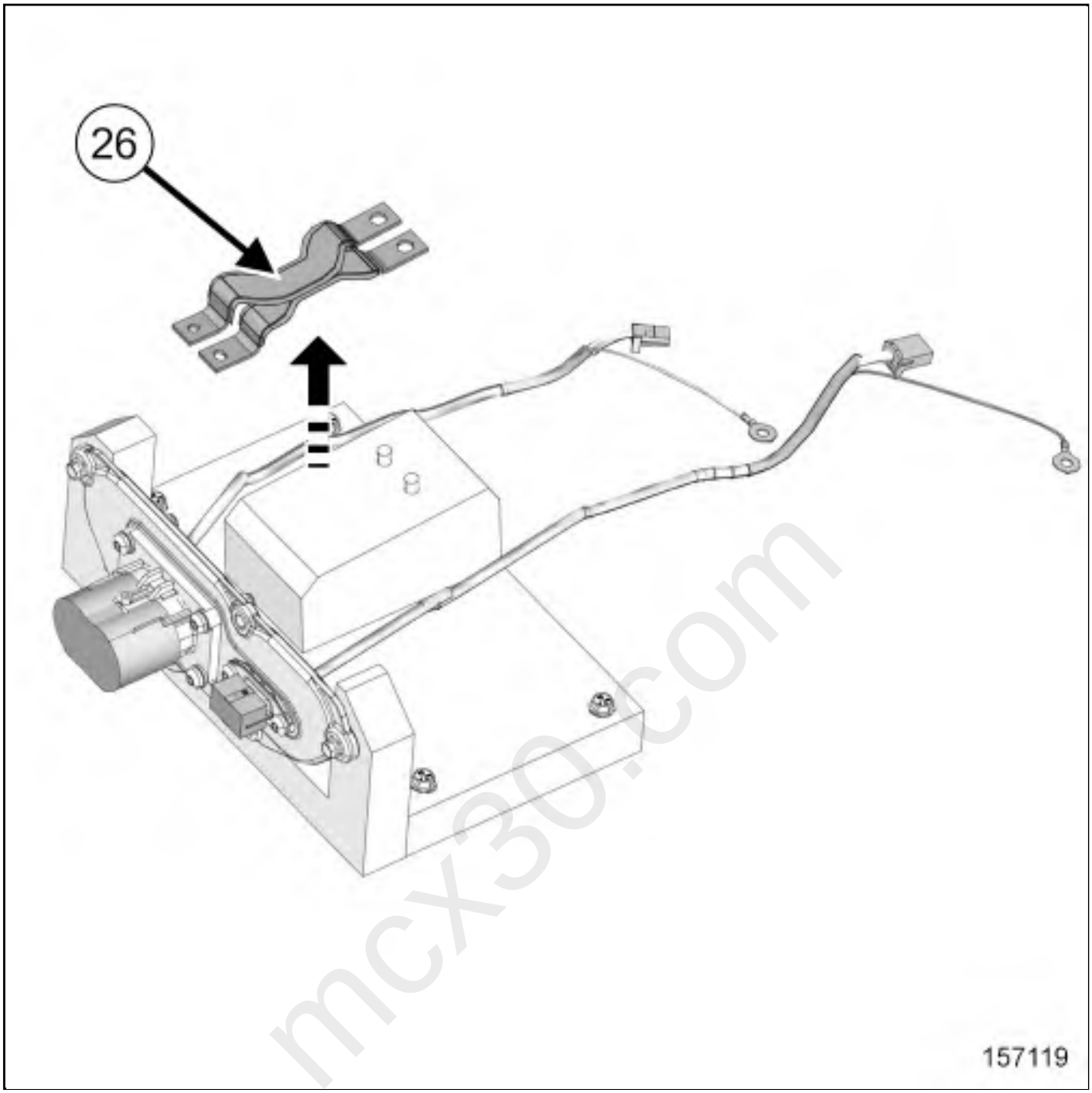

Remove the seal(24) between connectors support plate and connectors support(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .



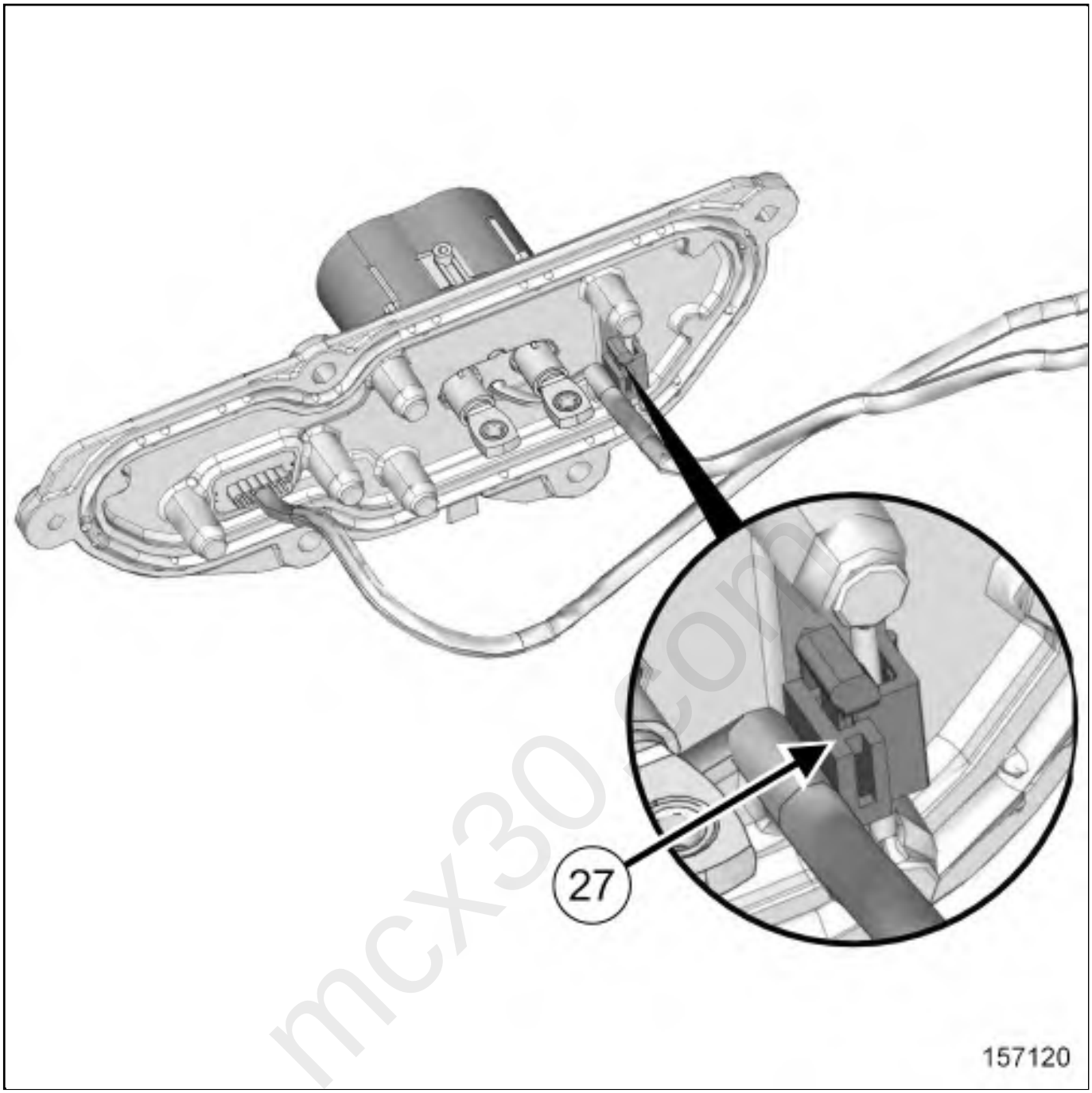

Fit the connectors support plate assembly on the preparation tool.



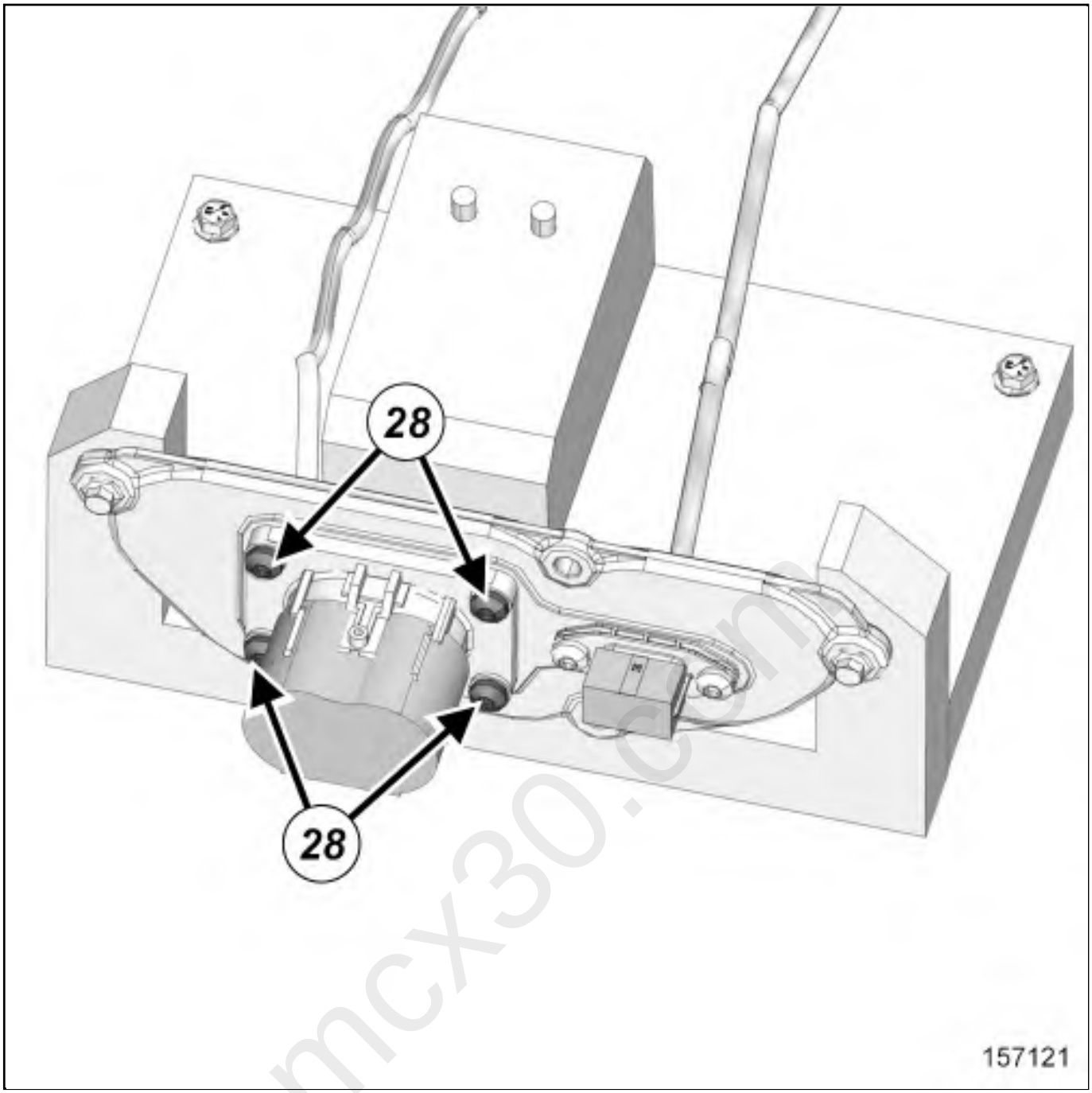

Remove the coupled bus bar screws(25) **(see 19E, Traction battery, Traction battery module stack assembly : Exploded view)** .



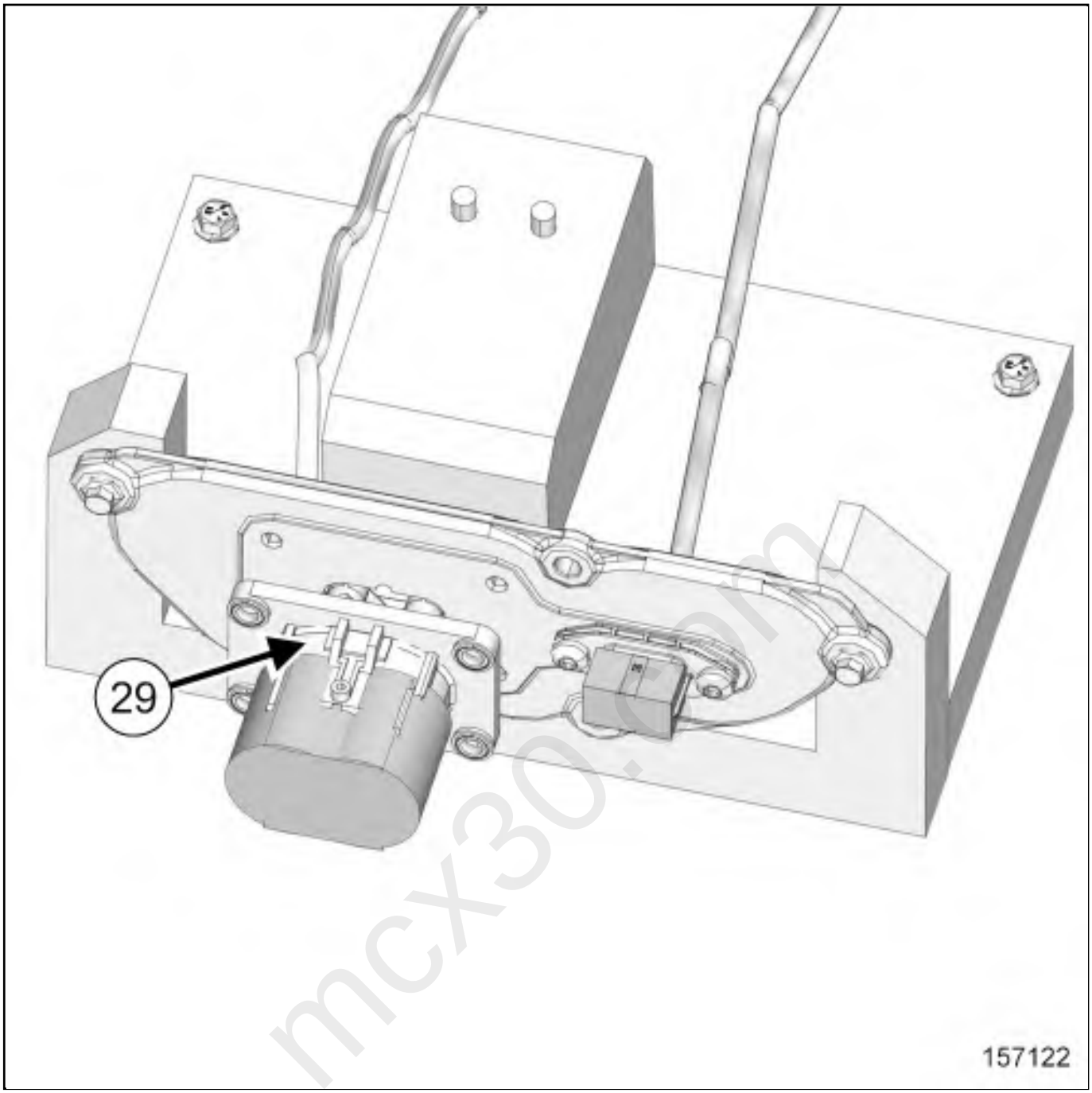

Remove the coupled bus bar(26) (see 19E, Traction battery, Traction battery module stack assembly : Exploded view ) .



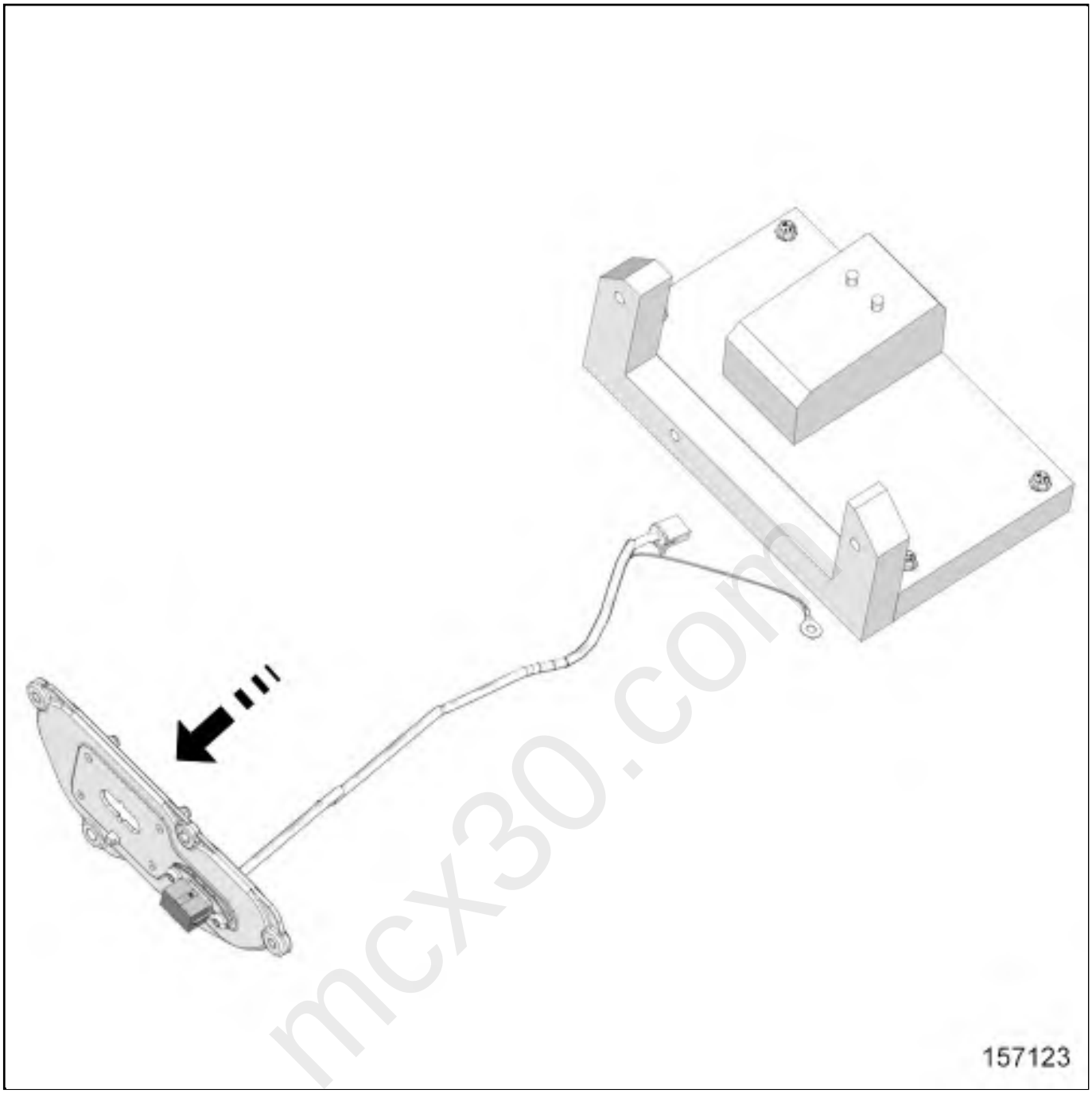

- Mark the location of the clamp on the high voltage connector interlock wiring using a paint marker.
- Cut the clamp(27) on the the high voltage connector interlock wiring using the insulated cutting pliers.
- Move the high voltage connector interlock wiring.




Remove the high voltage connector screws(28) using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .




Remove the high voltage connector(29) (see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .




Remove the connectors support plate assembly from the preparation tool.

