TRACTION BATTERY UPPER COVER : REMOVAL - REFITTING

Note, one or more warnings are present in this procedure

Special tooling required	
Set of trim removal levers.	Car. 1363
Insulating blanket	Ms. 1978
Voltage detector	Ele. 1993
Safety lockout plug of the traction battery	Ele. 2005

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 recommandations 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.

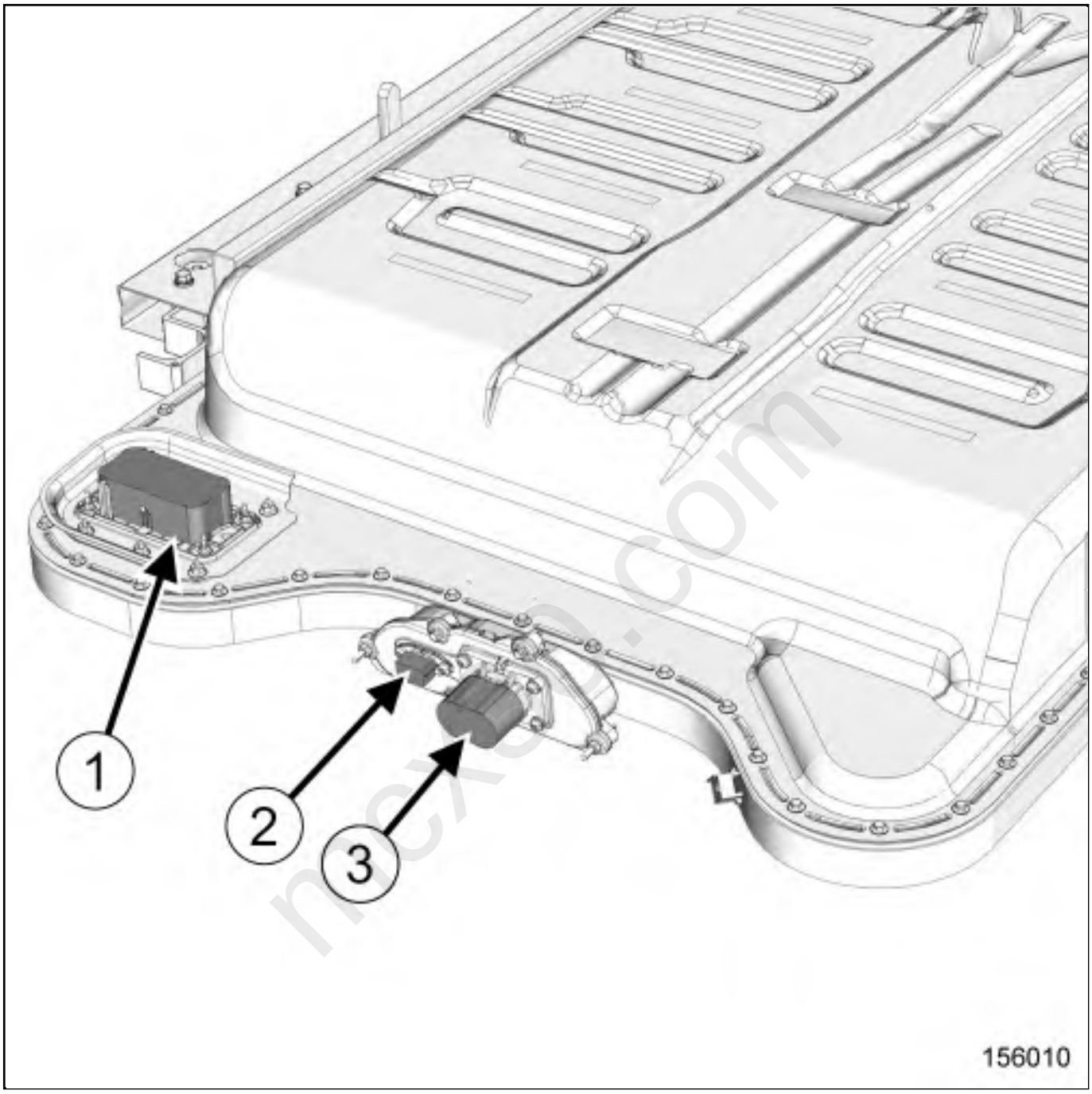
Risks of serious burns or electric shock that may prove fatal.

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

- Lift the traction battery Traction battery : Lifting .
- Place the traction battery on the working table (equipped with an insulated mat).



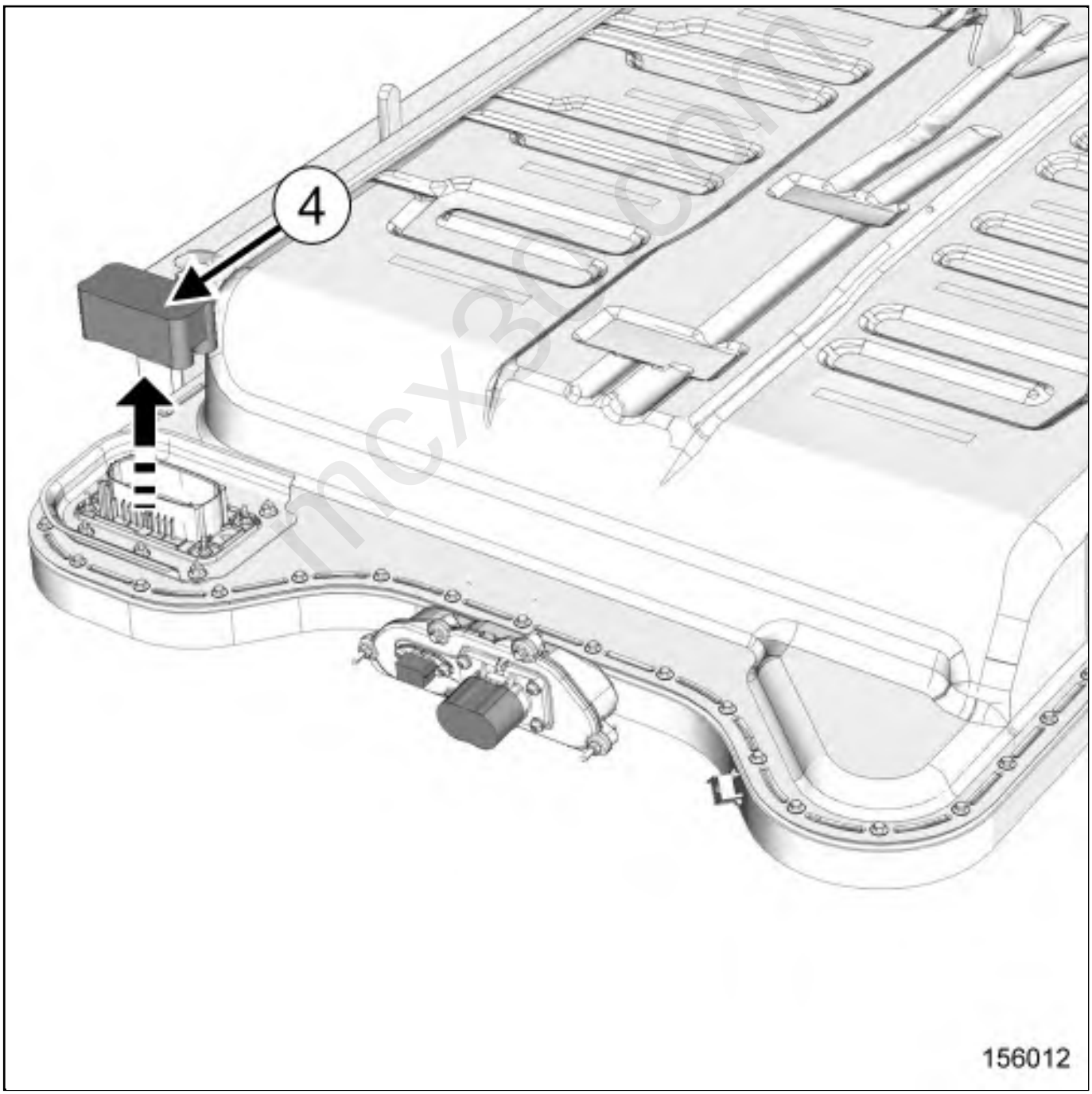
- Check the presence of:
  - the protective cover on the safety device switch socket(1) ,
  - the protective cover on the low voltage connector(2) ,
  - the protective cover on the high voltage connector(3) .