## REFITTING

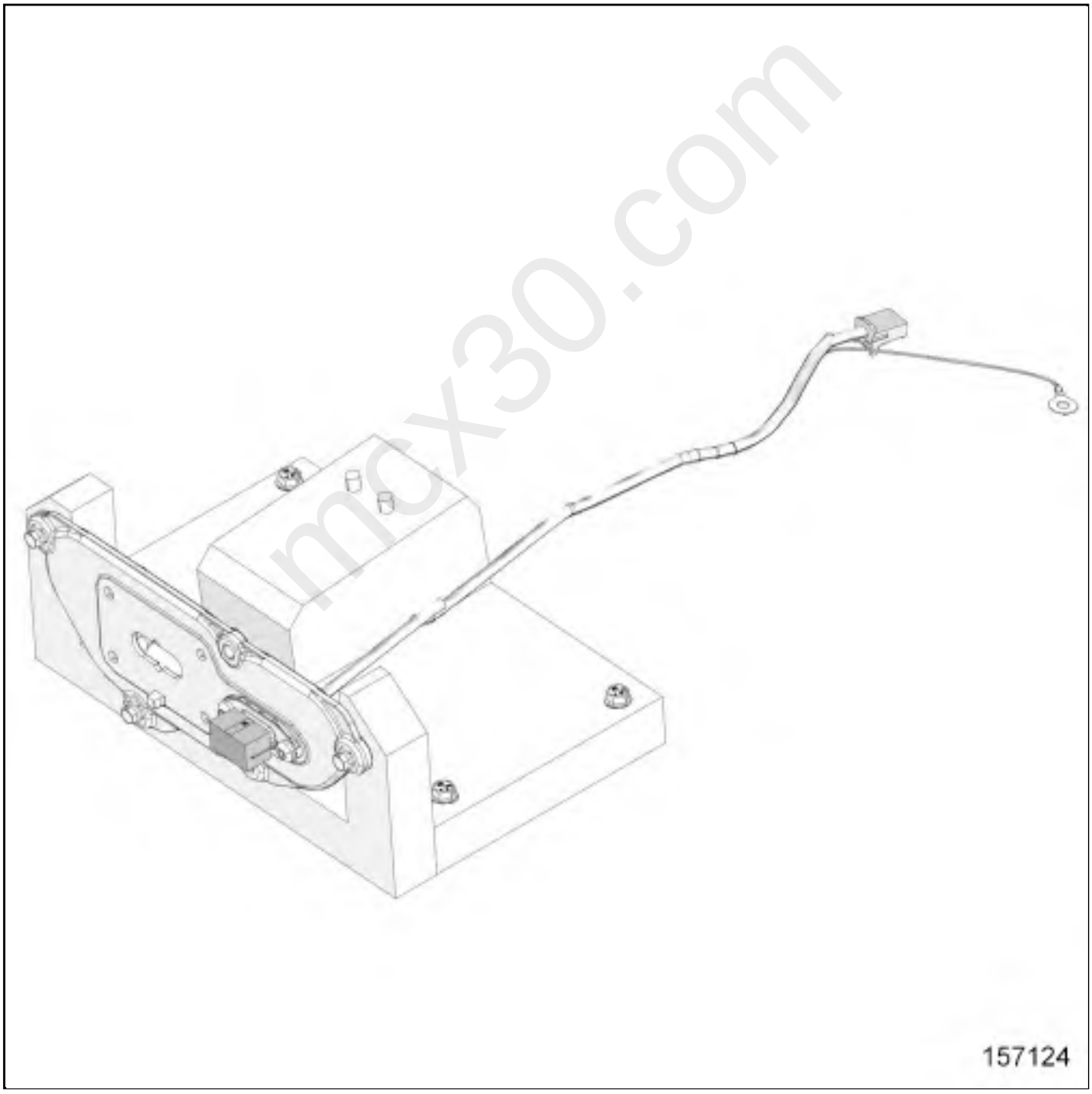
### 1. REFITTING OPERATION

Parts always to be replaced(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) :

- the seal between connectors support plate and connectors support.

Note:

Check the state of the bus bar, power wire lugs (no black marks, no corrosion, no trace of electrolysis, no tapping damages, no deformation of the contacts, no sign of breakage, or cracking on the plastic endings). Replace it in case of damage and analyse the origin.



Refit the connectors support plate assembly on the preparation tool.

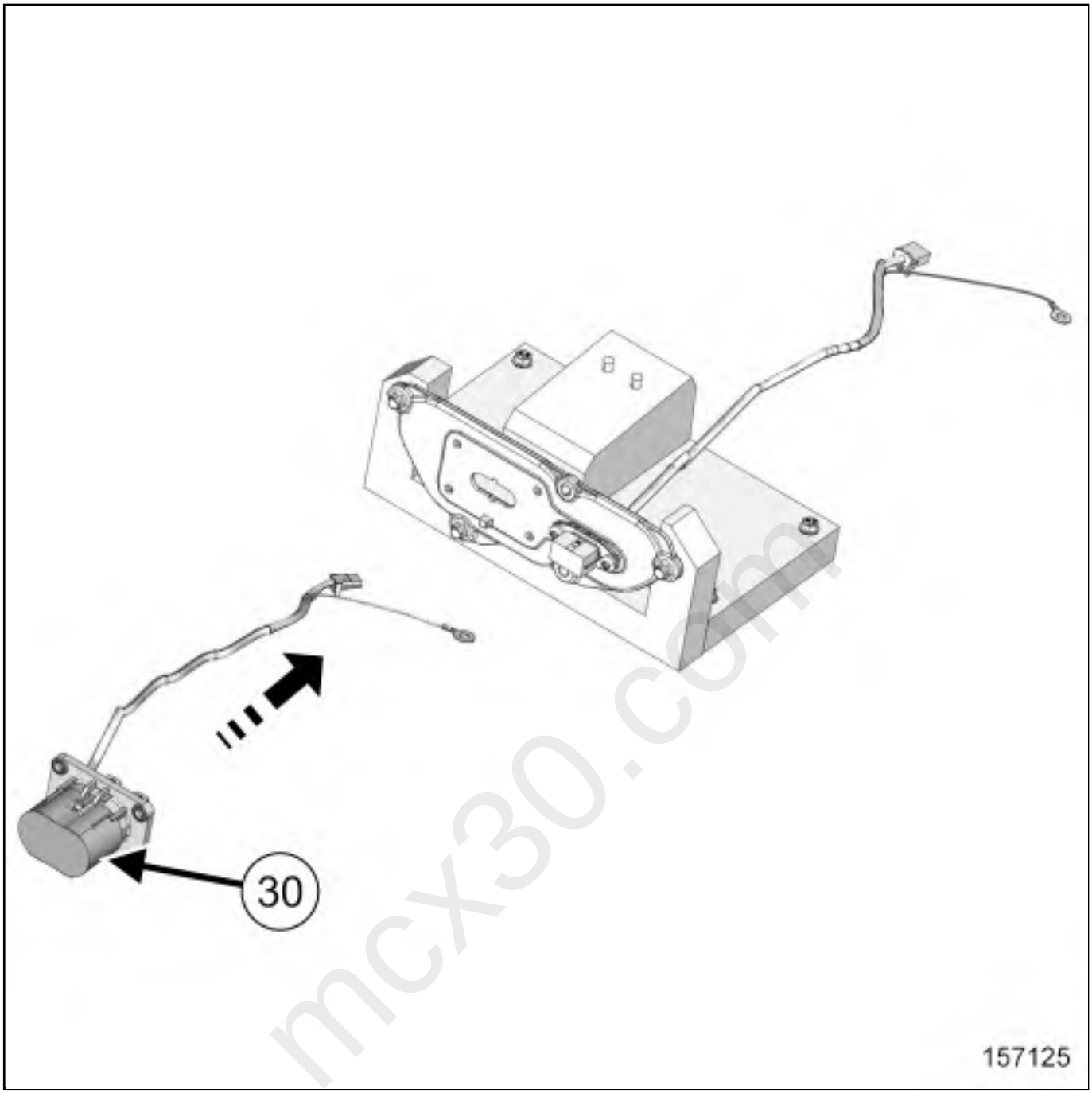
Check the high voltage connector protective cover.

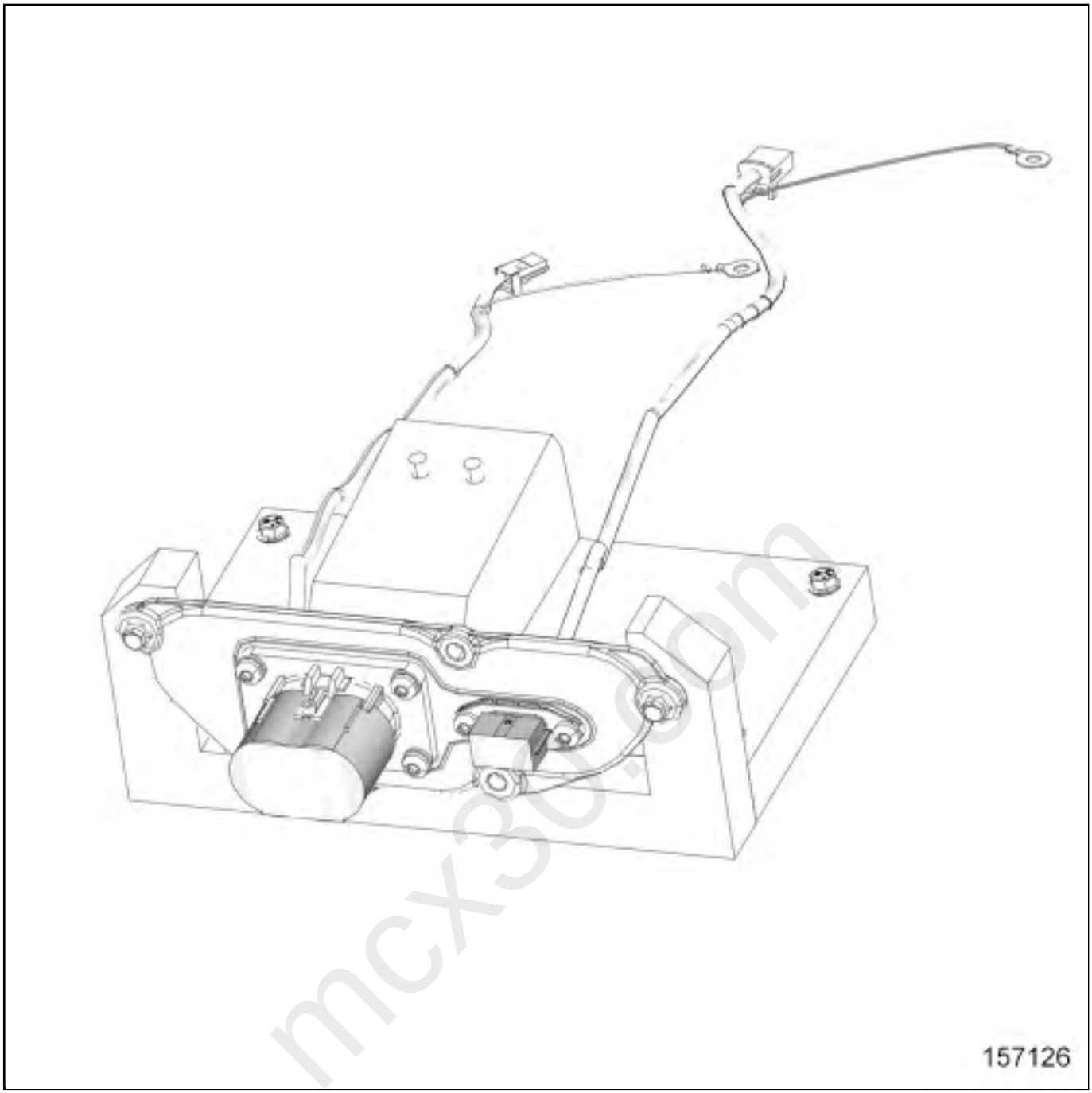
Clean :

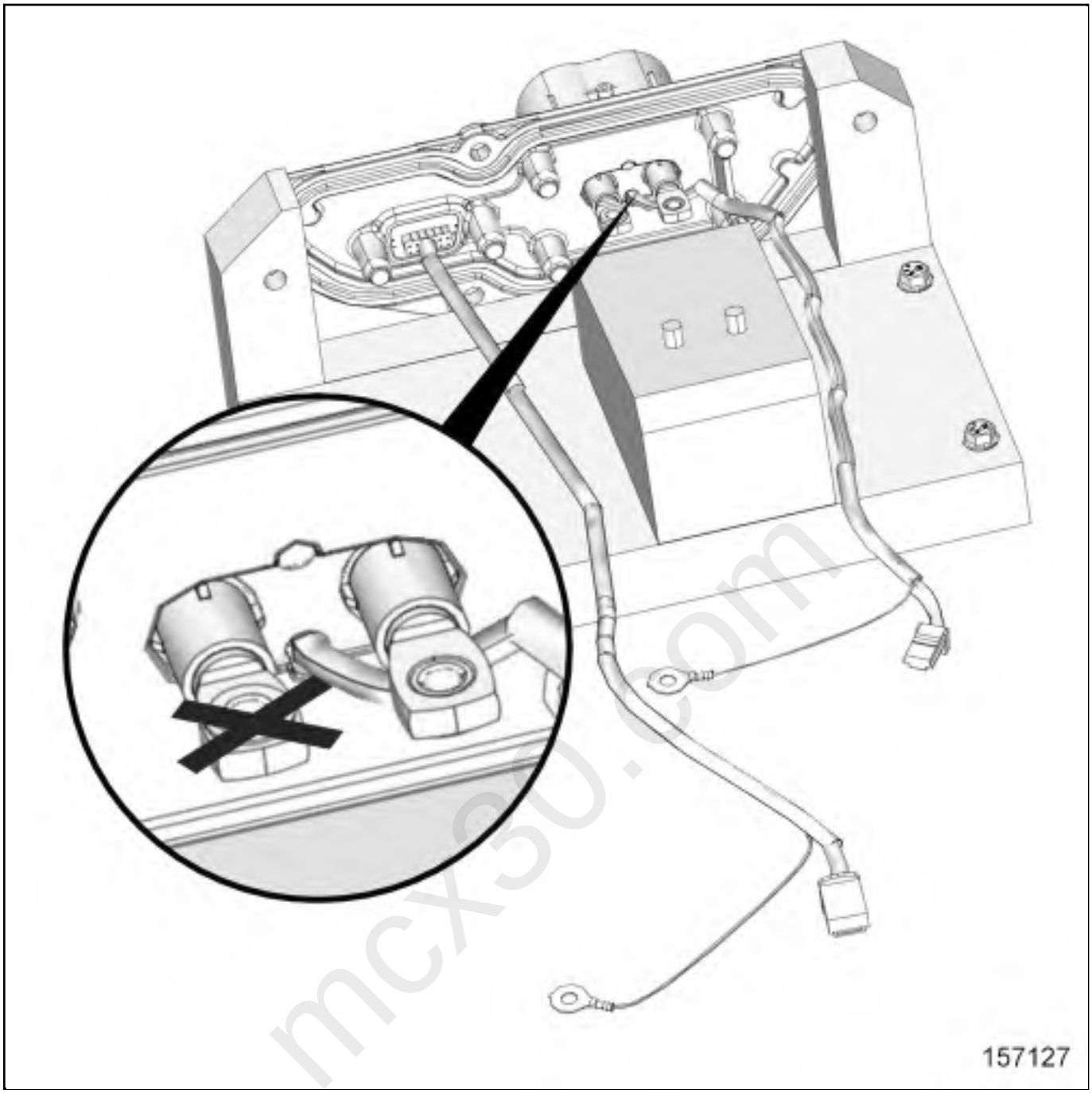
- the surfaces around the connector hole on the connectors support plate using the BRAKE CLEANER and LINT-FREE CLOTH (see **Vehicle: Parts and consumables for the repair**) ,
- the surfaces of the high voltage connector socket using the LINT-FREE CLOTH(see **Vehicle: Parts and consumables for the repair**) .

Note:

In case of damage of the seal, replace the high voltage connector socket.





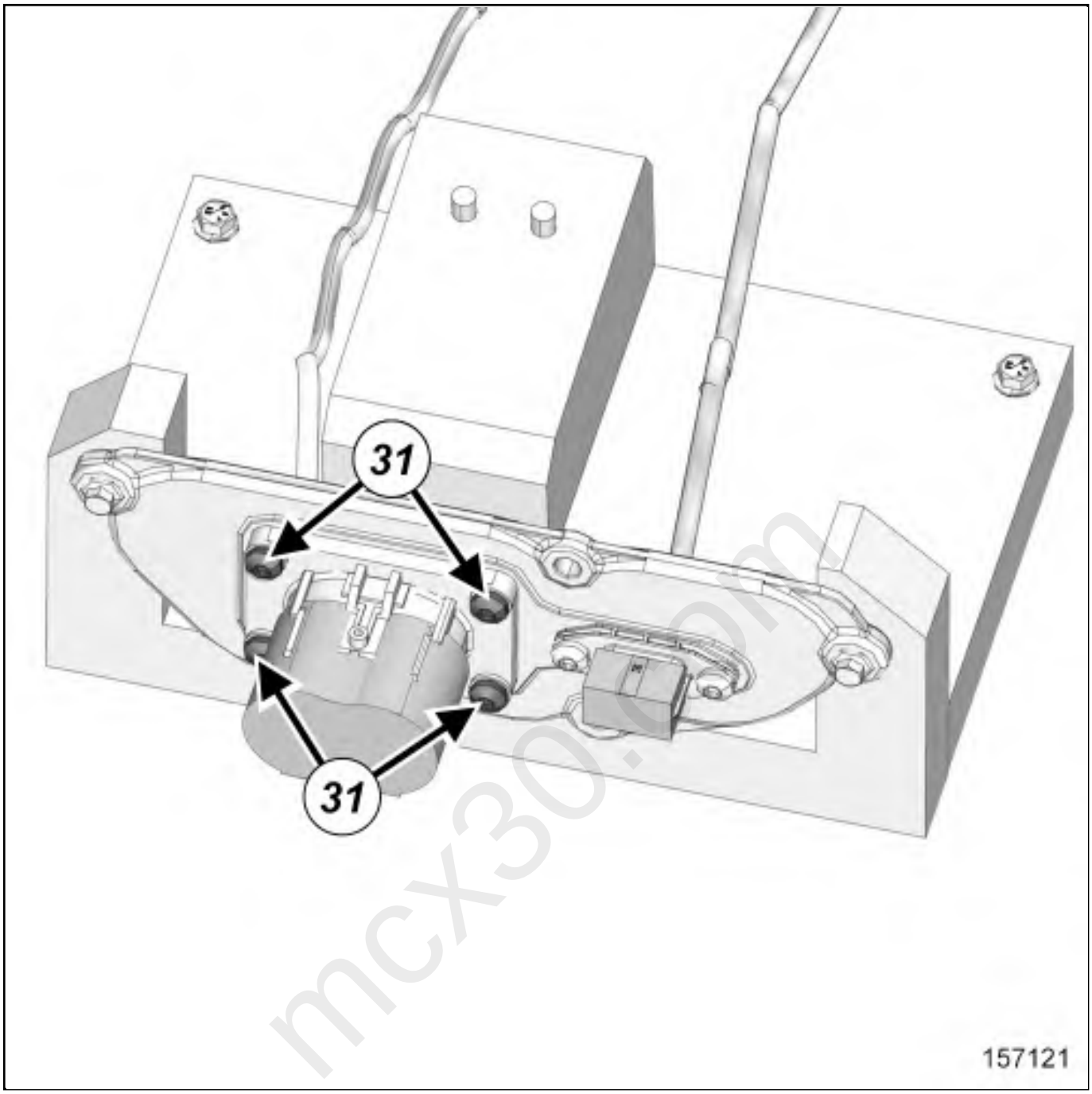



Refit the high voltage connector(30) .

Note:

Pay attention to the mechanical coding between the high voltage connector socket and the connectors support plate.

Pay attention to the orientation of the rods of the connector (flat faces on the top).