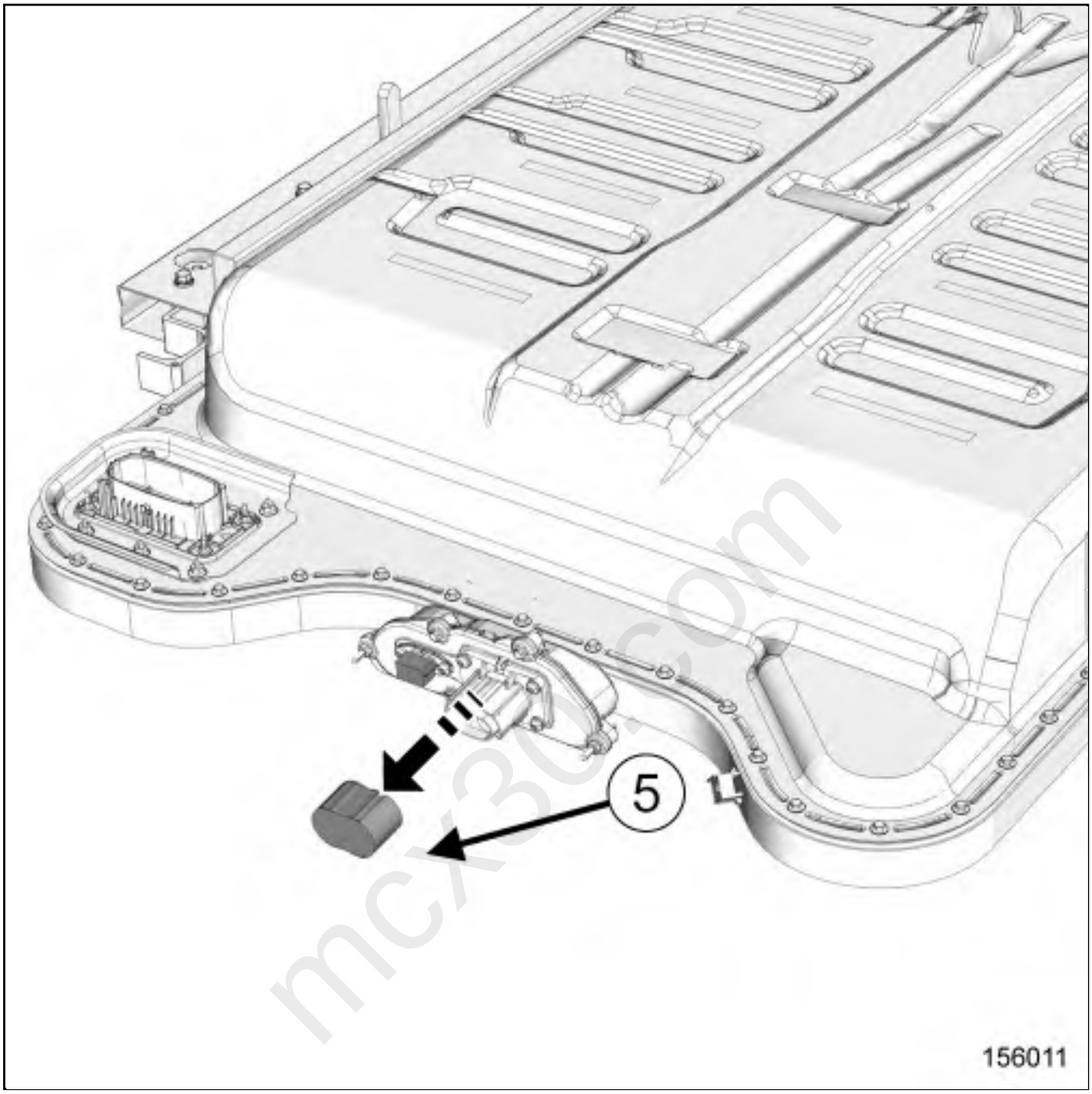
Note:

If no protective covers, check the status of each connector and replace if necessary and refit an protective cover.

- Check the presence of protection on the air inlets using the toolInsulating blanket (Ms. 1978) .

2. REMOVAL OPERATION





- Remove:
  - the protective cover(4) from the safety device switch socket,
  - the protective cover(5) from the high voltage connector.

- Make sure that the voltage detectorVoltage detector(Ele. 1993) is working correctly before measuring.