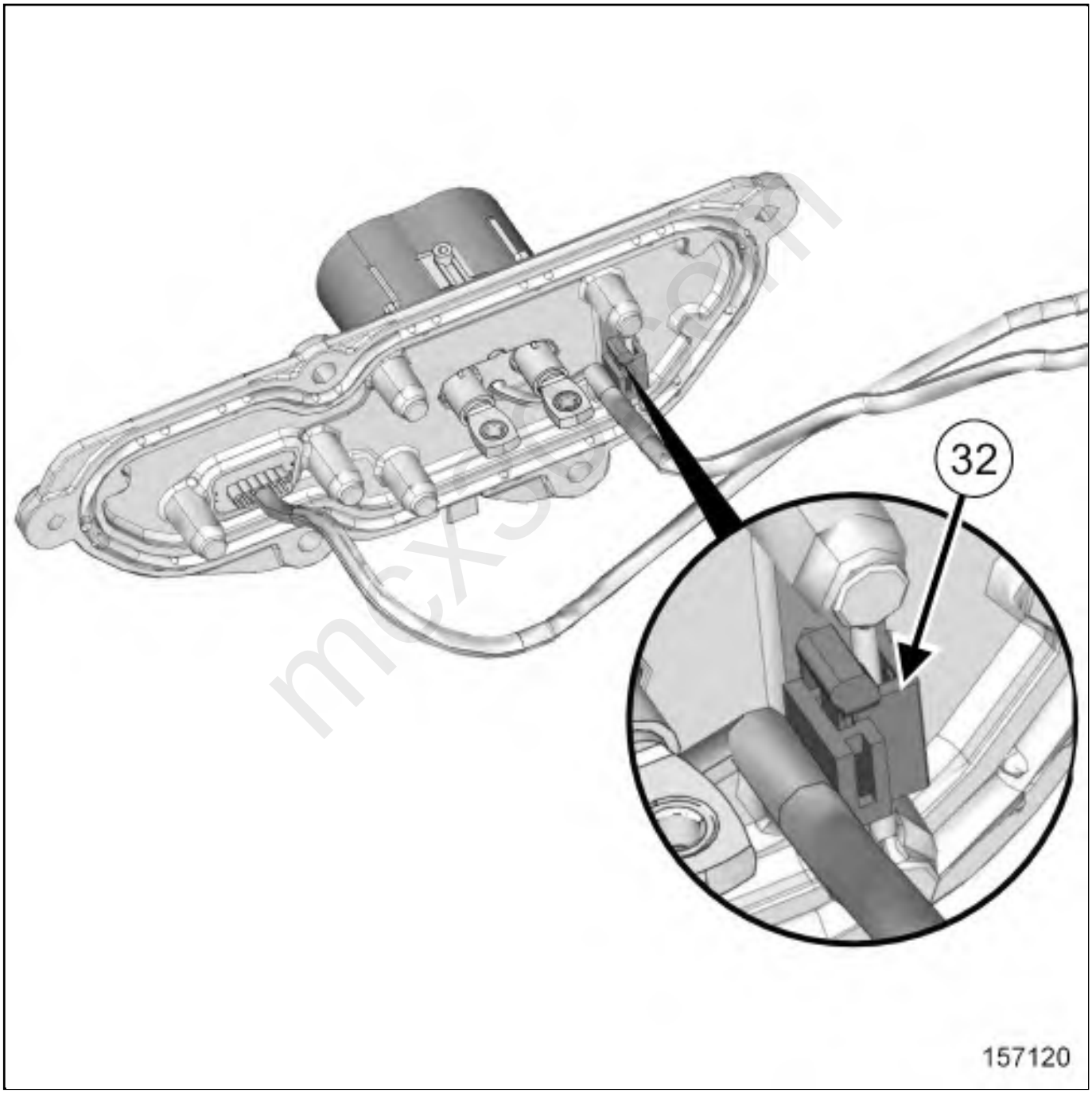

- Refit the high voltage connector screws(31) using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

- Torque tighten the high voltage connector screws using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

Note:

Tighten the screws in a criss-cross pattern.

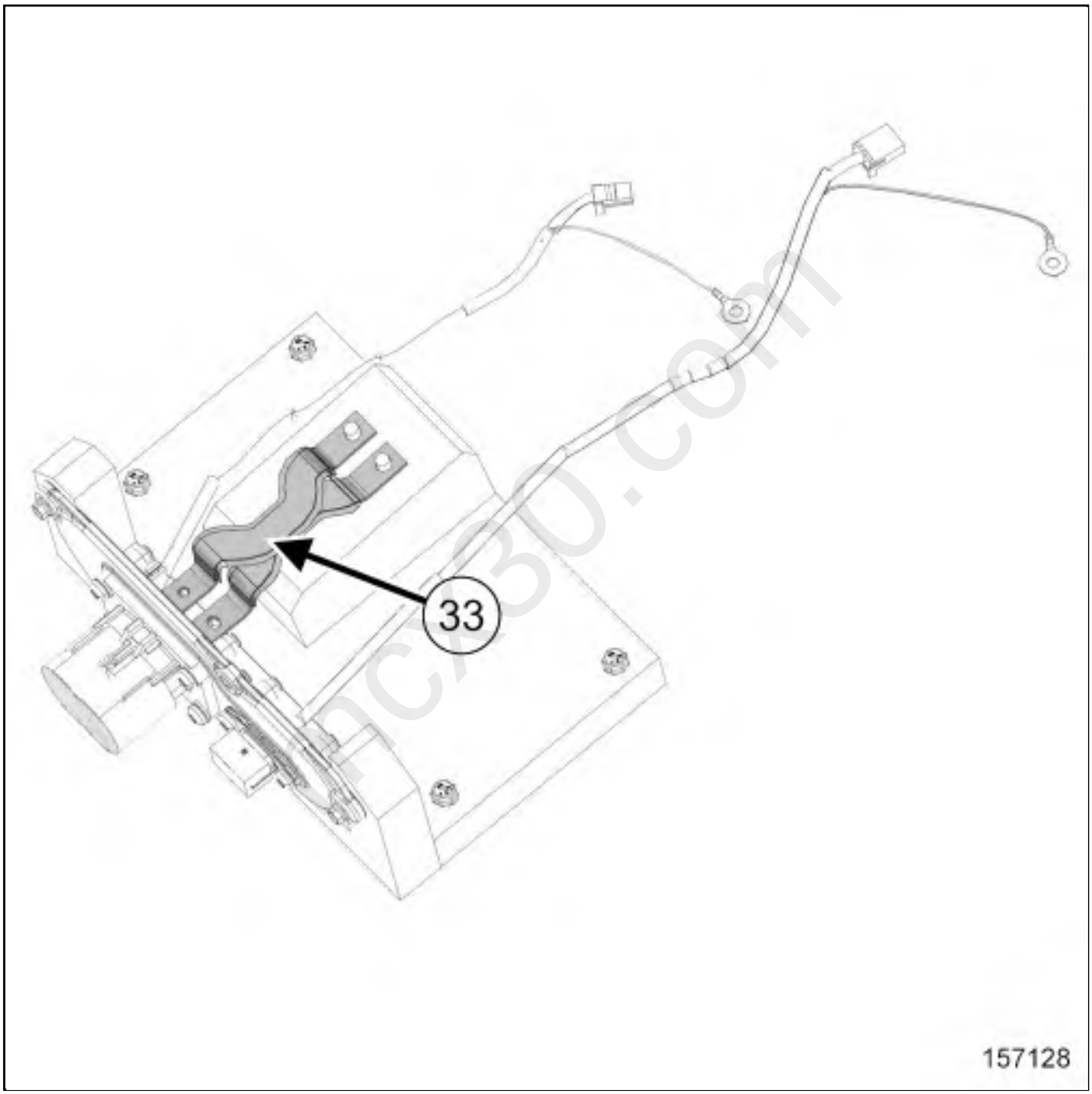
Mark always the screws with a PAINT MARKERof a color different from the original.



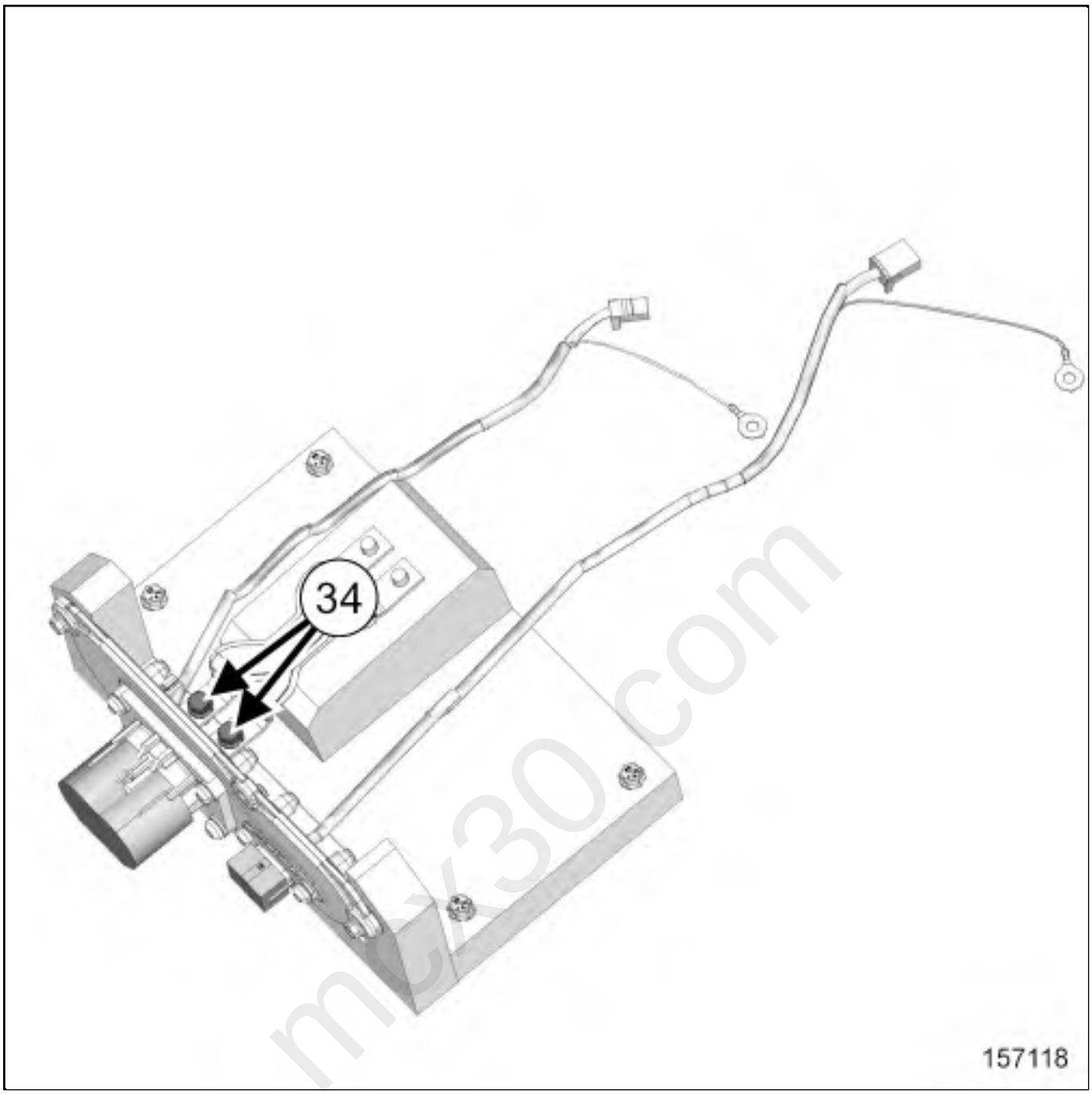

Fit the clamp at the place indicated on high voltage connector intrlock wiring.

Clip the clamp clip(32) .

Cut the clip clamp using an insulated cutting pliers.



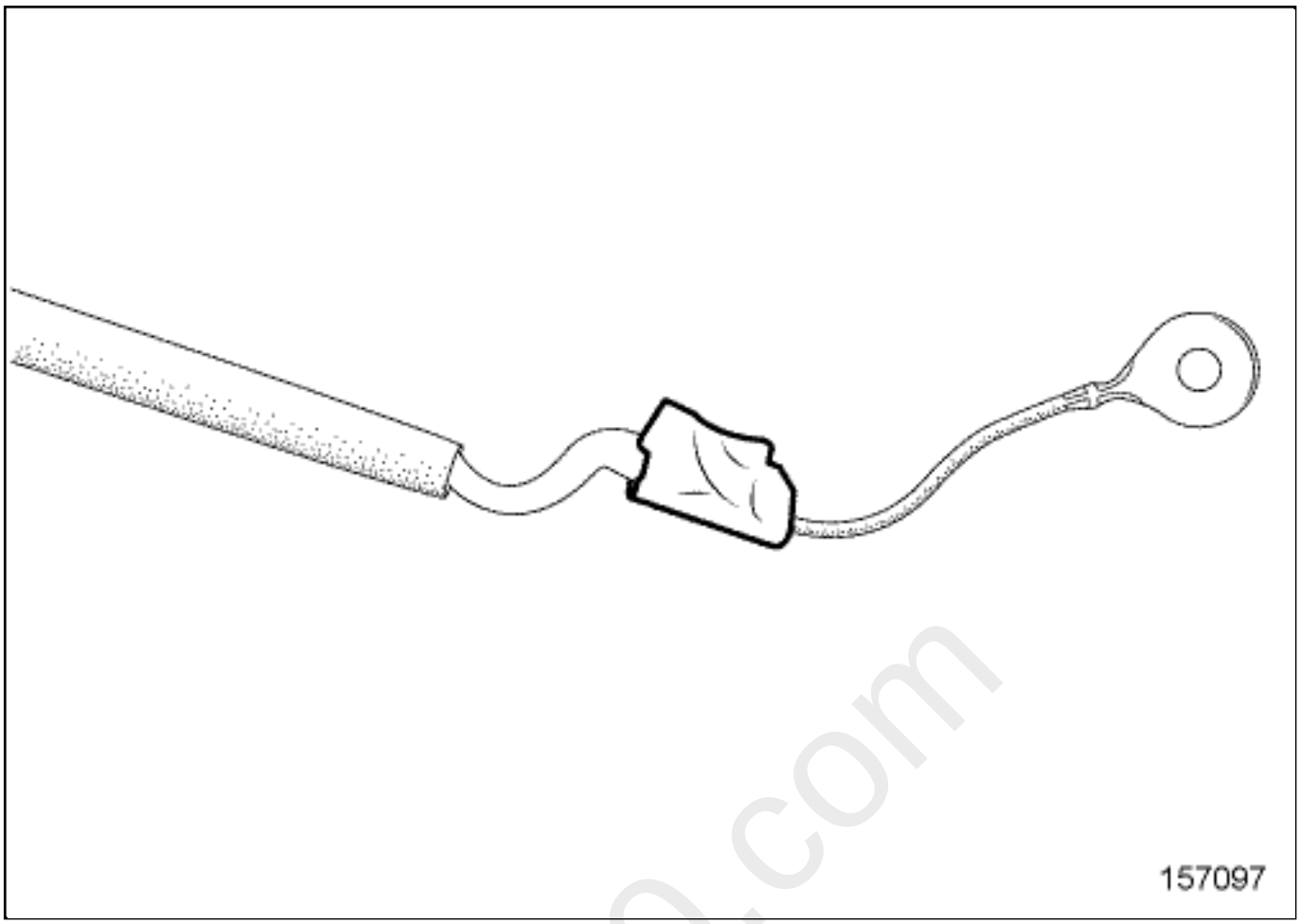

Fit the coupled bus bar(33) on the Preparation tool(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .




- Refit the coupled bus bar screws(34) **(see 19E, Traction battery, Traction battery module stack assembly : Exploded view )** .

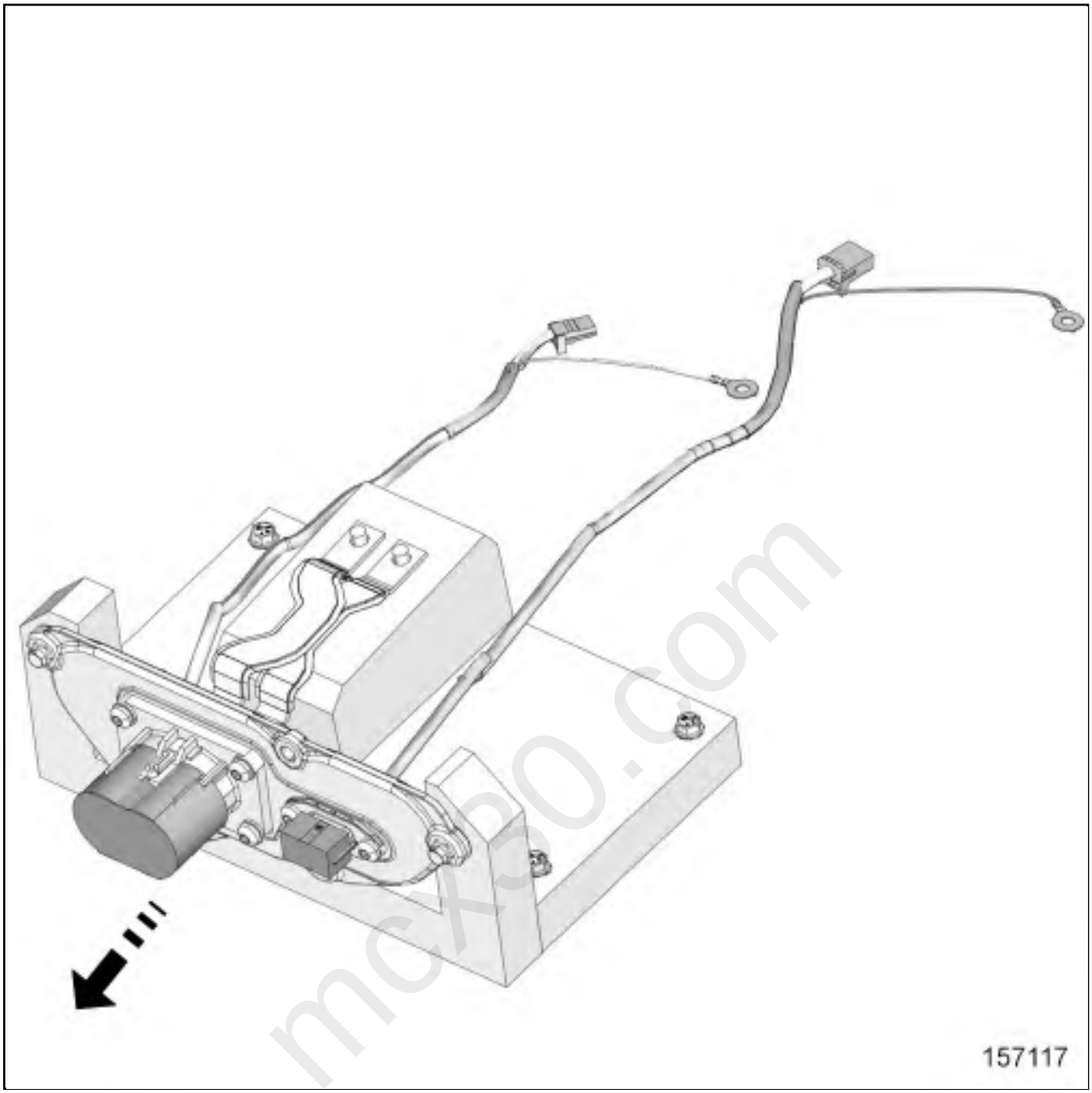
- Torque tighten the coupled bus bar screws**(see 19E, Traction battery, Traction battery module stack assembly : Exploded view)** .

- Mark always the screws with a PAINT MARKERof a color different from the original.



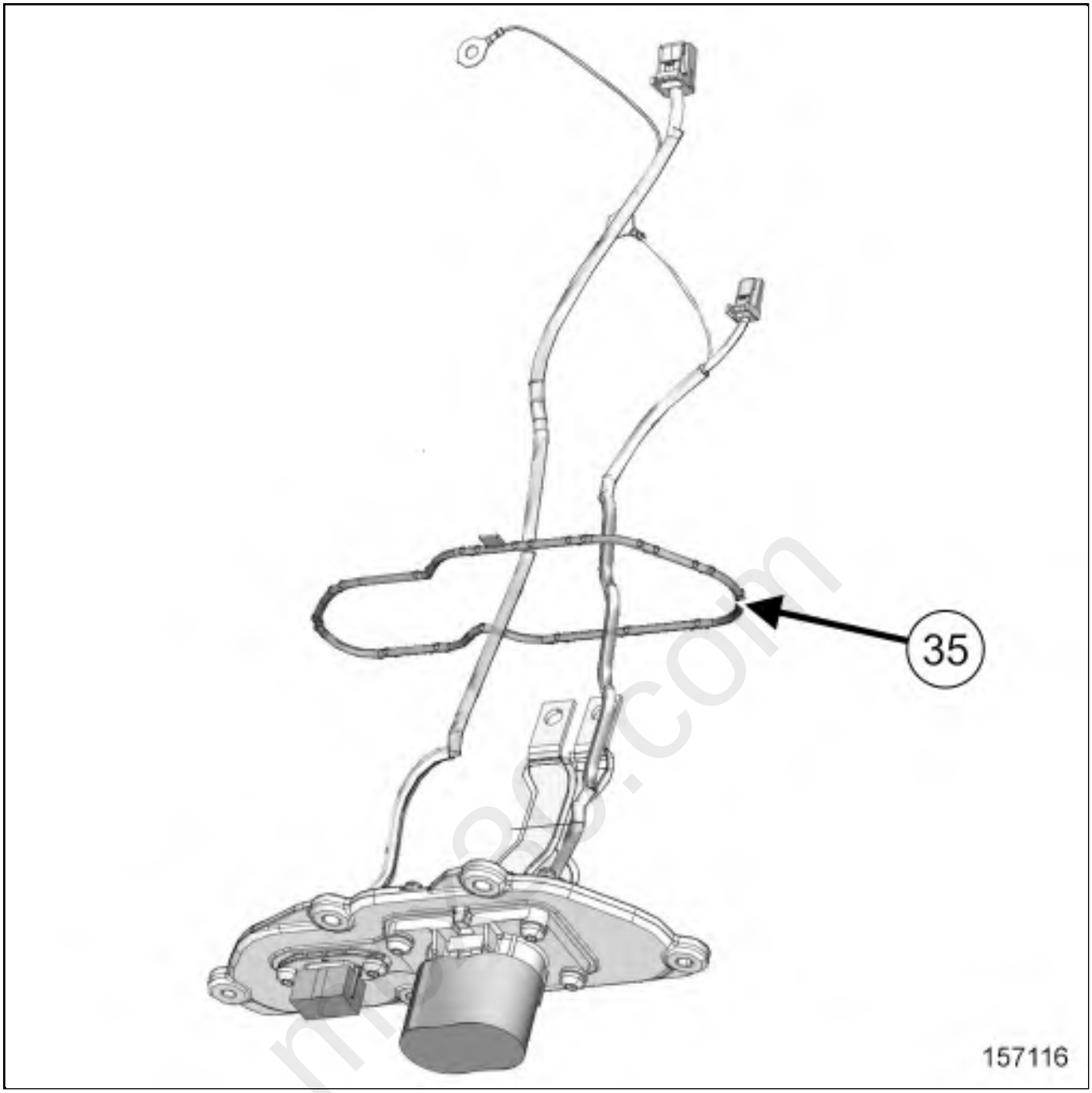

Gather :

- the lower voltage connector plug with the lug wire using adhesive tape,
- the interlock high voltage connector plug with the lug wire using adhesive tape.




Remove the connectors support plate assembly from the preparation tool.

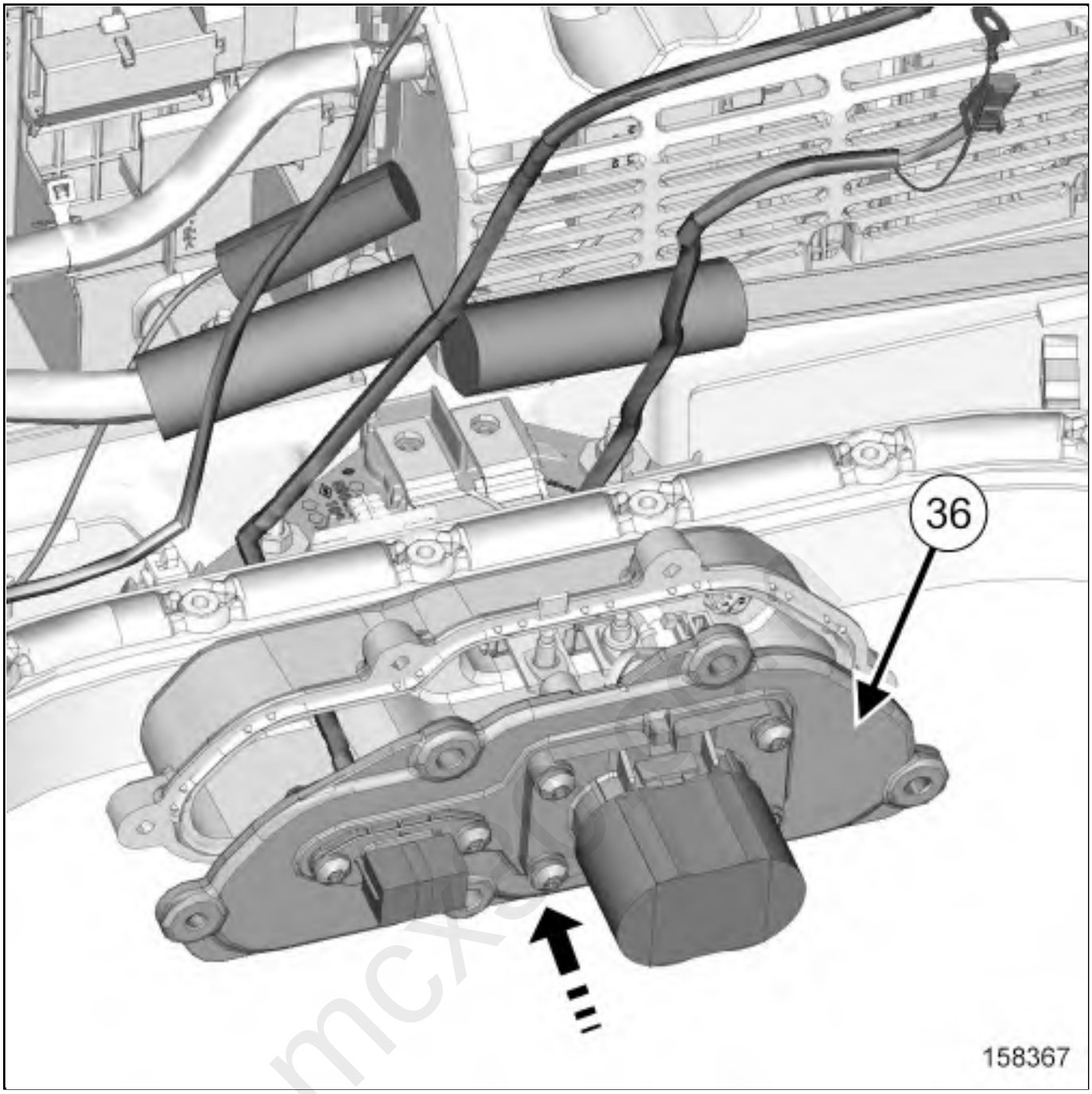
Clean the surfaces around the seal groove on the connectors support plate using the BRAKE CLEANER and LINT-FREE CLOTH(see **Vehicle: Parts and consumables for the repair**) .




Fit the new seal(35) between connectors support plate and connectors support(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

### 2. REFITTING OPERATION

Clean the sealing surface of the connectors support using the BRAKE CLEANER and LINT-FREE CLOTH (see **Vehicle: Parts and consumables for the repair**) .

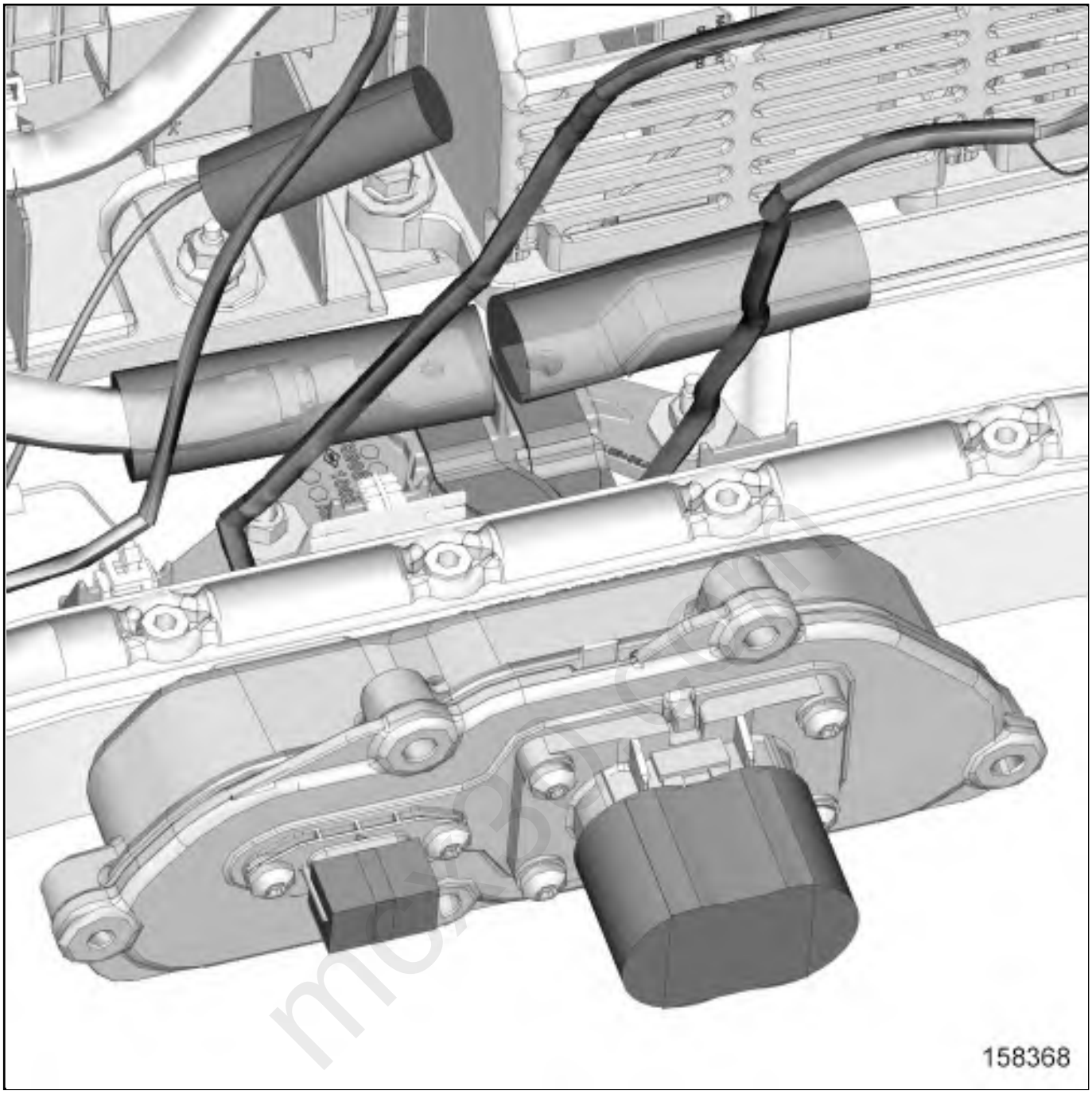



Refit the connectors support plate assembly(36) .

Note:

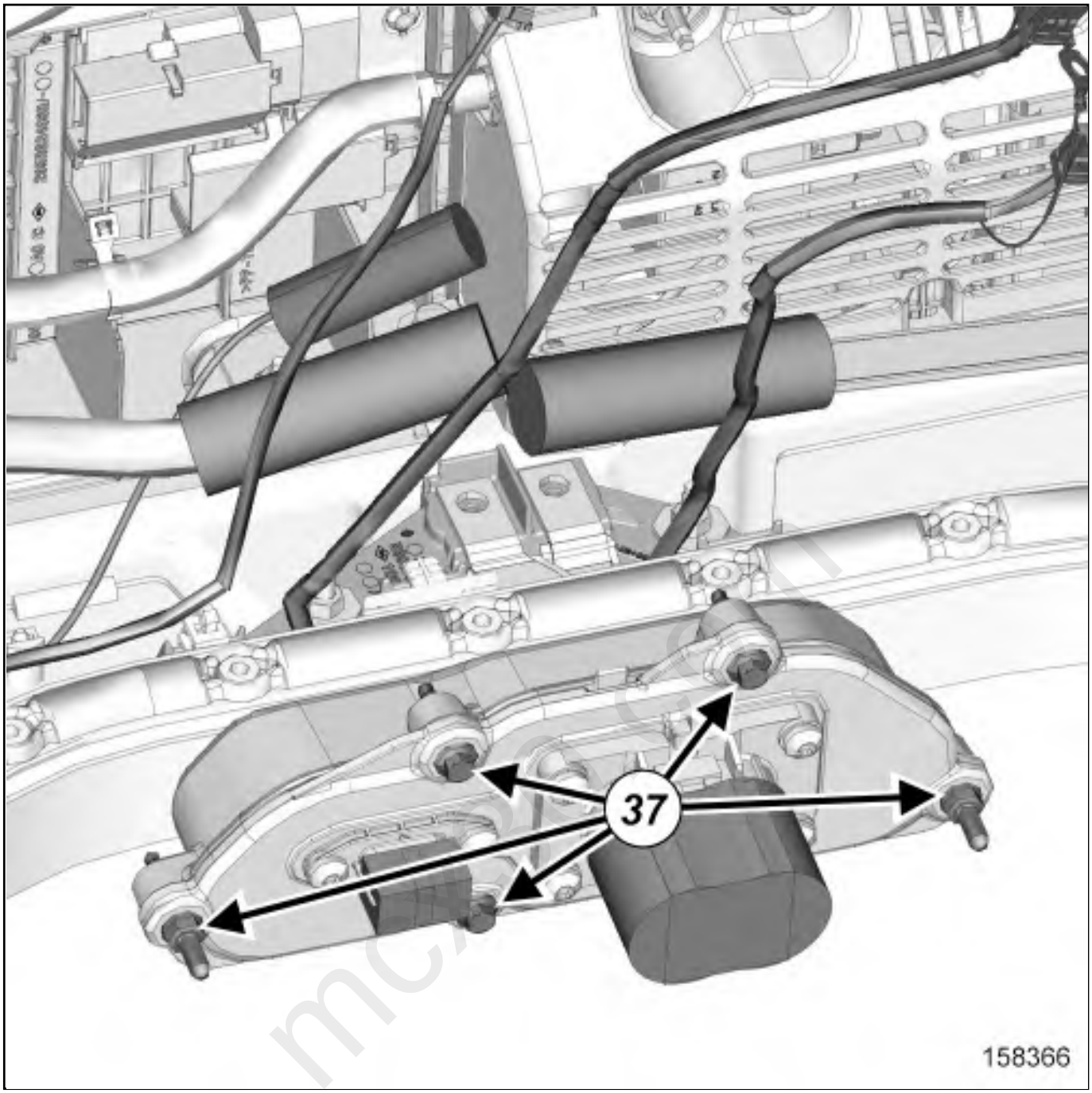
Assembly order : first ; lower voltage connector wirring , second ; the interlock high voltage connector wiring.

high voltage connector interlock wiring must be placed in the middle of the coupled bus bar.




Note:

the coupled bus bar of the high voltage connector socket is under the bus bar.




- Refit the connectors support plate screws(37) using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

- Torque tighten the connectors support plate screws using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

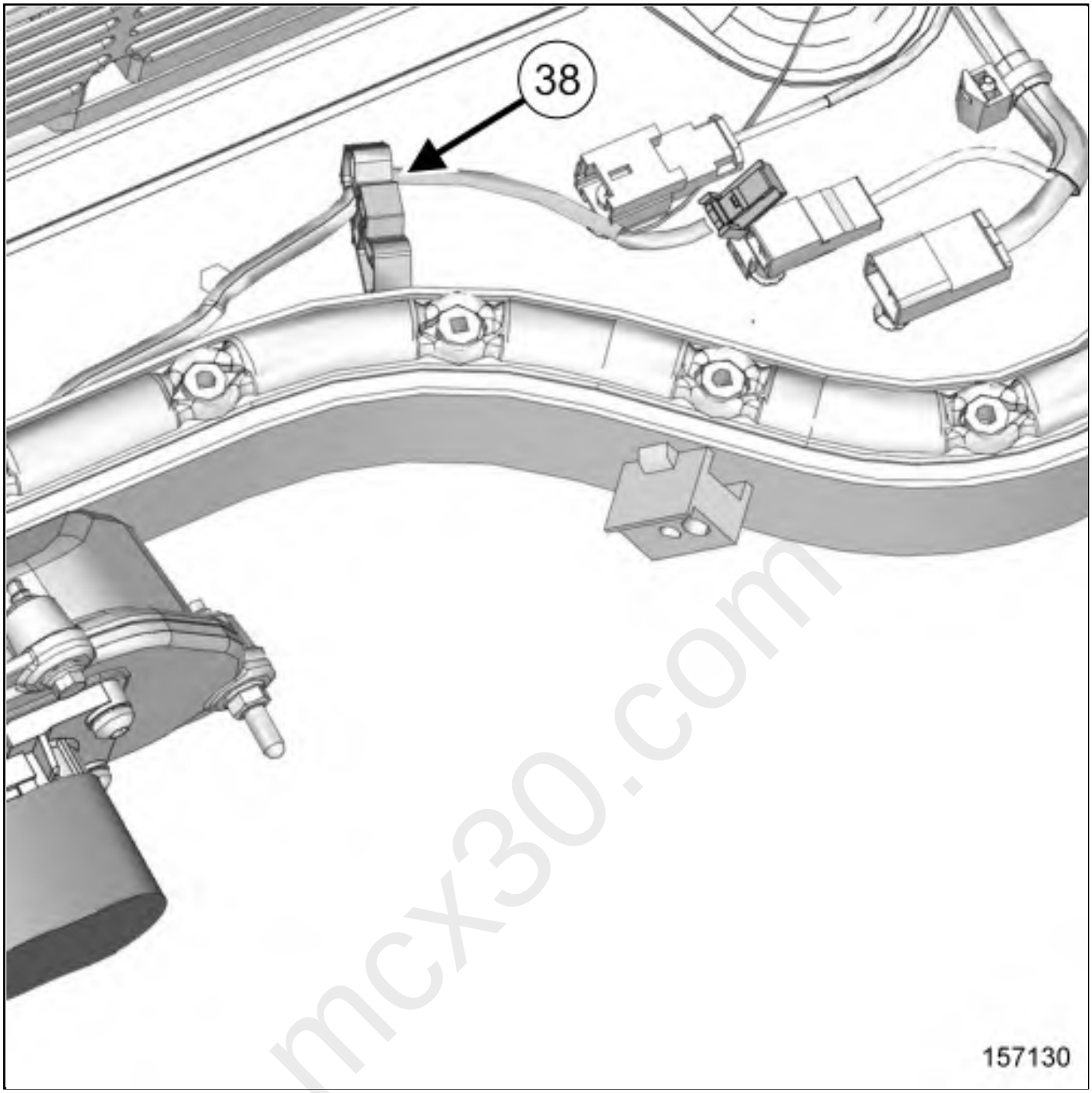
Note:

Start with the lateral screw (round hole), then the other lateral screw (elongated hole) and then the 3 last screws.

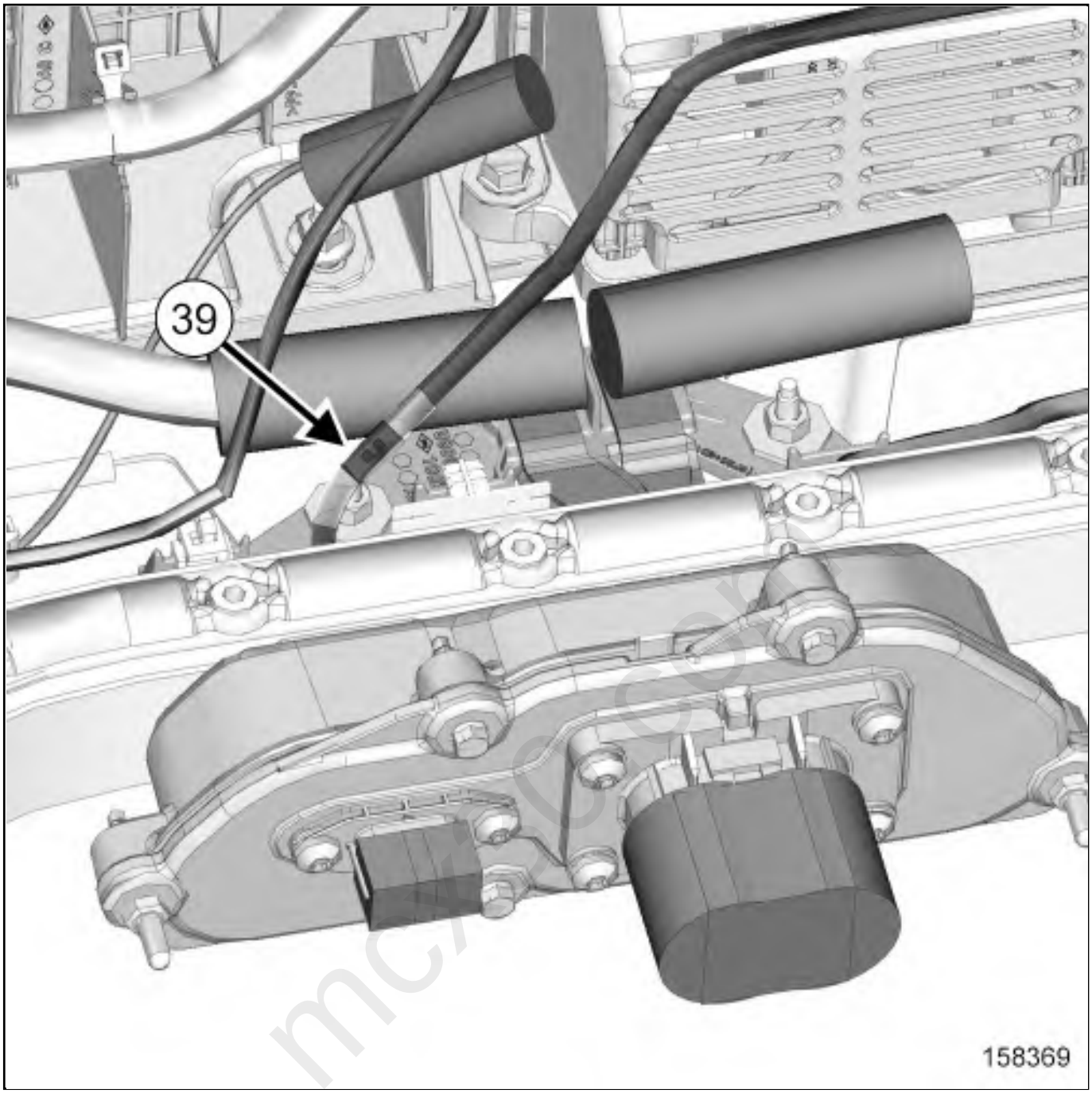
Tighten the screws in a criss-cross pattern.