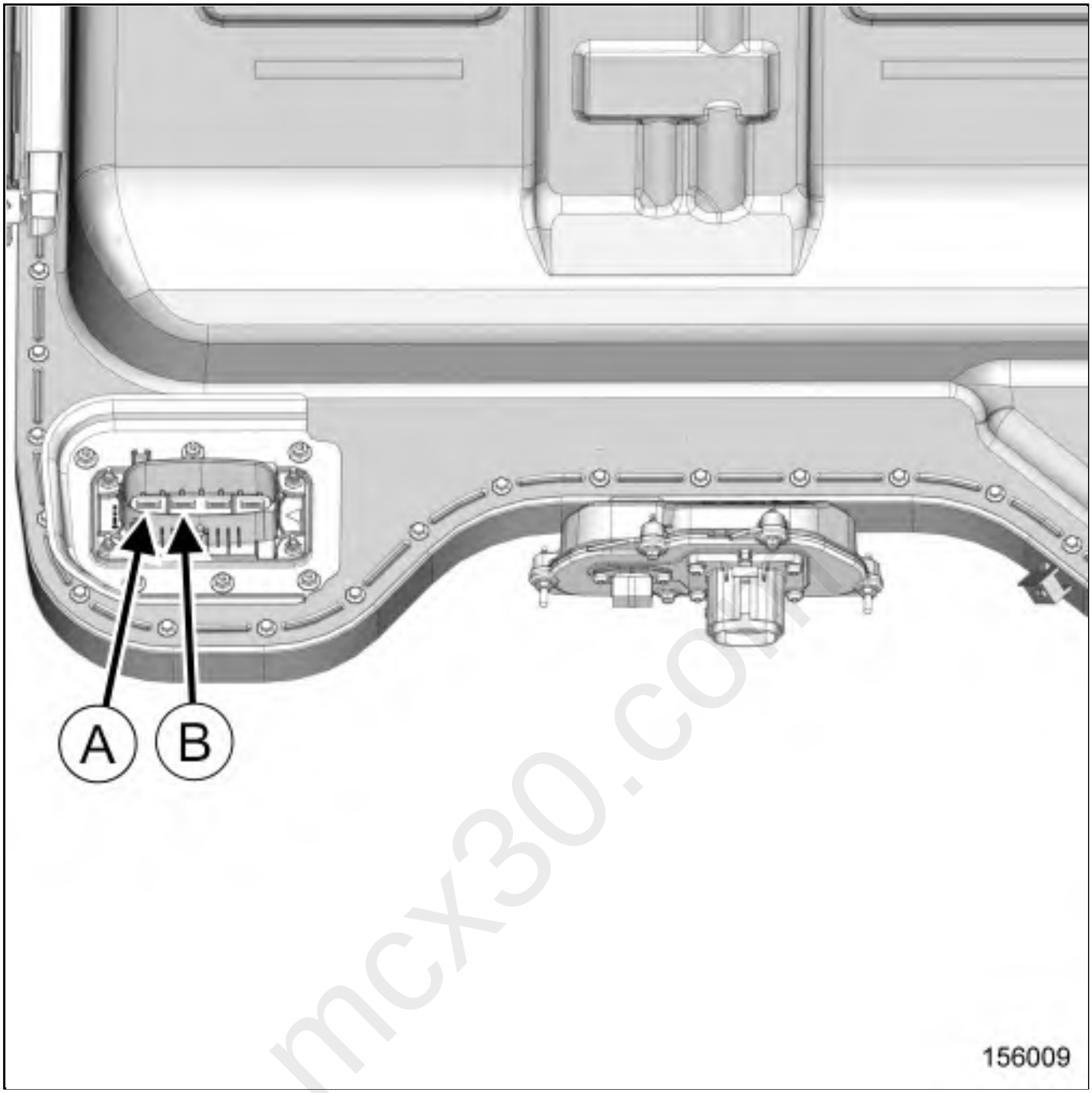
WARNING

Never use a voltage detector if its self-test is incorrect as it could provide erroneous data that could place you in danger.

CAUTION

If there is any permanent voltage remaining during measurments, there is an electrical default on the traction battery. It could be an insulation default or default on one the relays inside the junction box.

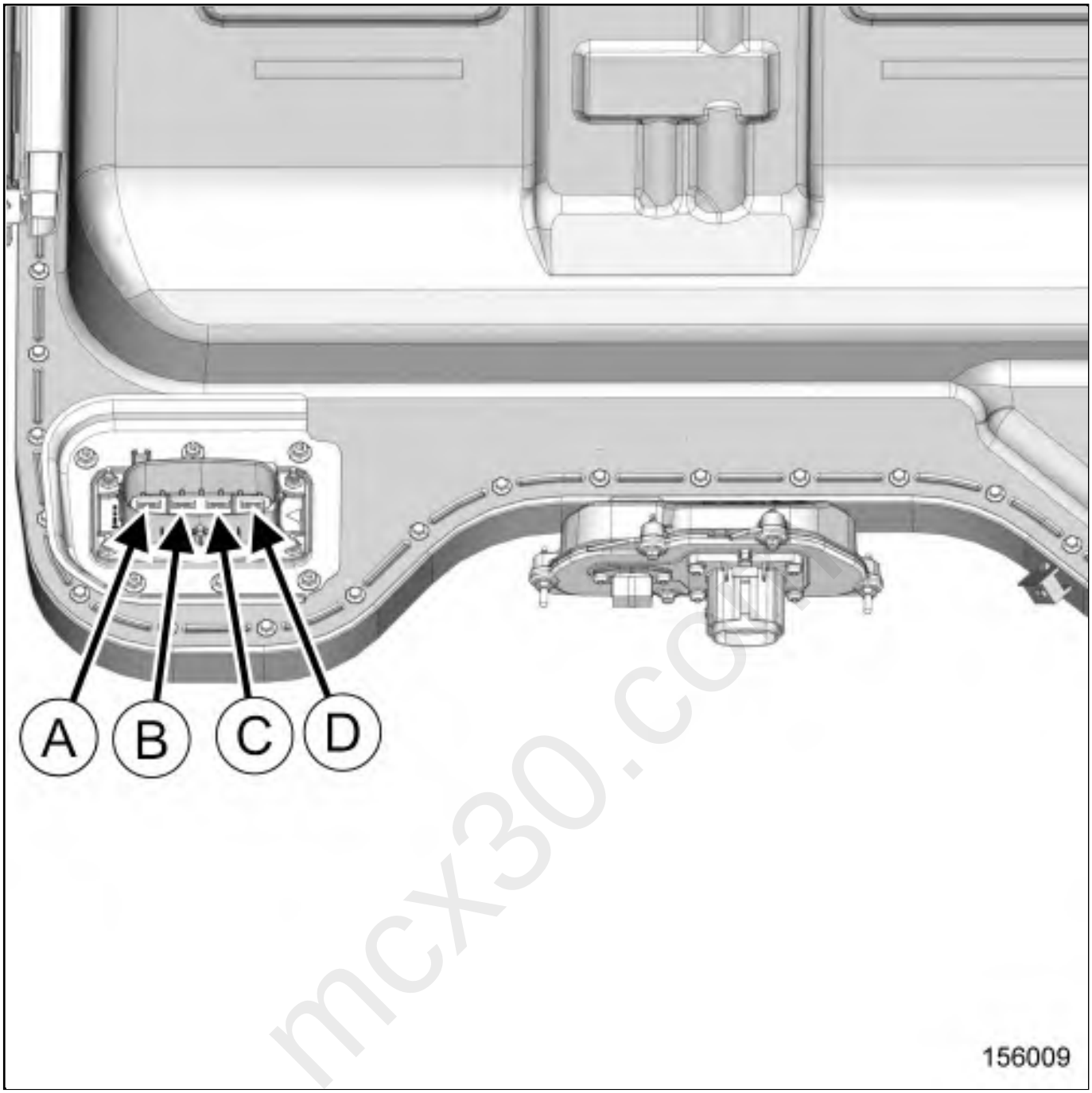
It is mandatory to determine the root cause of the failure and then to fix it.



❑ Check the presence of voltage using a voltage detectorVoltage detector(Ele. 1993) between the terminals 1 (A) and 2 (B) of the traction battery safety device switch socket (1 measurement).

Note:

Measure between the terminals 1(A) and 2 (B) , the voltage could reach 408V.

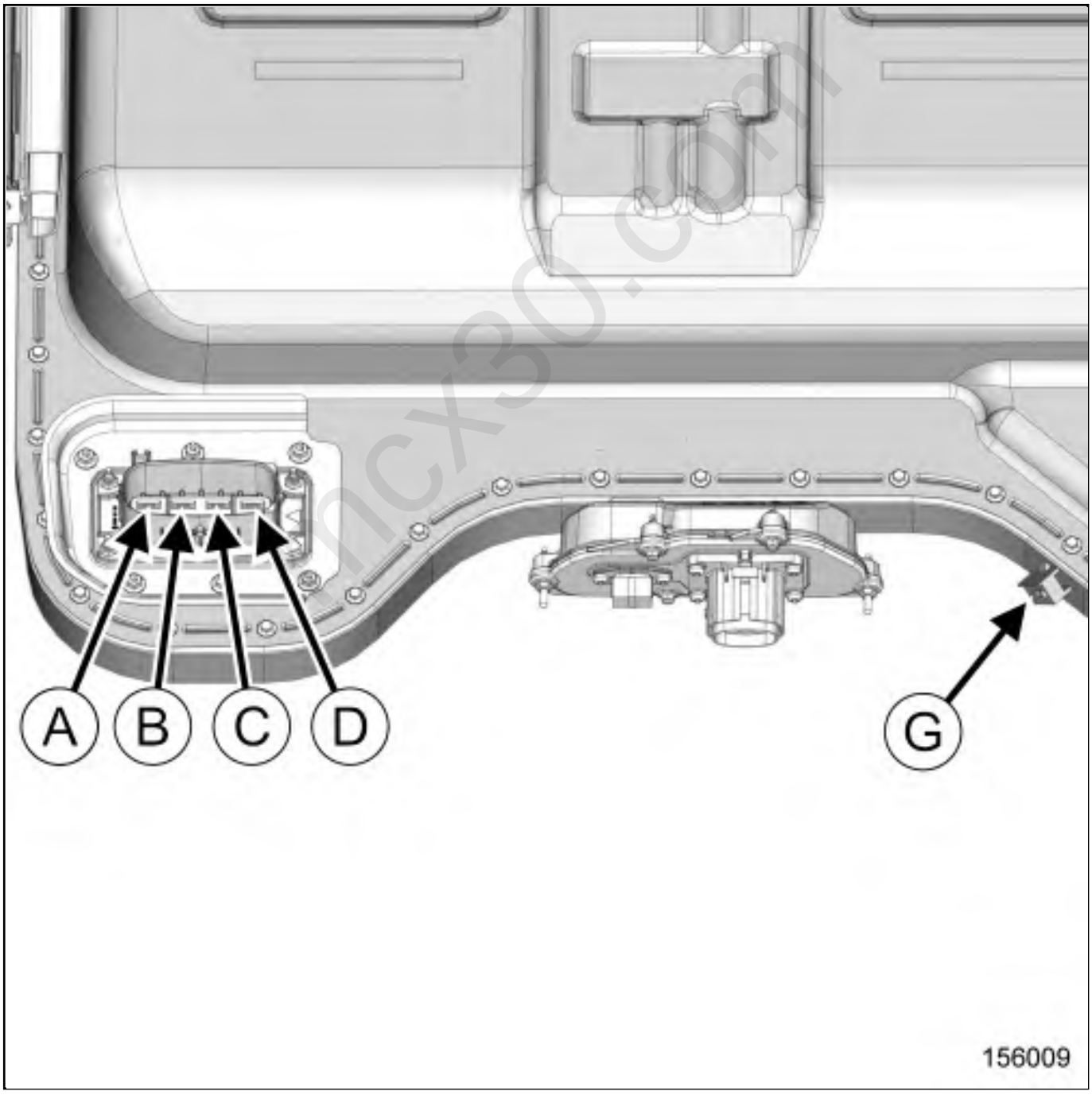


❑ Check that there is no voltage using a voltage detectorVoltage detector(Ele. 1993) between the 4 terminals of the traction battery safety device switch socket (5 measurements).

Note:

- Measure between the terminals:
  - 1 (A) and 3 (C) ,
  - 1 (A) and 4 (D) ,
  - 2 (B) and 3 (C) ,
  - 2 (B) and 4 (D) ,
  - 3 (C) and 4 (D) .

These 5 measurements must provide zero-voltage values or capacitive values (non-permanent voltage).



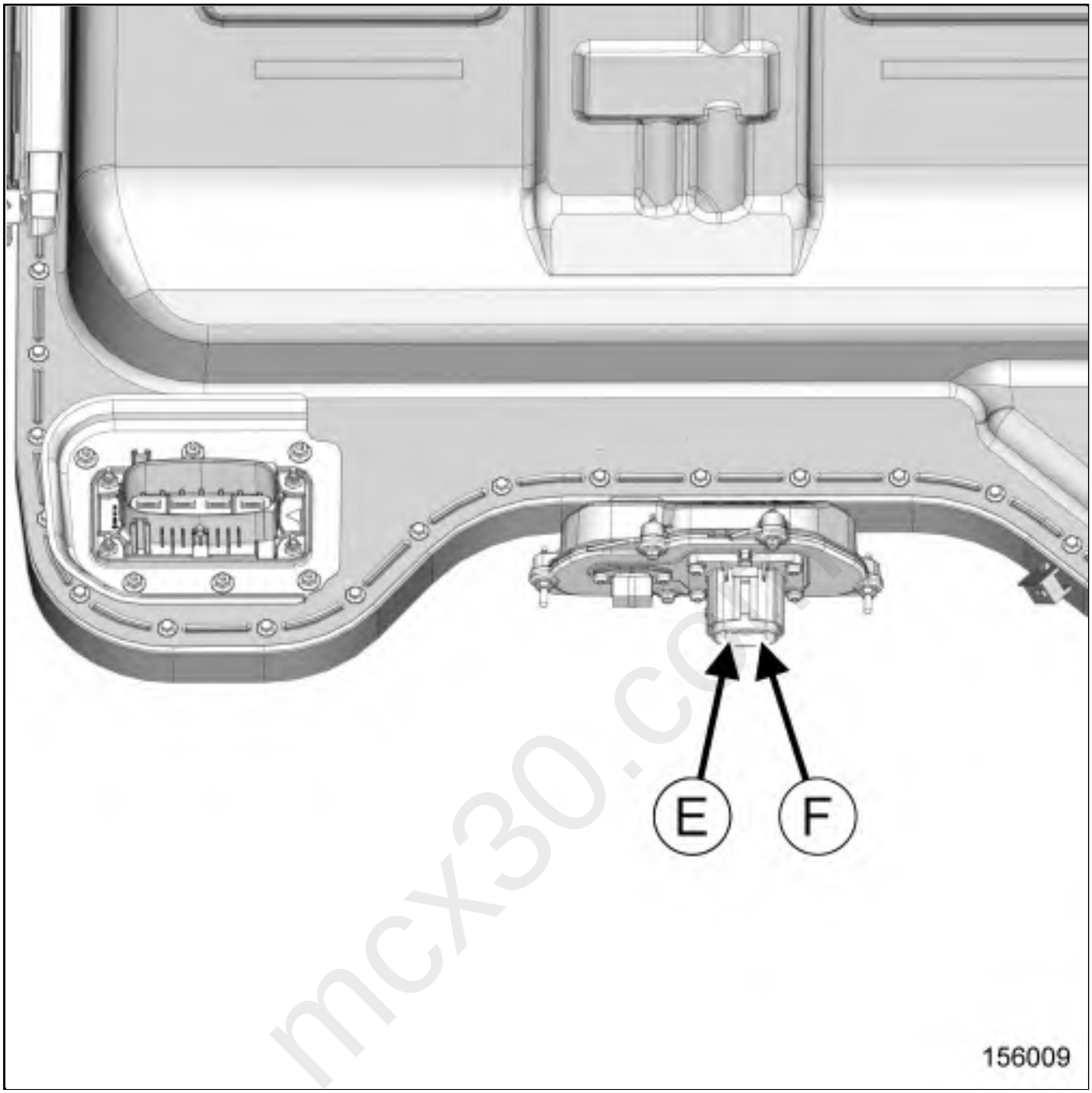
Check that there is no voltage using a voltage detectorVoltage detector(Ele. 1993) between the 4 terminals of the traction battery safety device switch socket and the traction battery lower cover earth (4 measurements).