Mark always the screws with a PAINT MARKERof a color different from the original.

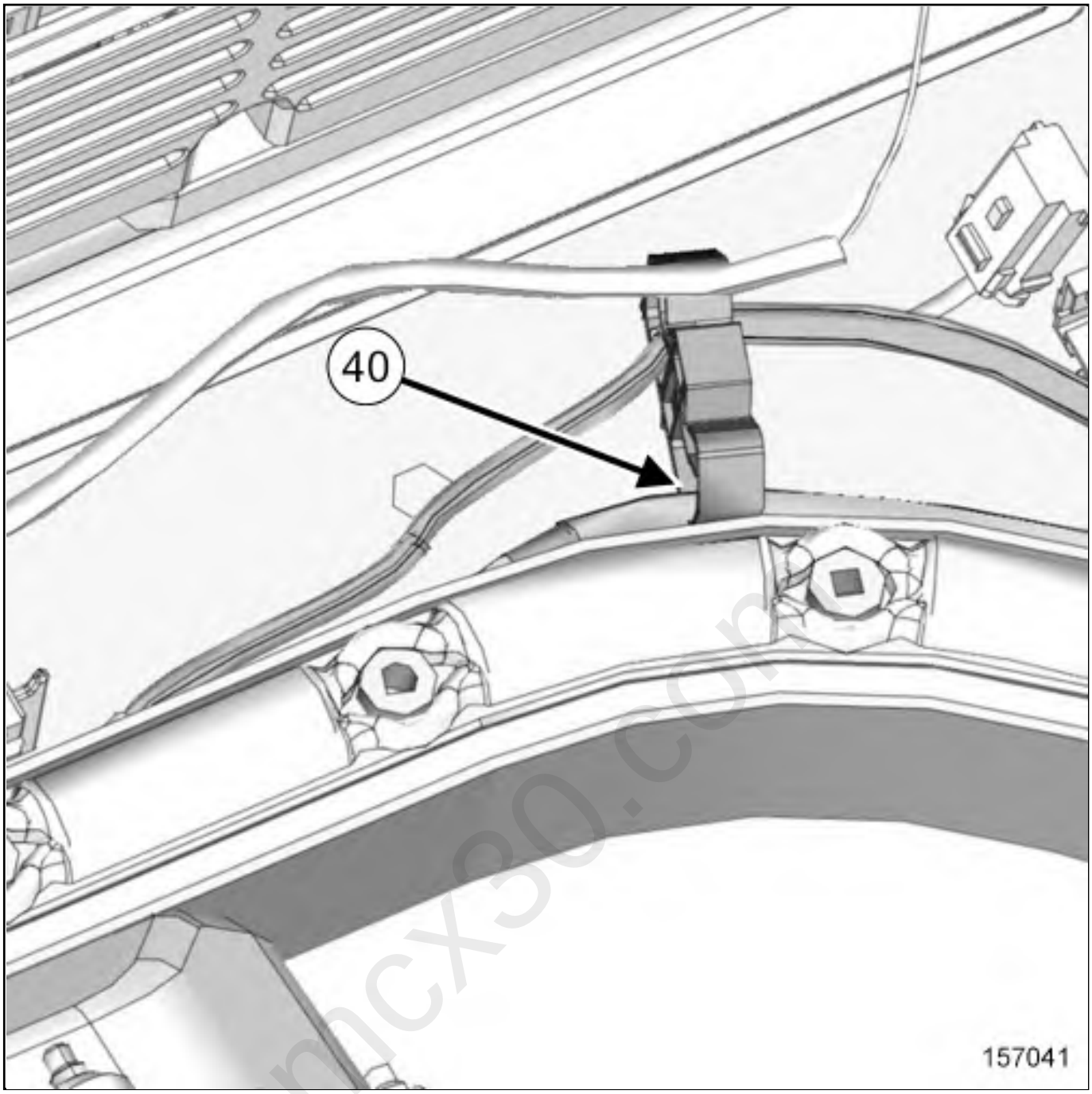
Refit the wiring high voltage connector to the bottom of the lower cover using toolSet of trim removal levers.(Car. 1363 ) .



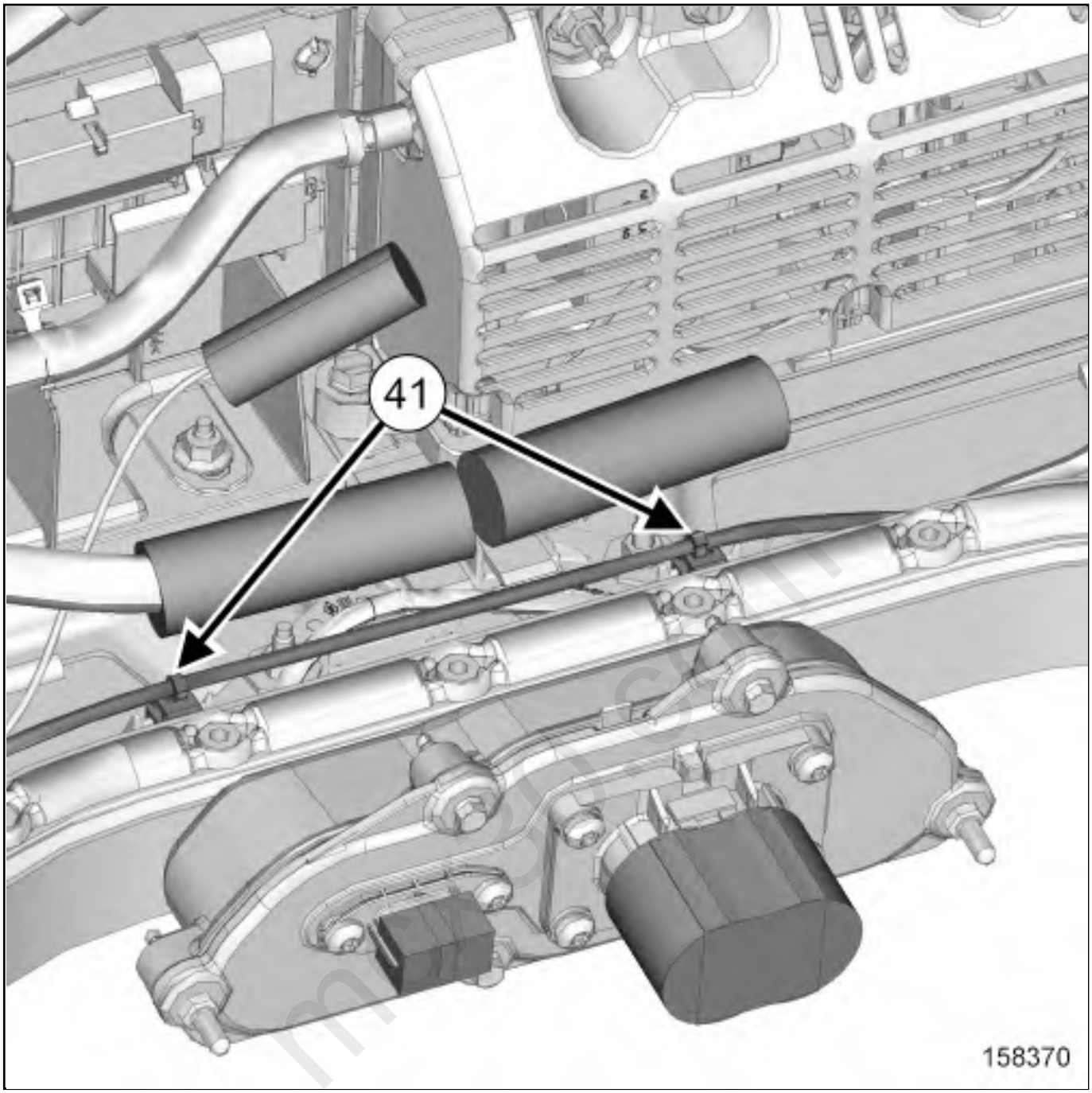

Clip the interlock high voltage connector wiring on the twin clip(38) .




- Refit the clip(39) on the low voltage connector wiring using adhesive tape.
- Clip the low voltage connector clip on the insulated support.
- Refit the wiring low voltage connector to the bottom of the lower cover using toolSet of trim removal levers.(Car. 1363 ) .

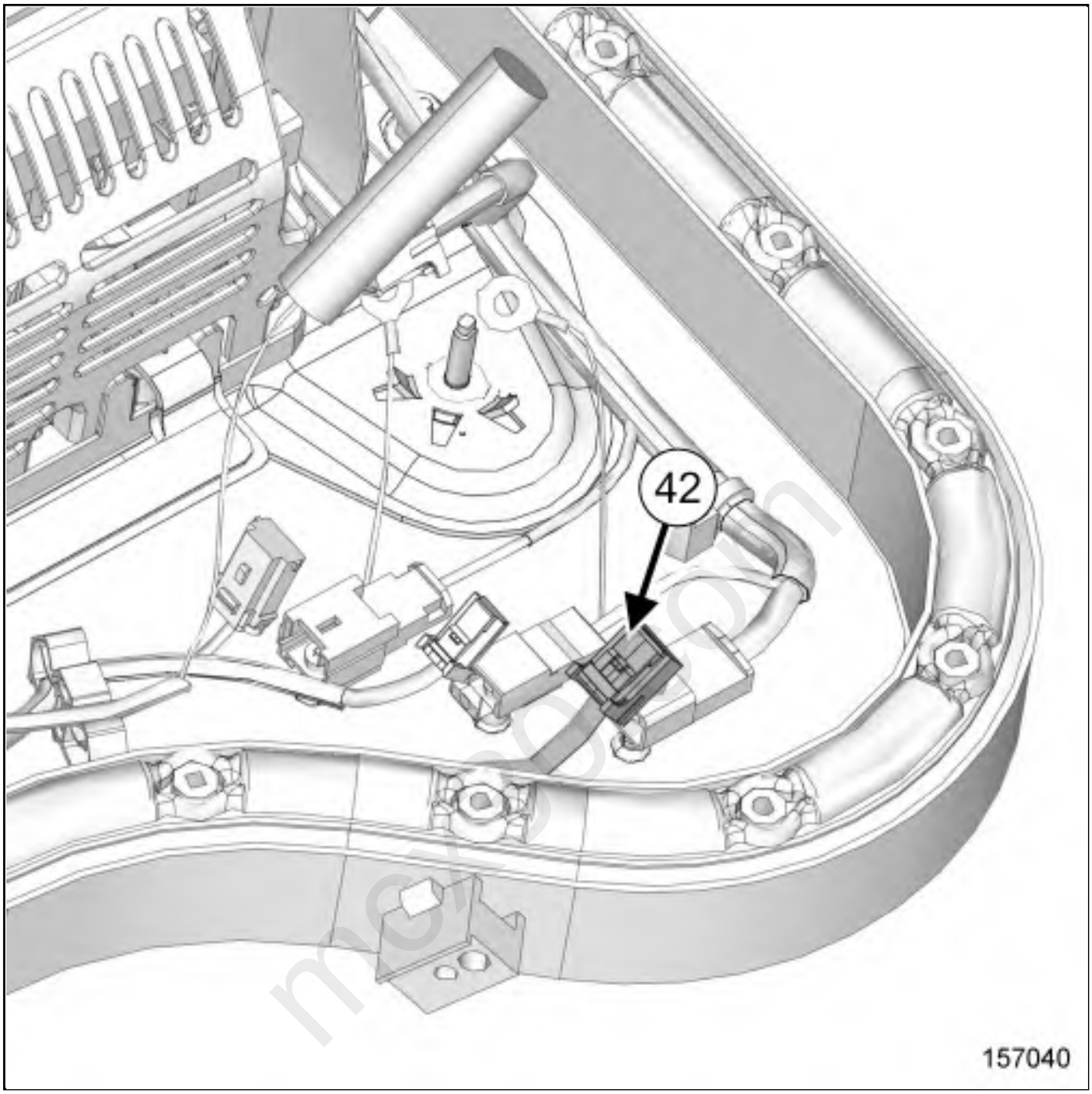



Clip the low voltage connector wiring on the twin clip(40) .




- Fit the clamps at the place indicated on safety device switch socket interlock wire.
- Clip the clamp clips(41).
- Cut the clip clamps using an insulated cutting pliers.
-

Remove the adhesive tape from the wirings.

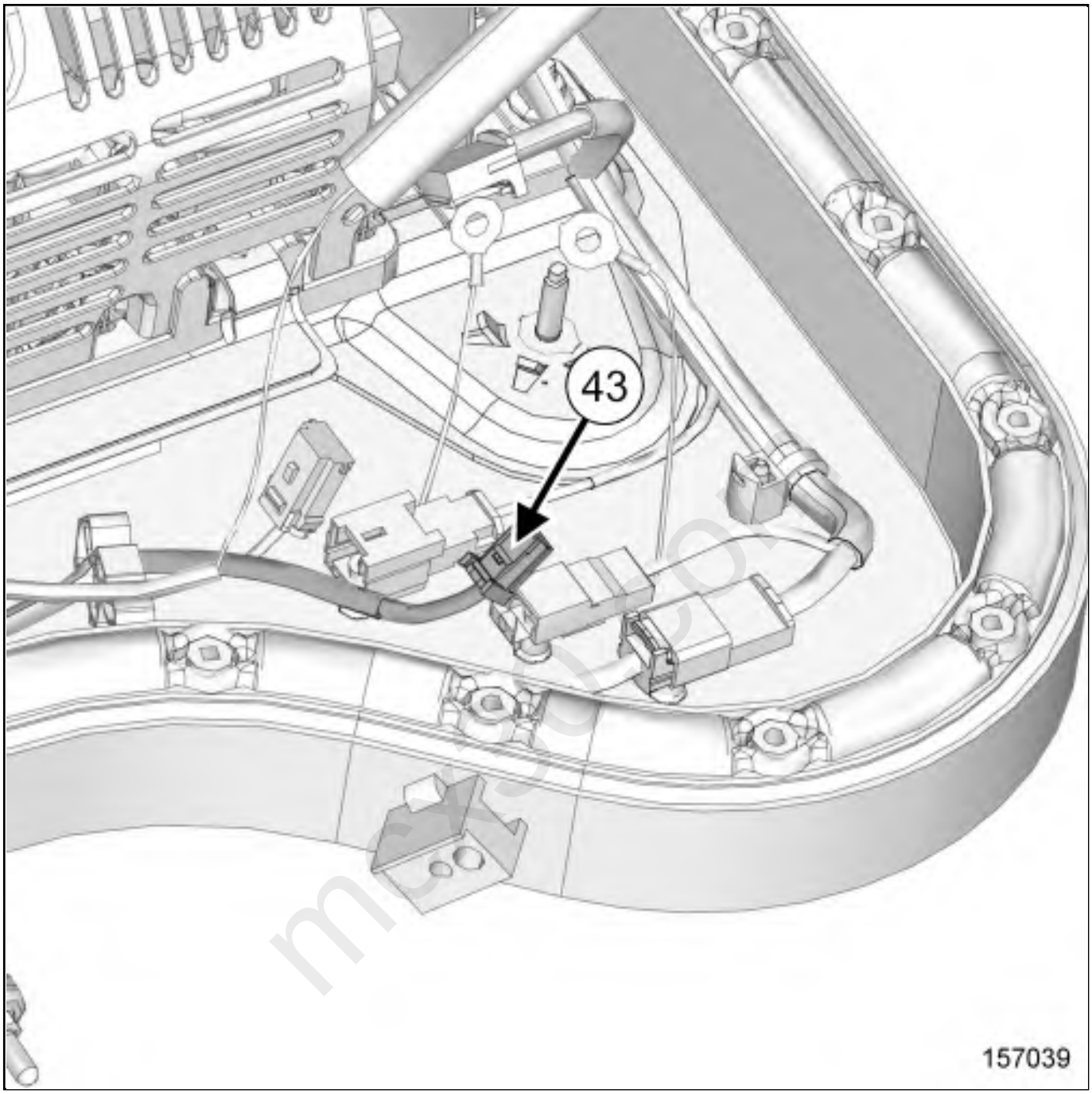



Connect the wiring plug(42) of the low voltage connector.

Note:

Make a push-pull test on the connector.

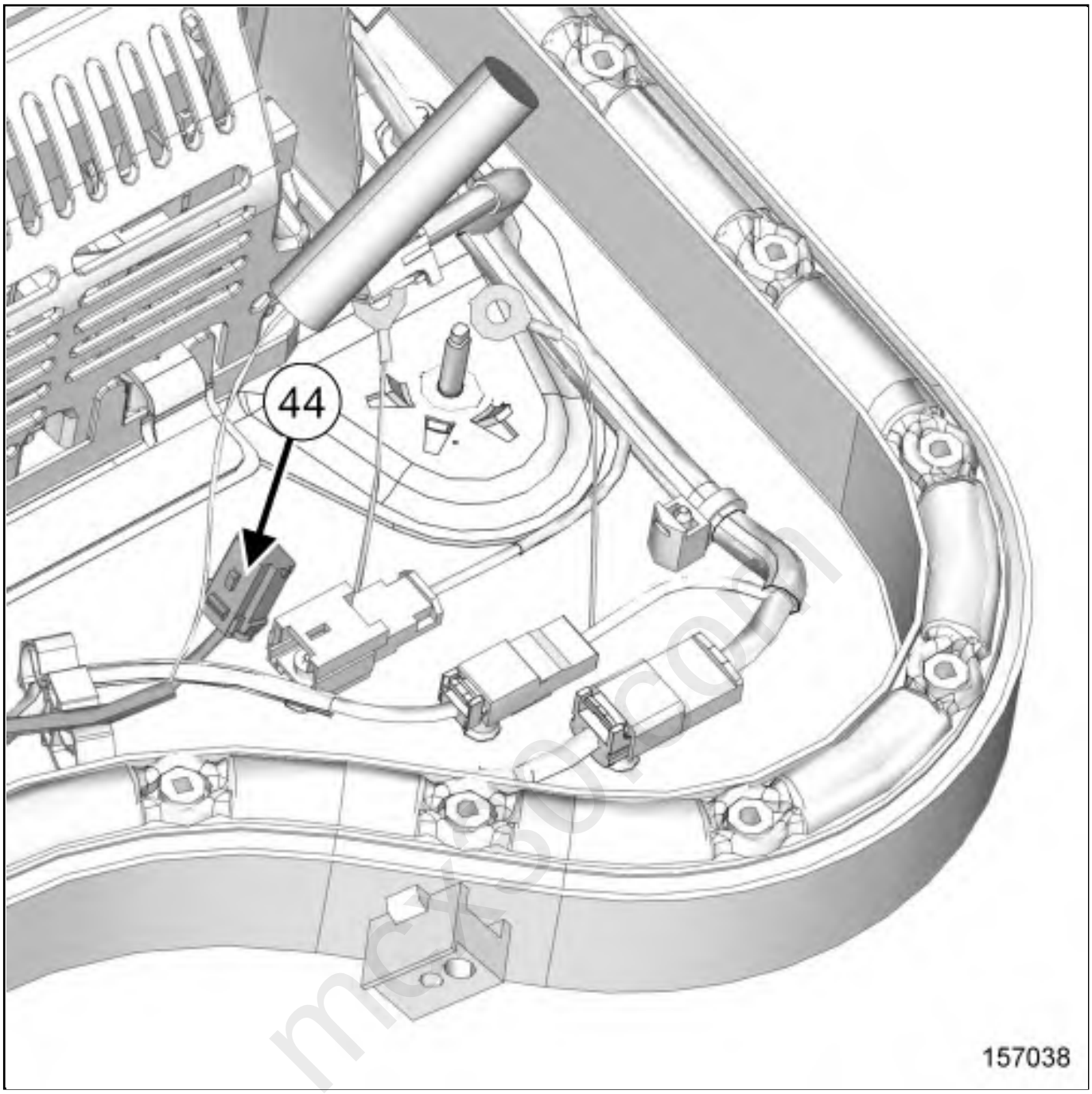
Refit the low voltage connector wiring on the bottom of the lower cover.




Connect the high voltage connector interlock wiring plug(43) .

Note:

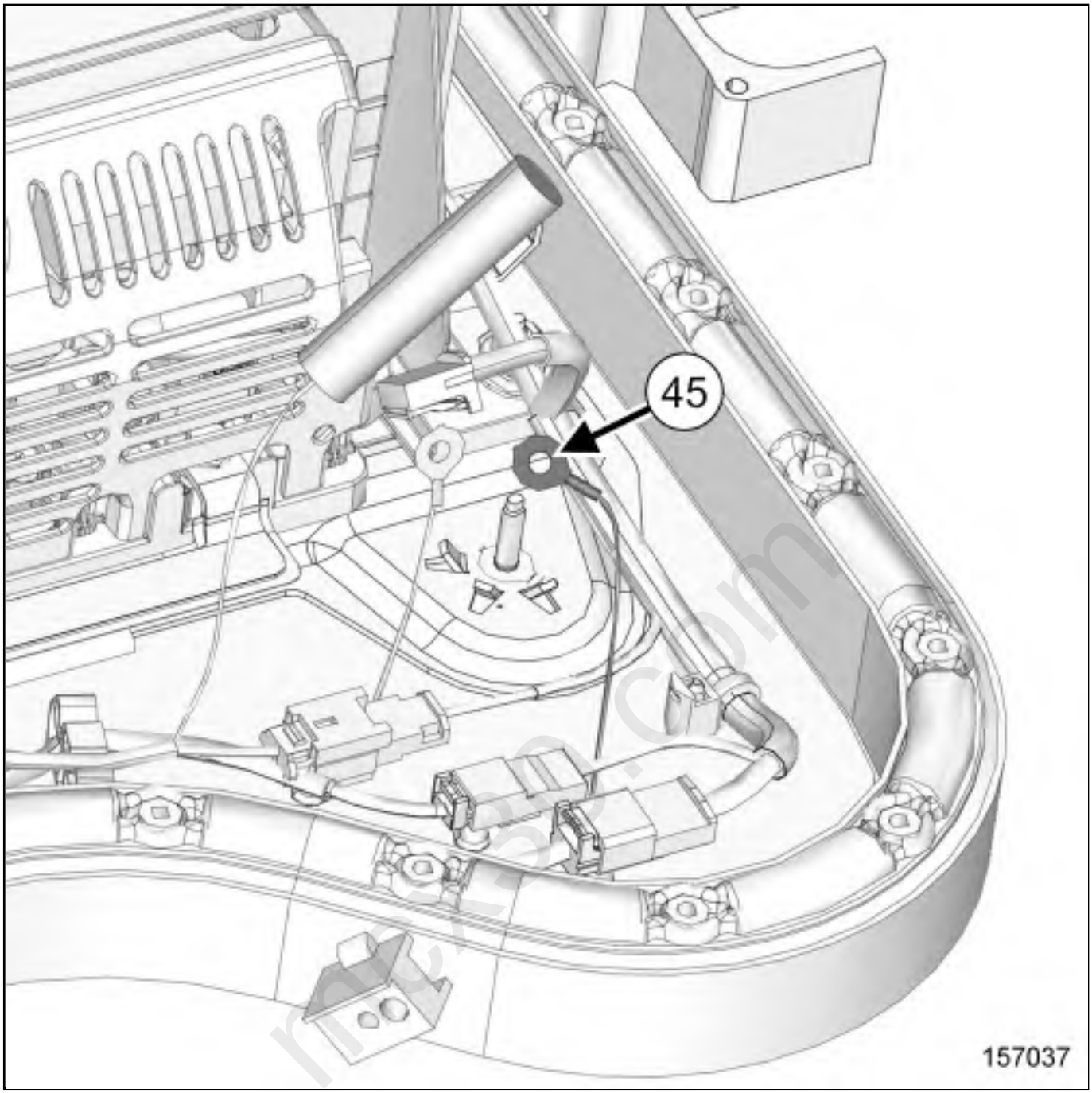
Make a push-pull test on the connector.



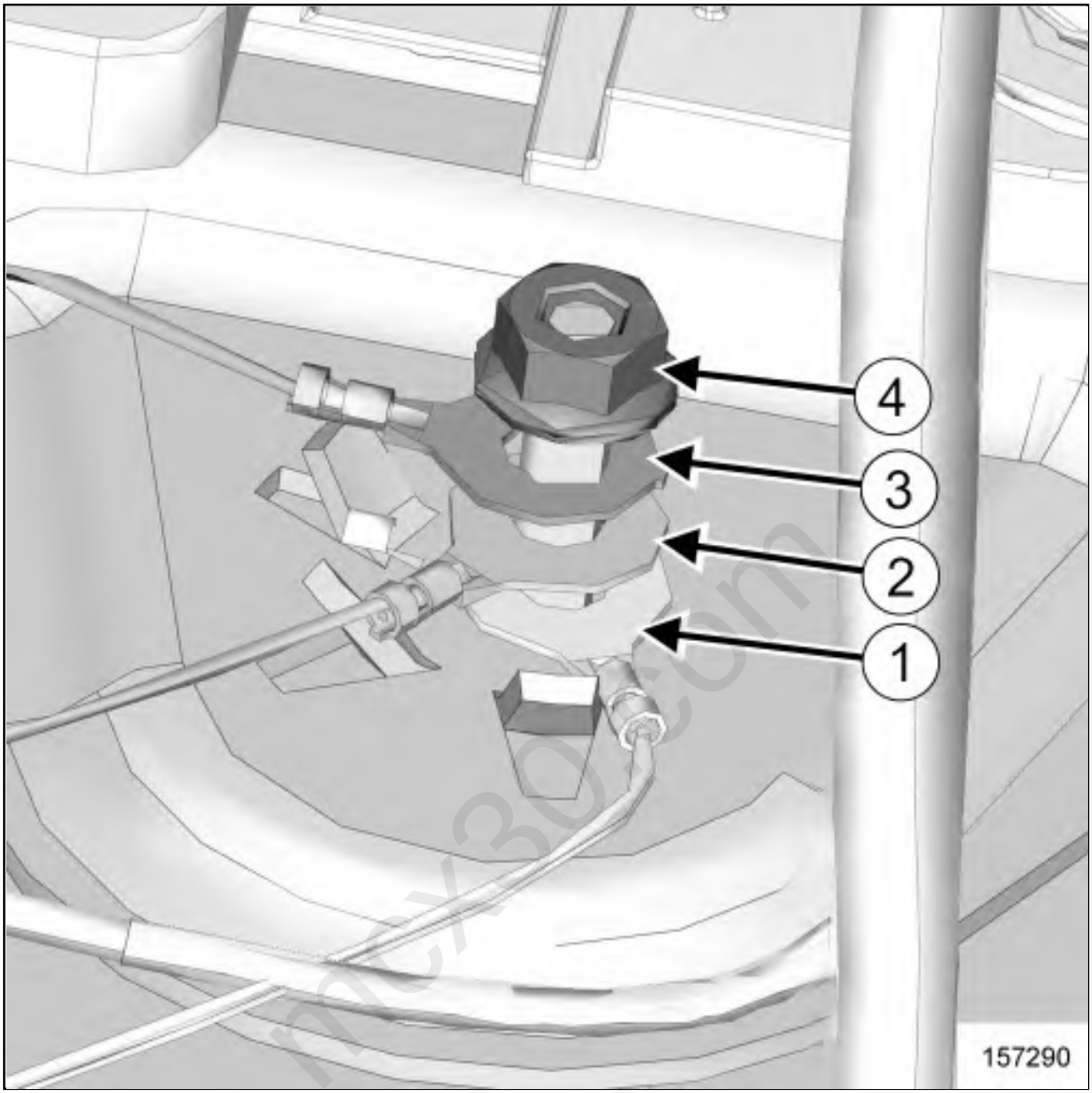

Connect the safety device switch socket interlock wire plug(44) .

Note:

Make a push-pull test on the connector.




Refit the low voltage connector electric earth lug(45) on the electric earth stud using the toolSet of trim removal levers.(Car. 1363 ) .


4
3
2
1
157290

Note:

Pay attention to the mechanical coding.

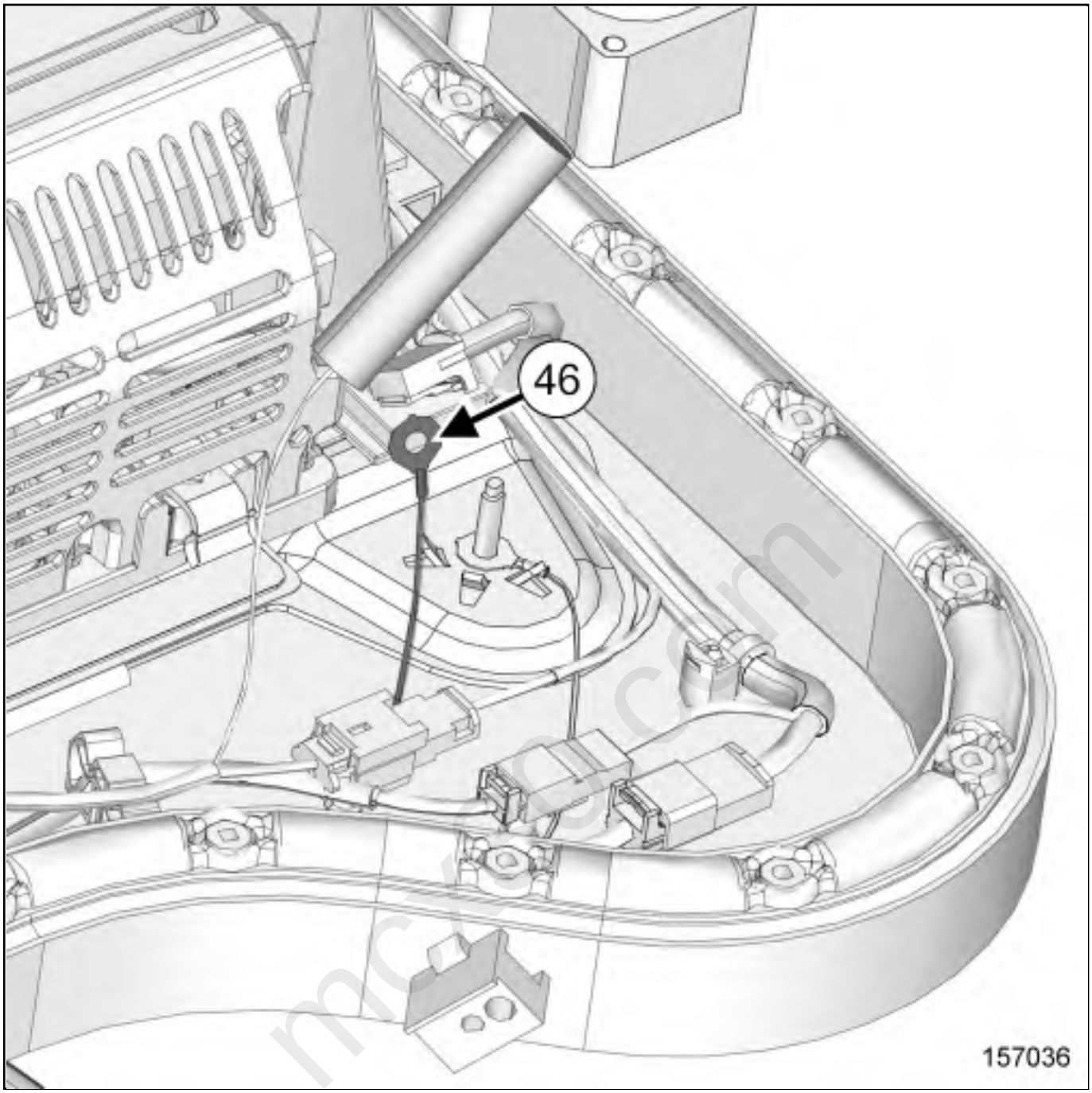
1 low voltage connector electric earth lug,

2 high voltage connector interlock electric earth lug,

3 safety device switch socket interlock electric earth lug,

4 nut.

Put the negative wiring on the bottom of the lower cover.




Refit the high voltage connector interlock electric earth lug(46) on the electric earth stud using the tool Set of trim removal levers.(Car. 1363 ) .

Note:

Pay attention to the mechanical coding.

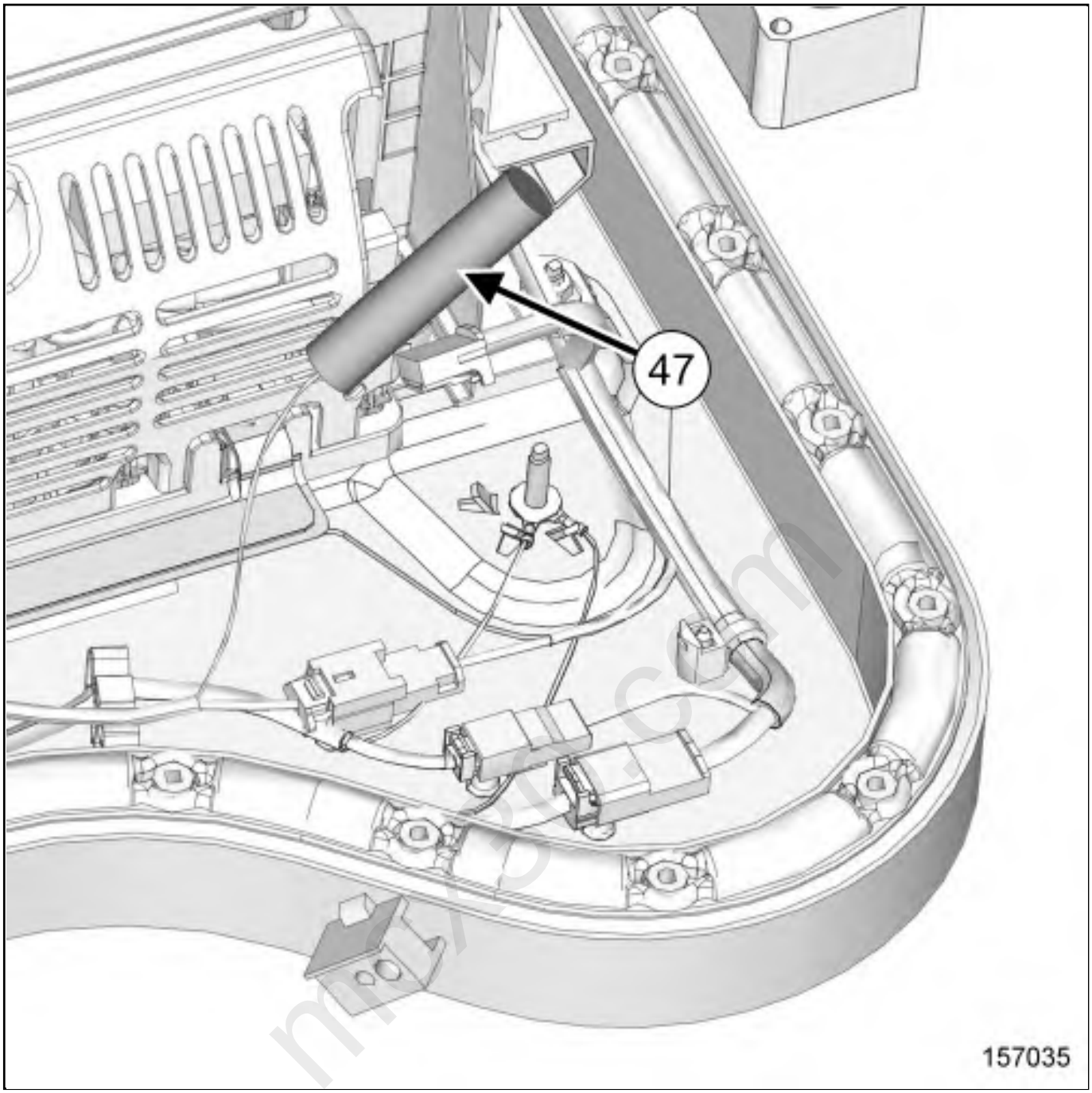
1 low voltage connector electric earth lug,

2 high voltage connector interlock electric earth lug,

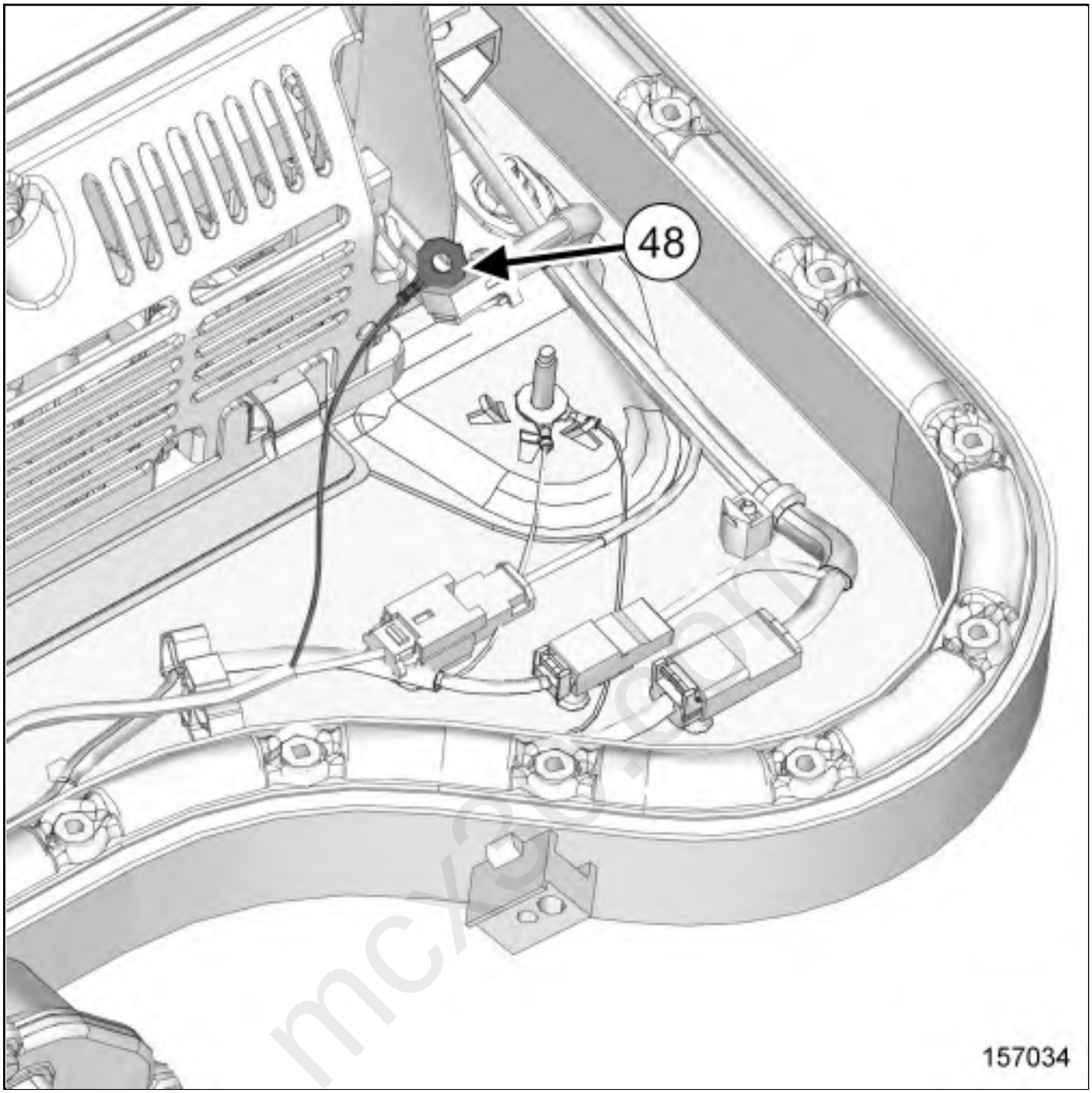
3 safety device switch socket interlock electric earth lug,

4 nut.