Note:

Measure between the terminals:

- 1 (A) and 7 (G) ,
- 2 (B) and 7 (G) ,
- 3 (C) and 7 (G) ,
- 4 (D) and 7 (G) .

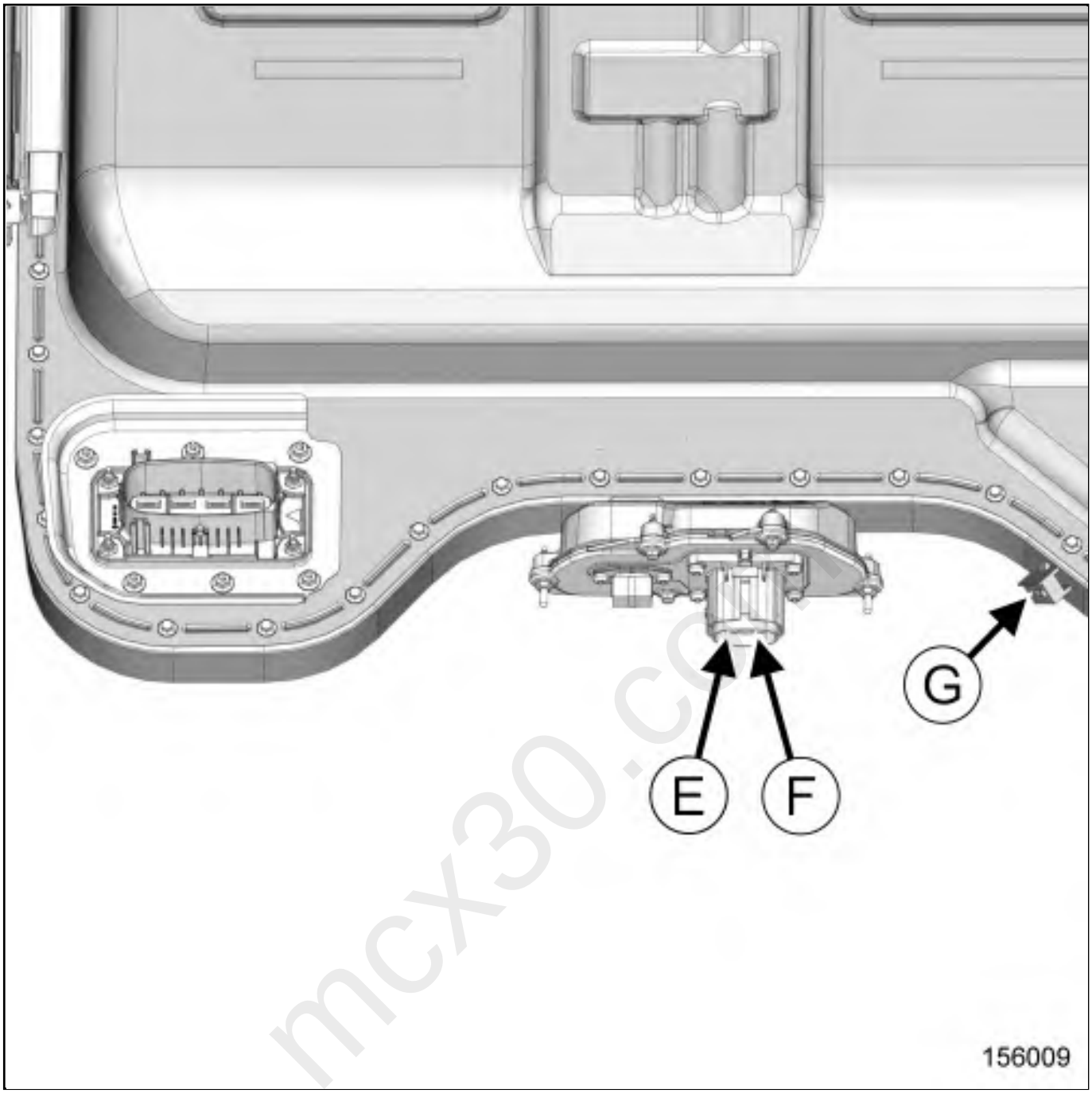
These 4 measurements must provide zero-voltage values or capacitive values (non-permanent voltage).



❑ Check that there is no voltage using a voltage detectorVoltage detector(Ele. 1993) between the 2 terminals of the traction battery high voltage connector (1 measurement).

Note:

Measure between the terminals 5(E) and 6 (F) . This measure must provide zero-voltage value or capacitive value (non-permanent voltage).



Check that there is no voltage using a voltage detectorVoltage detector(Ele. 1993) between the 2 terminals of the traction battery high voltage connector and the traction battery lower cover earth (2 measurements).