Put the negative wiring on the bottom of the lower cover.




Remove the insulation(47) from the safety device switch socket interlock electric earth lug.




Refit the safety device switch socket interlock electric earth lug(48) on the electric earth stud using the toolSet of trim removal levers.(Car. 1363 ) .

Note:

Pay attention to the mechanical coding.

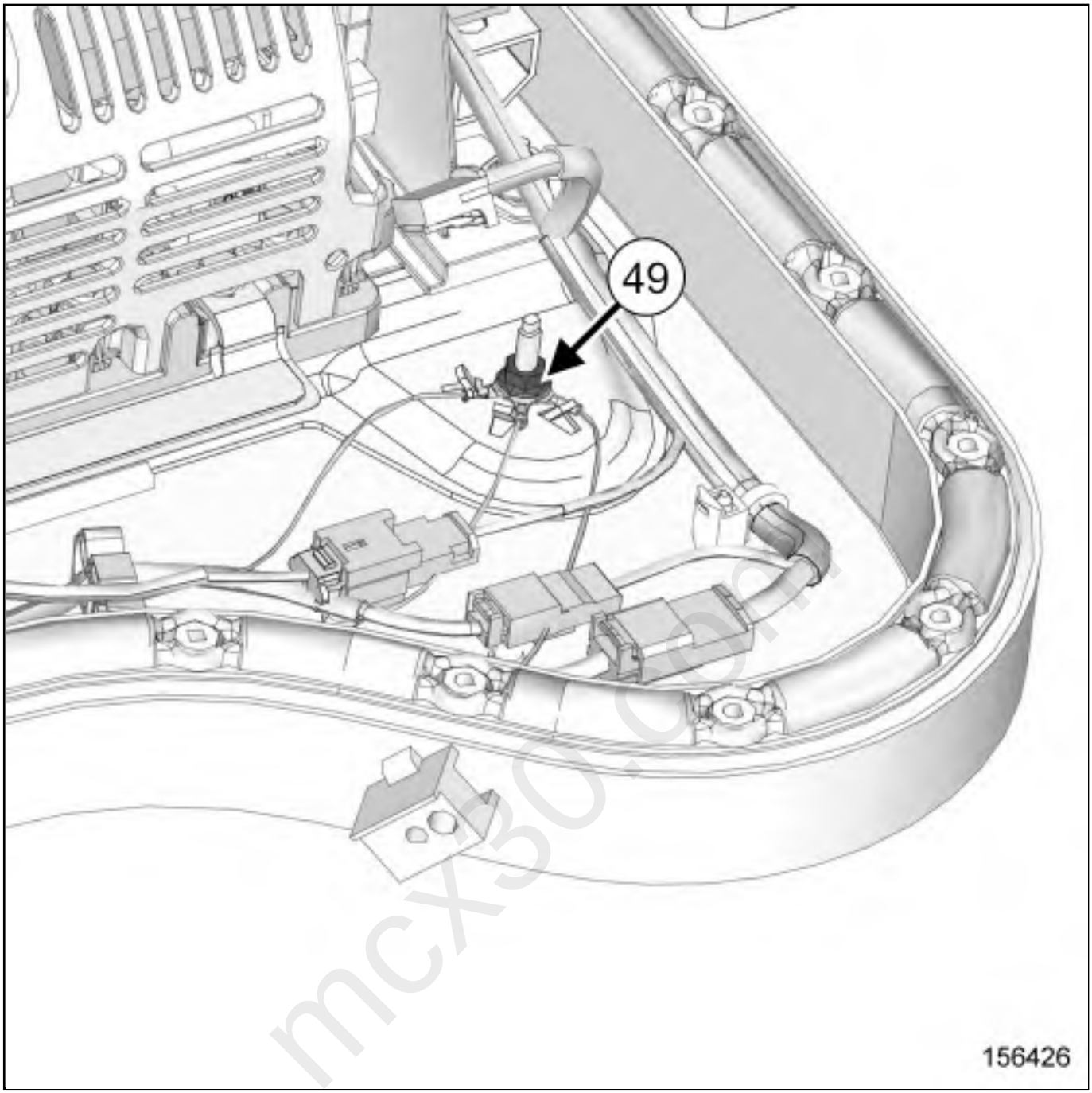
1 low voltage connector electric earth lug,

2 high voltage connector interlock electric earth lug,

3 safety device switch socket interlock electric earth lug,

4 nut.

Put the negative wiring on the bottom of the lower cover.




Refit the earth electric connection nut(49) from the lower cover using an insulated magnetic socket **(see 19E, Traction battery, Traction battery module stack assembly : Exploded view)** .

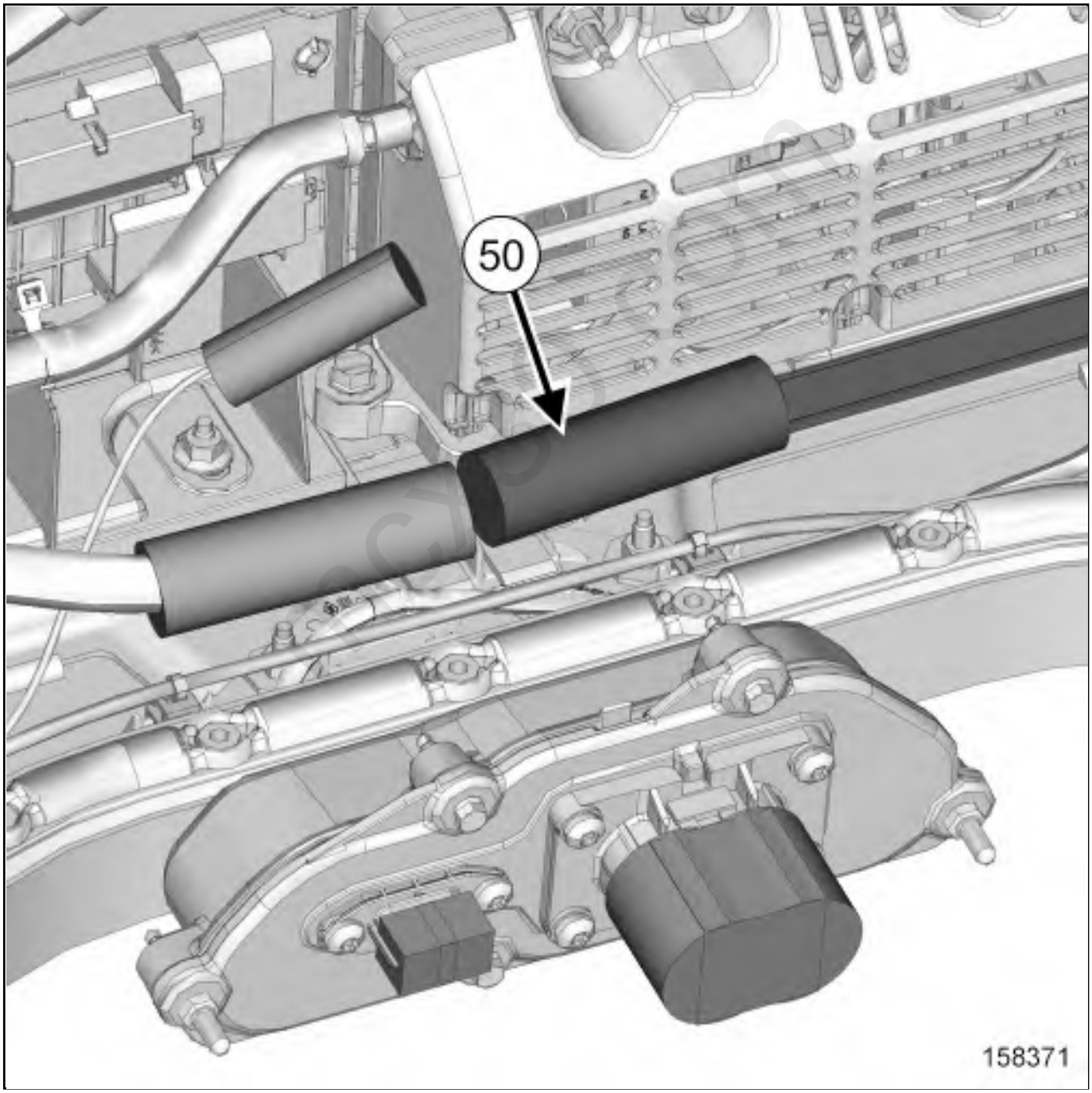
Torque tighten the earth electric connection nut from the lower cover using an insulated magnetic socket **(see 19E, Traction battery, Traction battery module stack assembly : Exploded view)** .

Mark always the nut with a PAINT MARKERof a color different from the original.

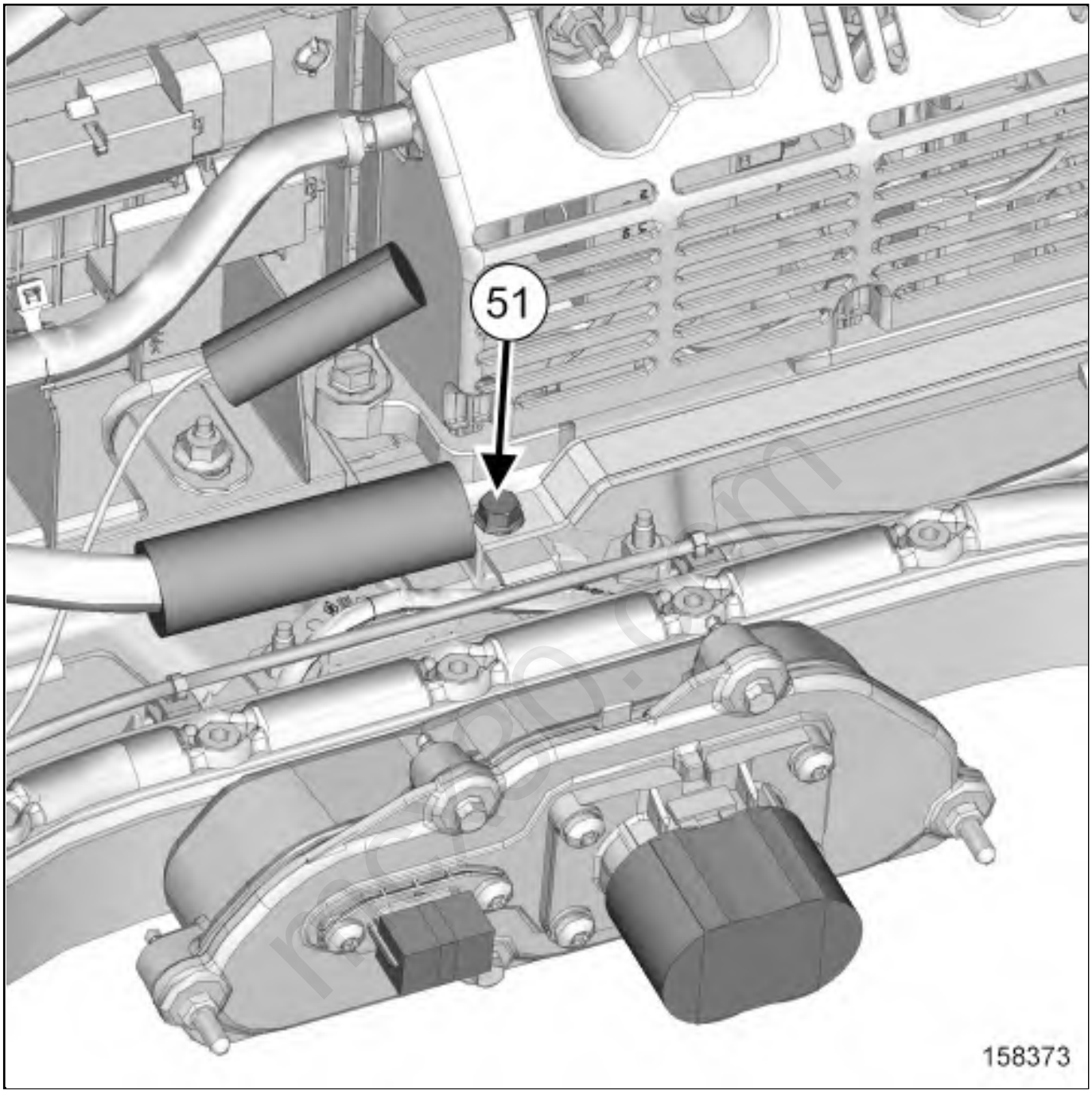
Loosen the insulated support screws(see 19E, Traction battery, Traction battery module stack assembly : Exploded view ) .

Note:

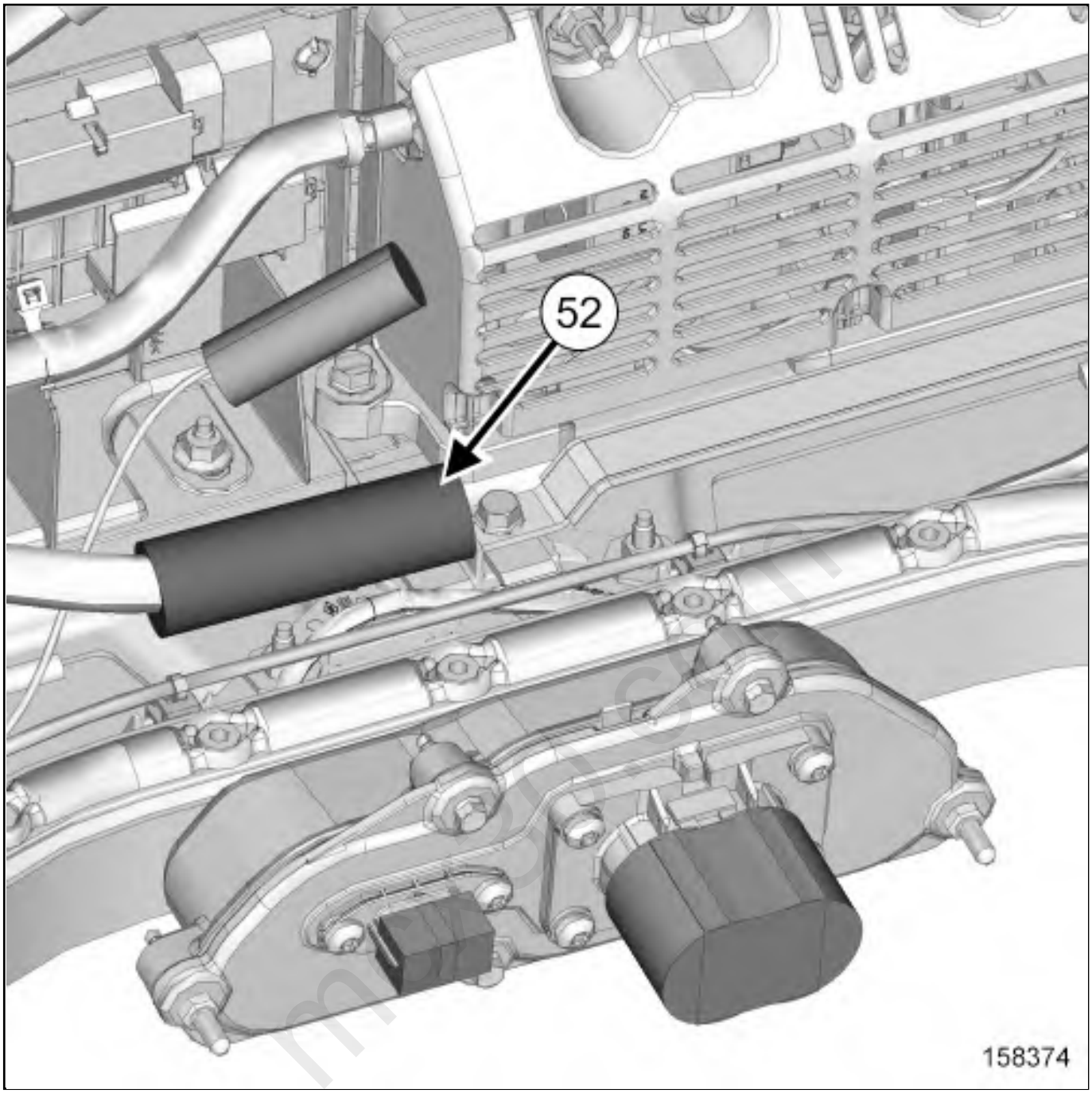
For adjust the bus bars.



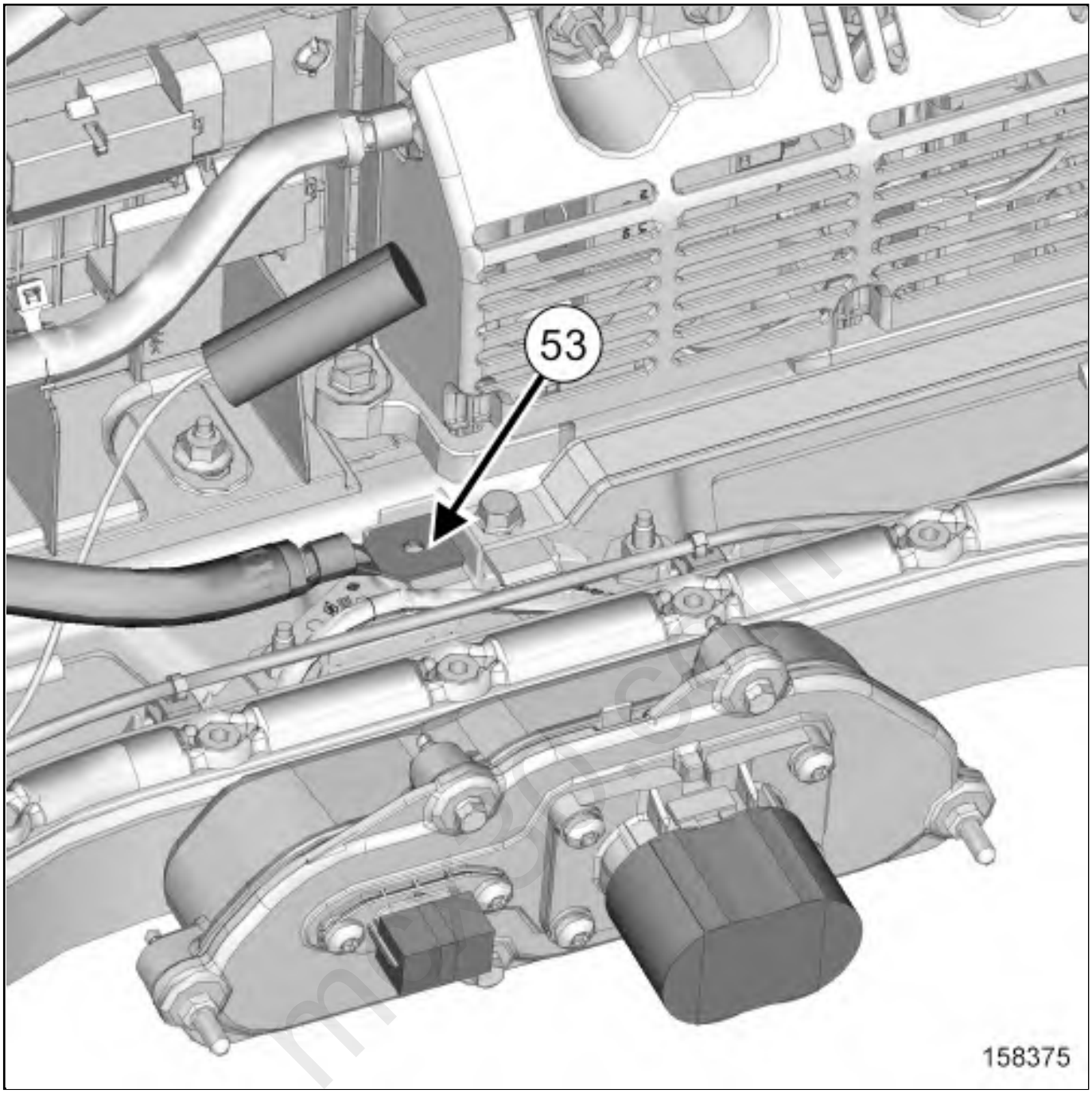
Remove the insulated cover(50) from the bus bar.