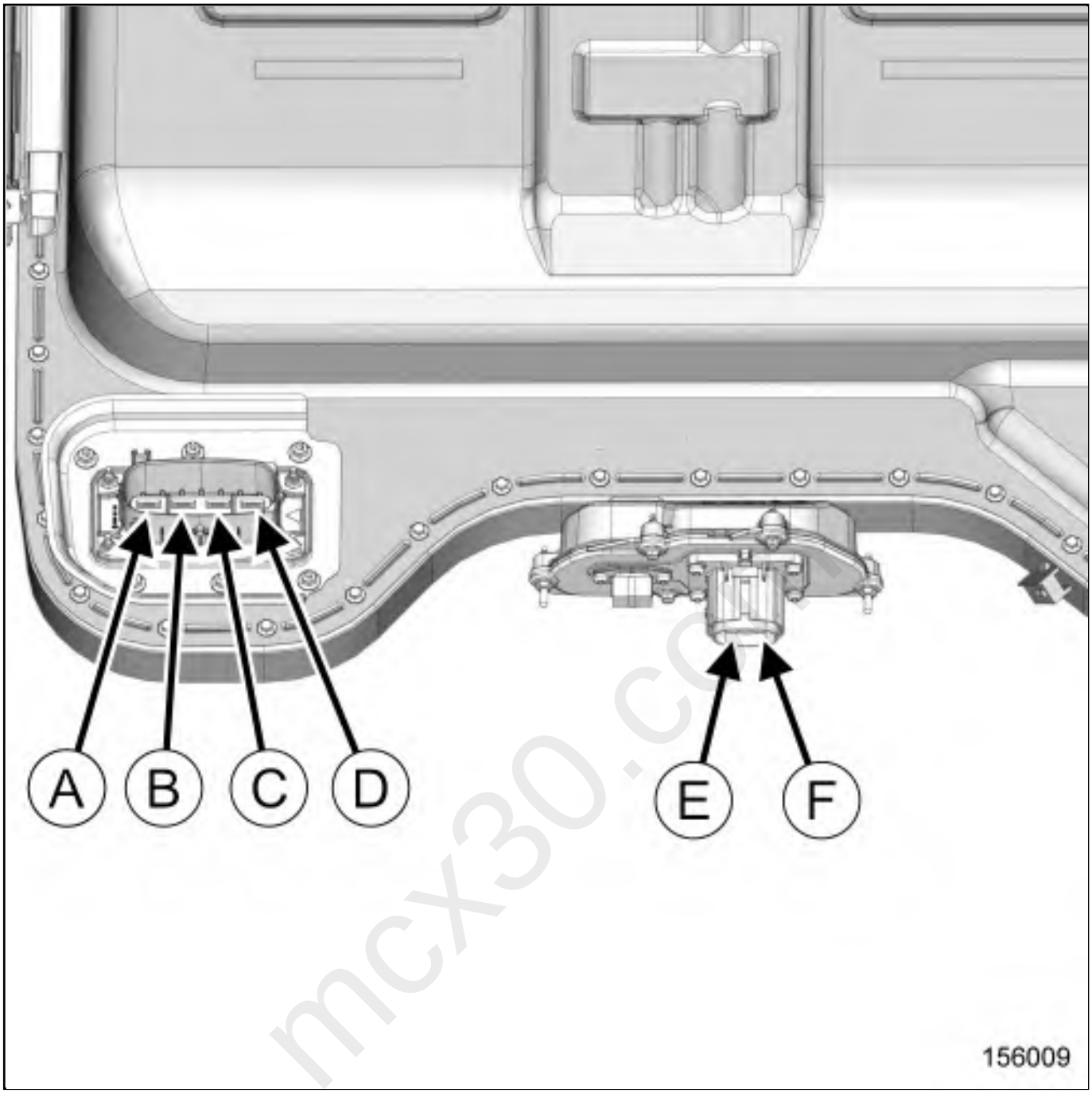
Note:

- Measure between the terminals:
  - 5 (**E**) and 7 (**G**) ,
  - 6 (**F**) and 7 (**G**) .

These 2 measurements must provide zero-voltage values or capacitive values (non-permanent voltage).

Note:

Scratch the material to be measured with the tip of the voltmeter to ensure good electrical contact.



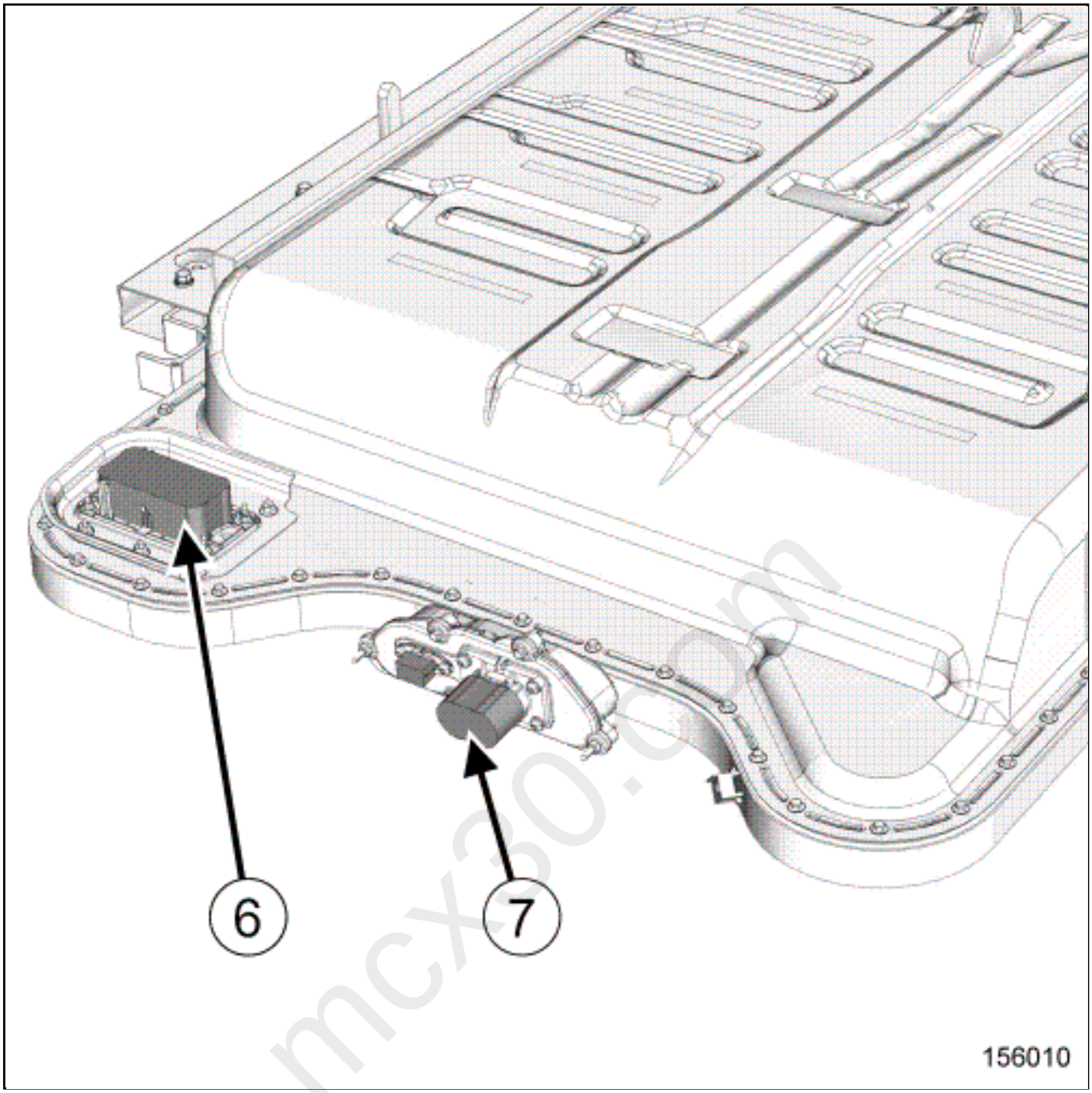
Check that there is no voltage using a voltage detectorVoltage detector(Ele. 1993) between the 4 terminals of the traction battery safety device switch socket and the 2 terminals of the traction battery high voltage connectors (8 measurements).