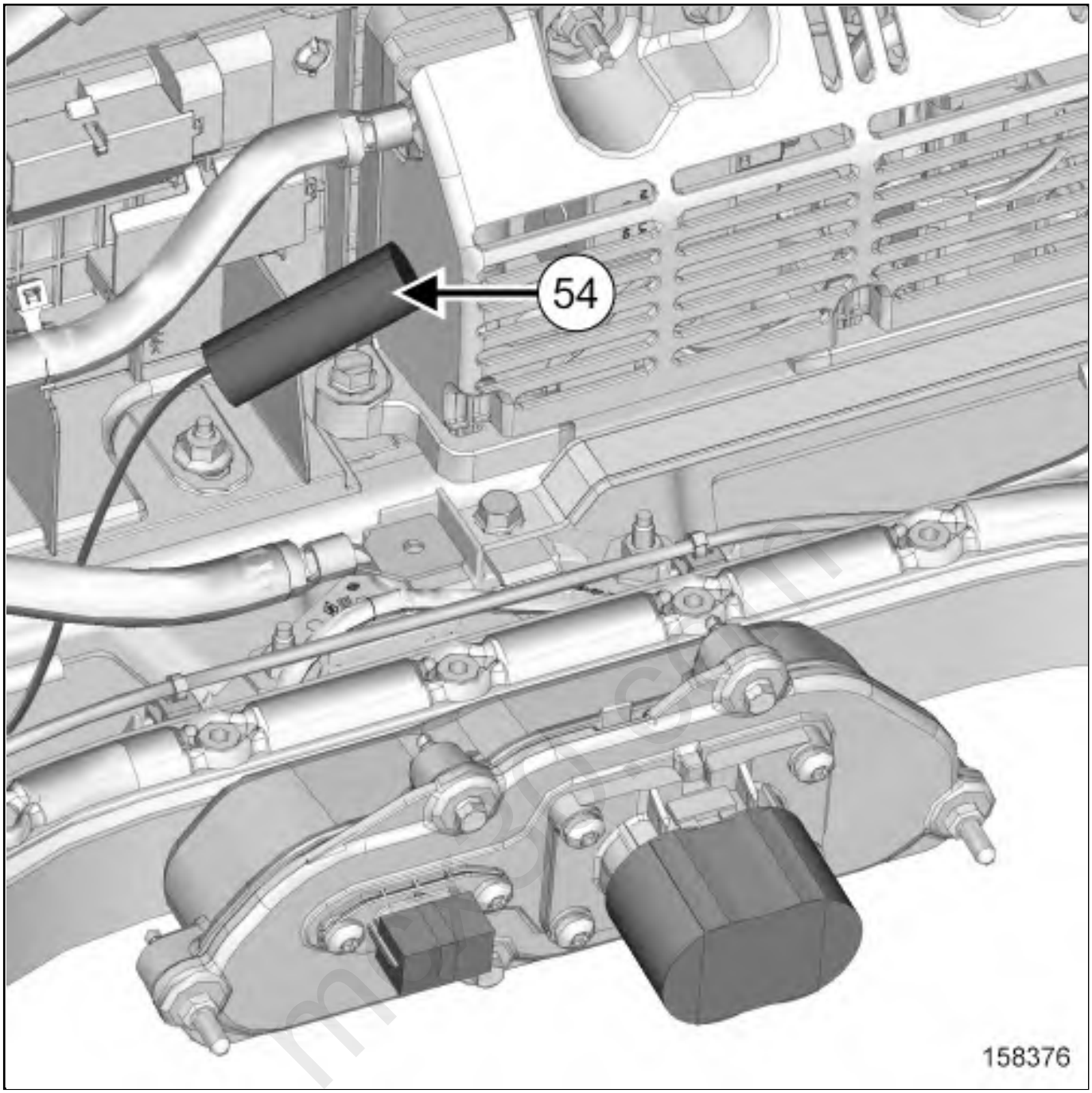

Refit the bus bar screw(51) using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .



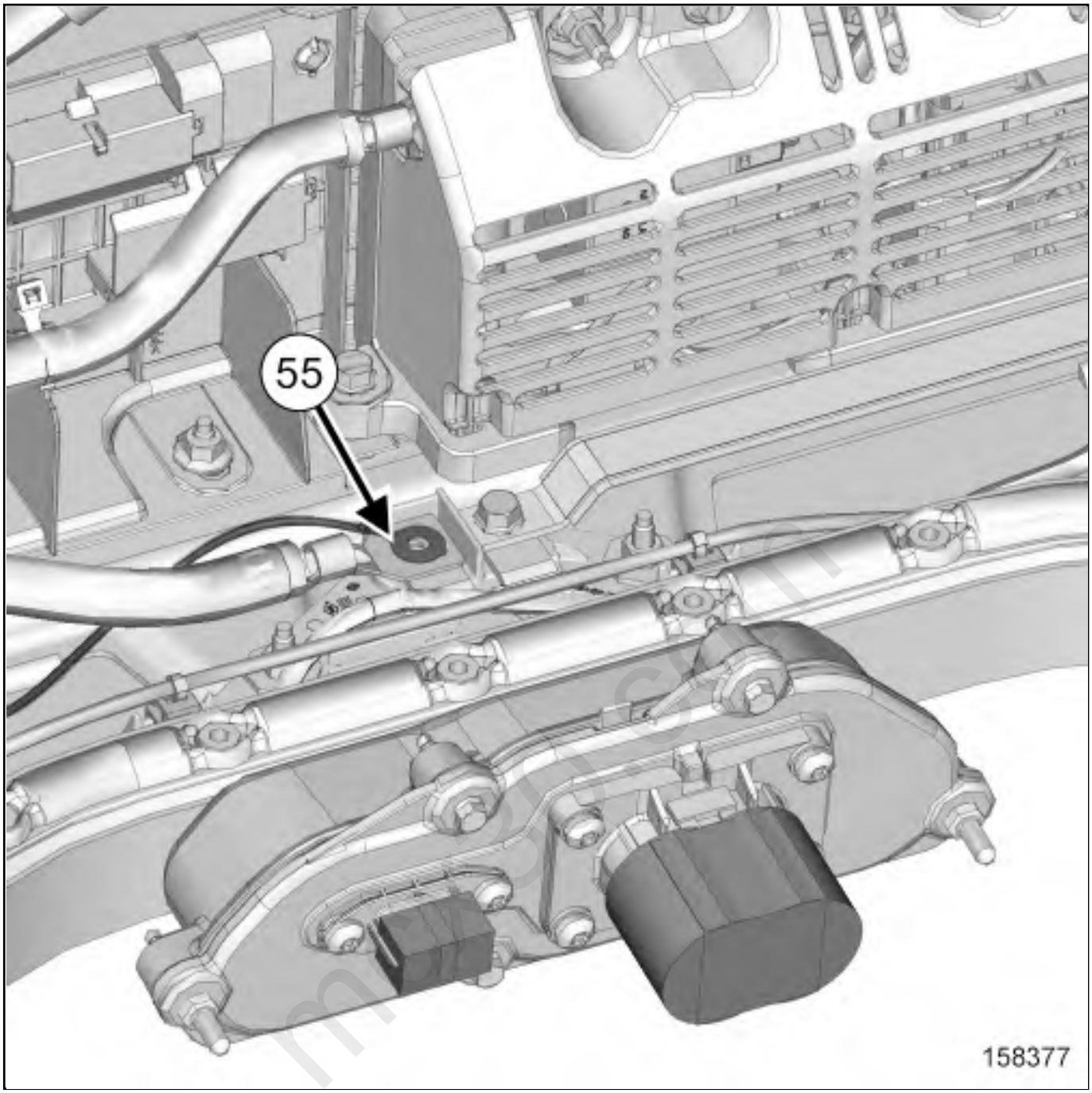

Remove the insulated cover(52) from the power wire number 4 lug.

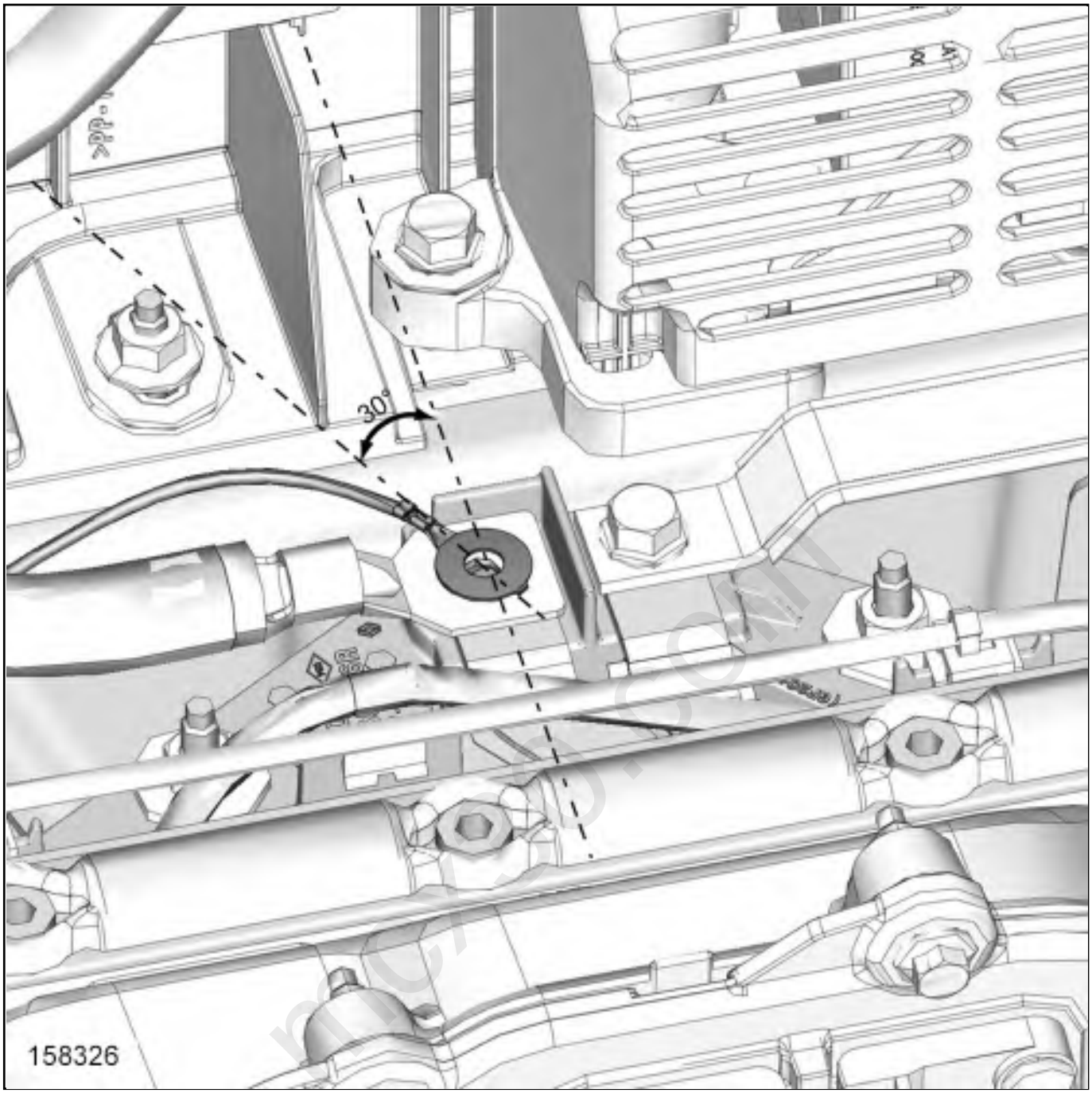



Refit the power wire number 4 lug(53) .




Remove the insulated cover(54) from the electronic fliter lug.

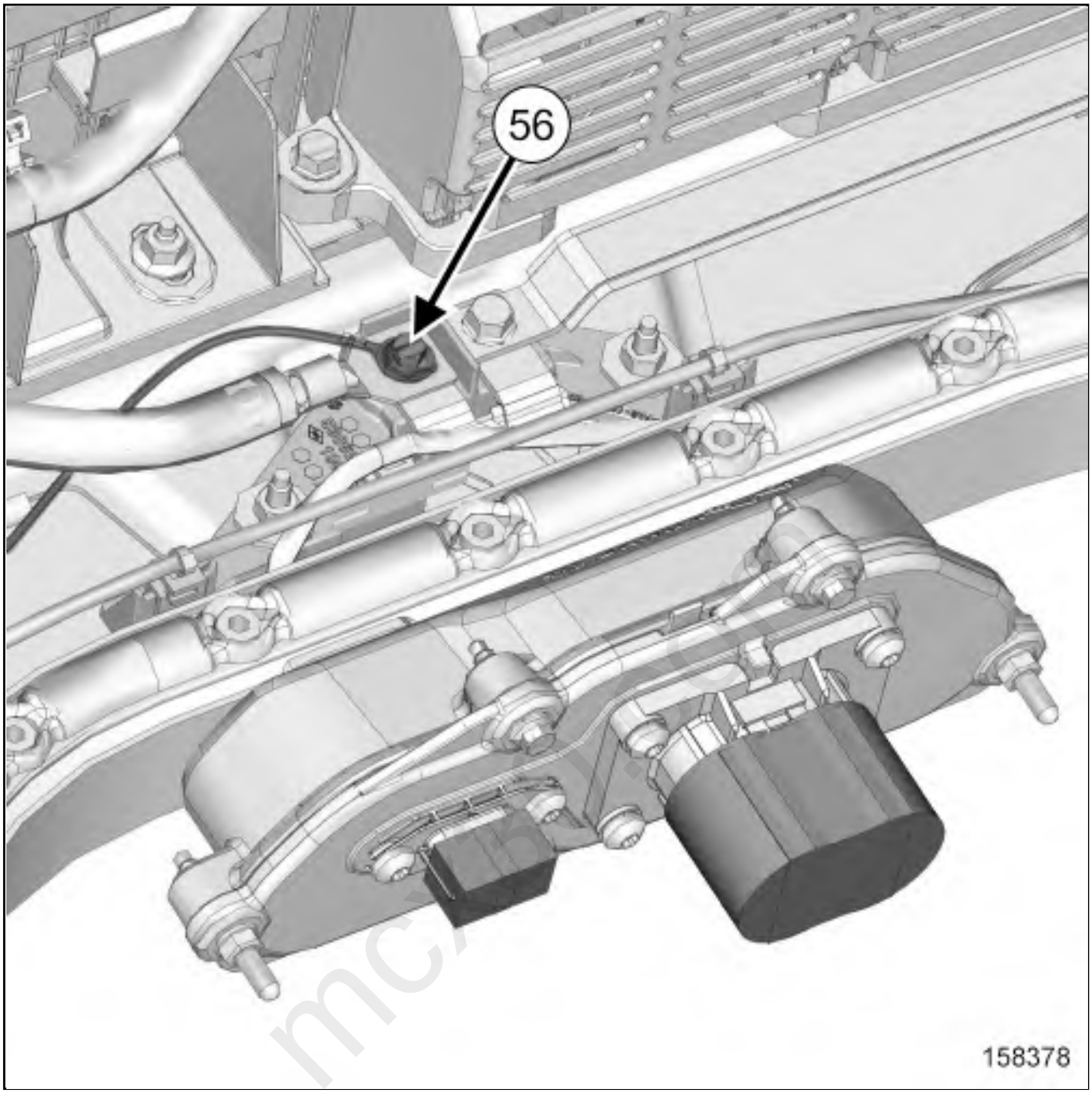

55
158377




Refit the electronic filter lug(55) above the power wire number 4.

Note:

Position the filter electronic lug to 30 degrees.



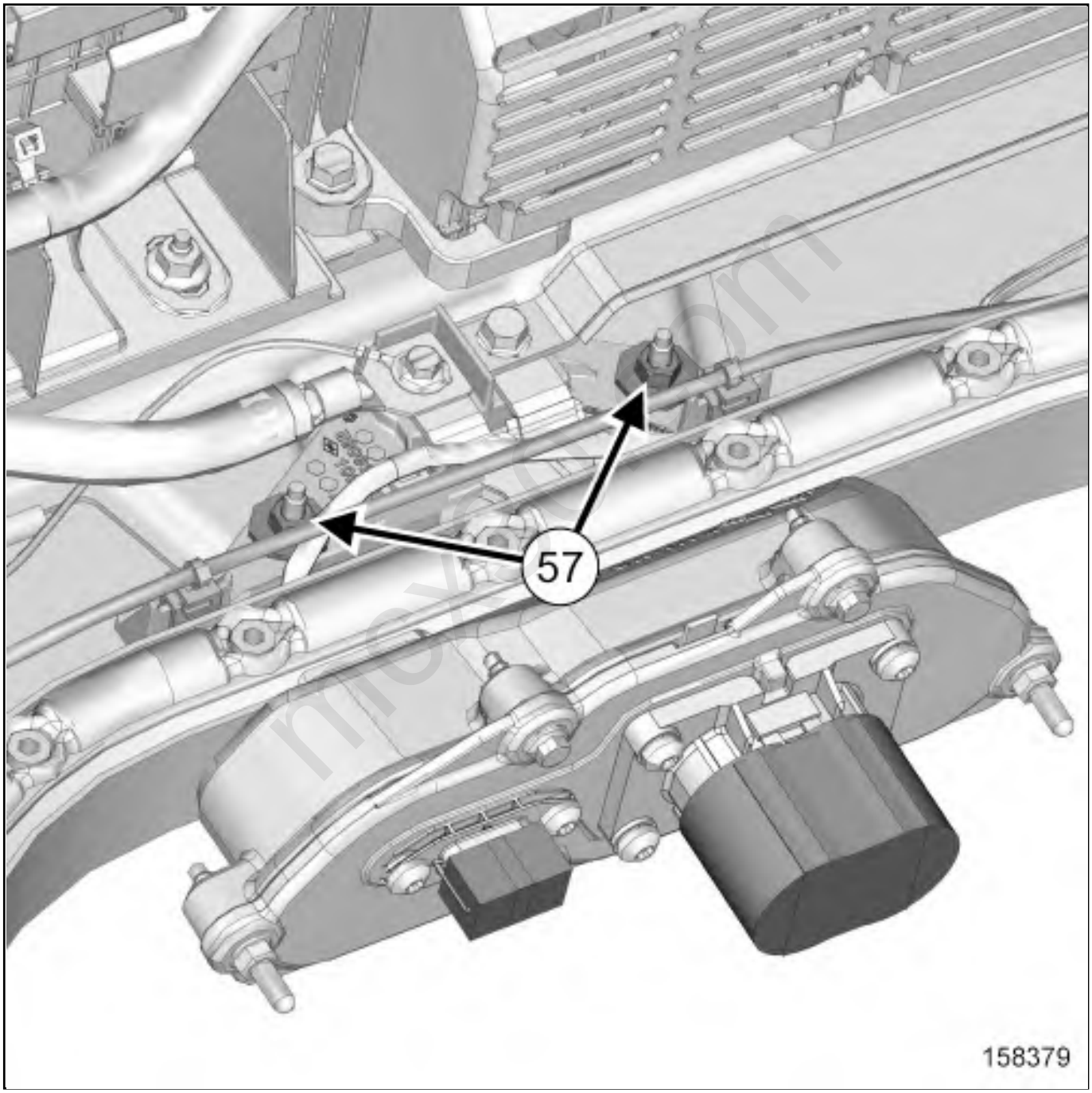

- Refit the electronic filter wiring and power wire number 4 connection screw(56) using an insulated magnetic socket (see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

- Torque tighten the bus bar screw using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

- Mark always the screws with a PAINT MARKERof a color different from the original.

Torque tighten the electronic filter wiring and power wire number 4 connection screw using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

Mark always the screws with a PAINT MARKERof a color different from the original.




Torque tighten the insulated support screws(57) (see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

Mark always the screws with a PAINT MARKERof a color different from the original.

### 3. FINAL OPERATION

Proceed in the reverse order to removal.