Note:

- Measure between the terminals:
  - 1 (A) and 5 (E) ,
  - 2 (B) and 5 (E) ,
  - 3 (C) and 5 (E) ,
  - 4 (D) and 5 (E) ,
  - 1 (A) and 6 (F) ,
  - 2 (B) and 6 (F) ,
  - 3 (C) and 6 (F) ,
  - 4 (D) and 6 (F) .

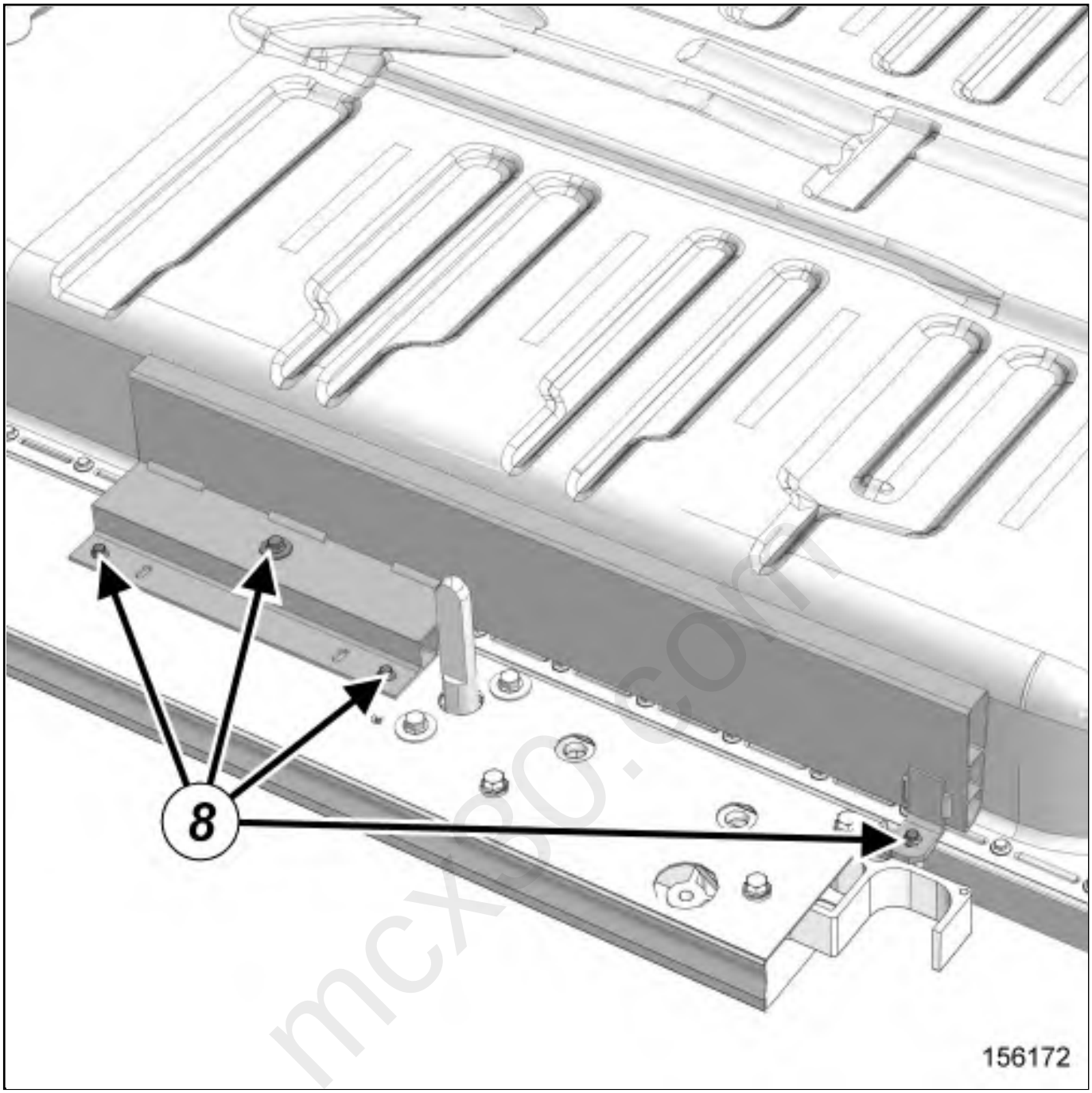
These 8 measurements must provide zero-voltage value or capacitive value (non-permanent voltage).

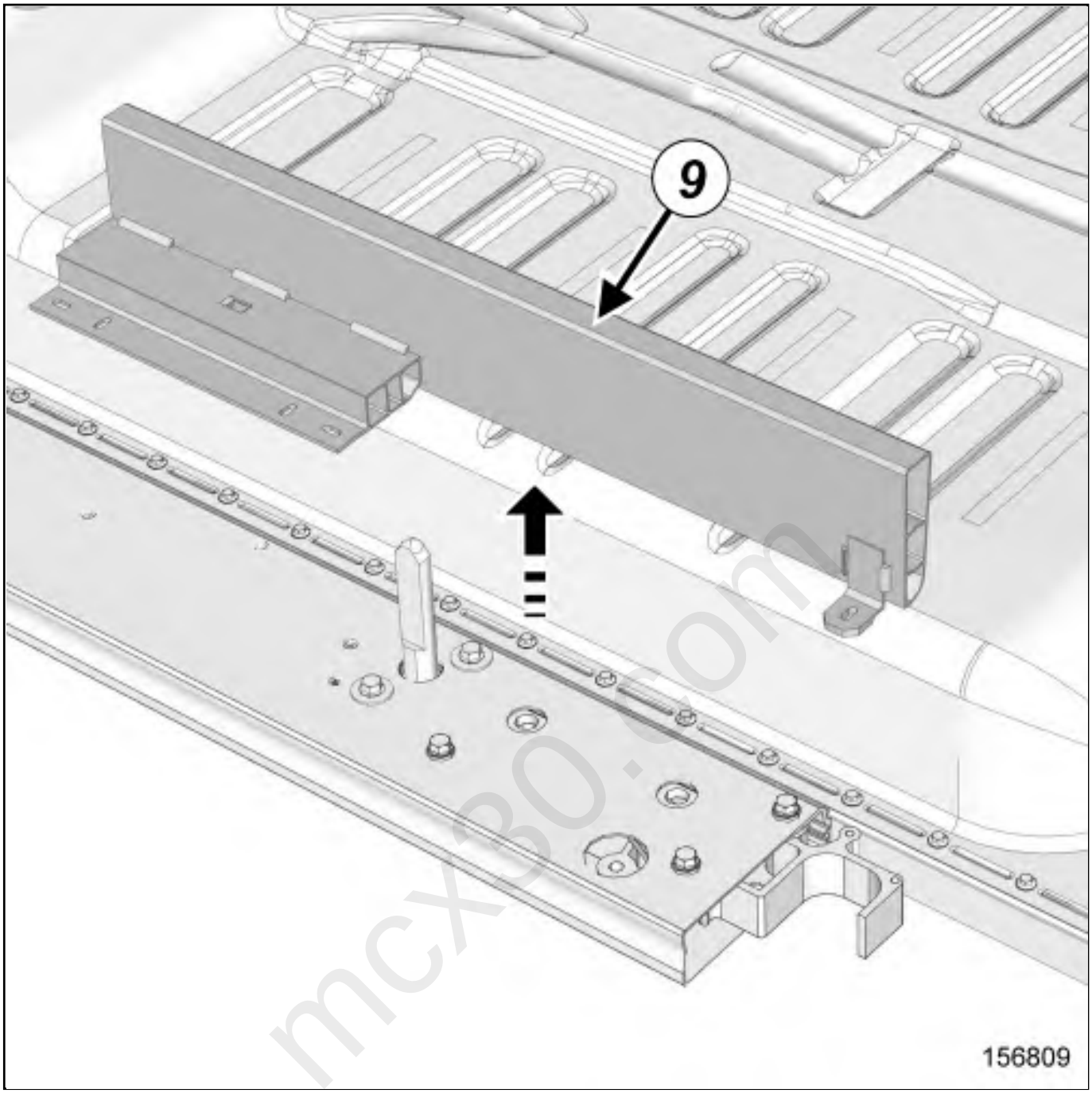
- Check that the voltage detectorVoltage detector(Ele. 1993) is working correctly after measurement.



Refit:

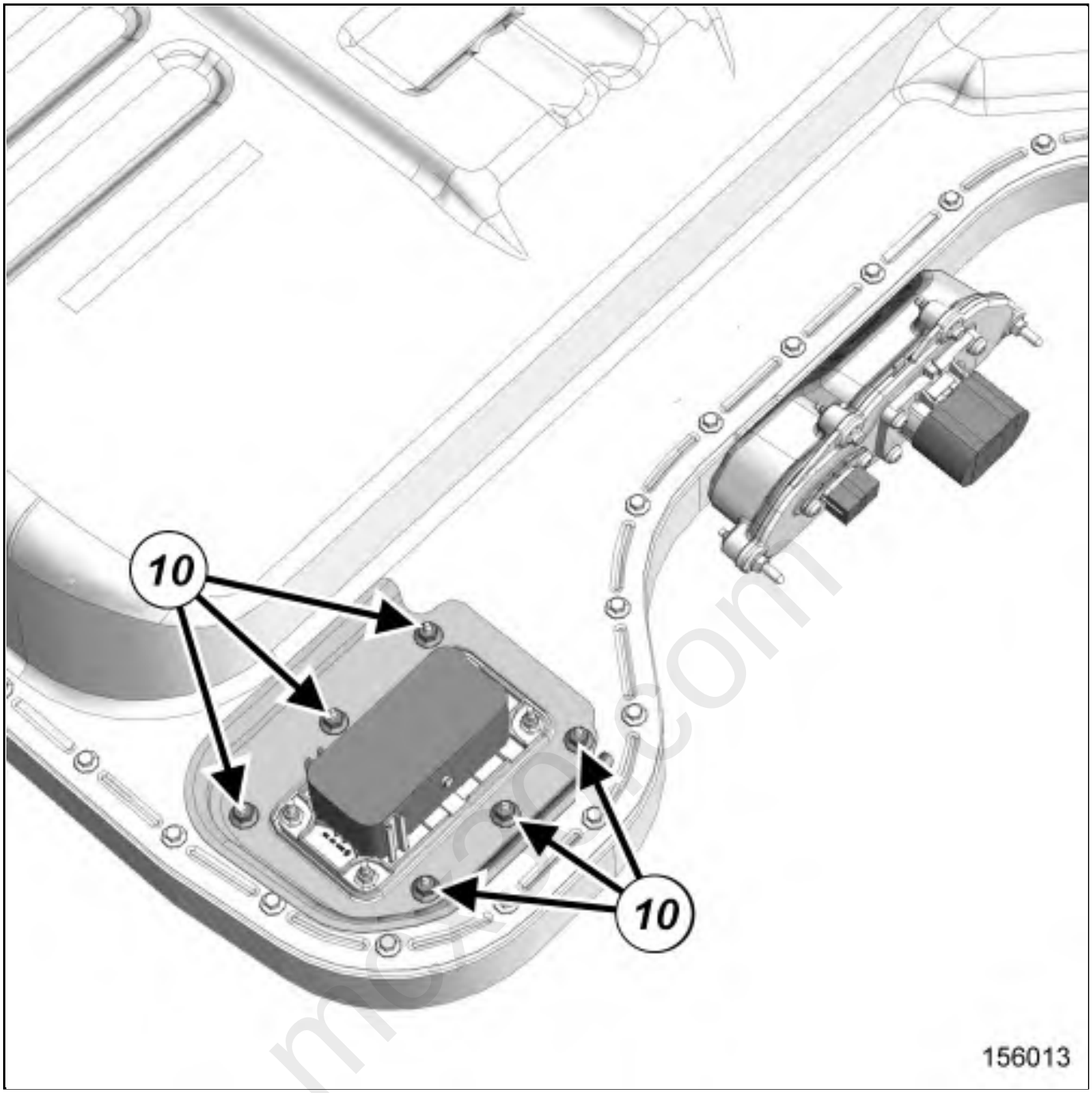
- the protective cover(6) on the safety device switch socket,
- the protective cover(7) on the high voltage connector.





- Remove (see 19E, Traction battery, Traction battery housing assembly : Exploded view) :
  - the retaining shock pillars screws(8) using an insulated magnetic socket,
  - the retaining shock pillars(9) .

- Clean using a vacuum cleaner equipped with a plastic nozzle, all traces of dust and dirt on the traction battery upper cover.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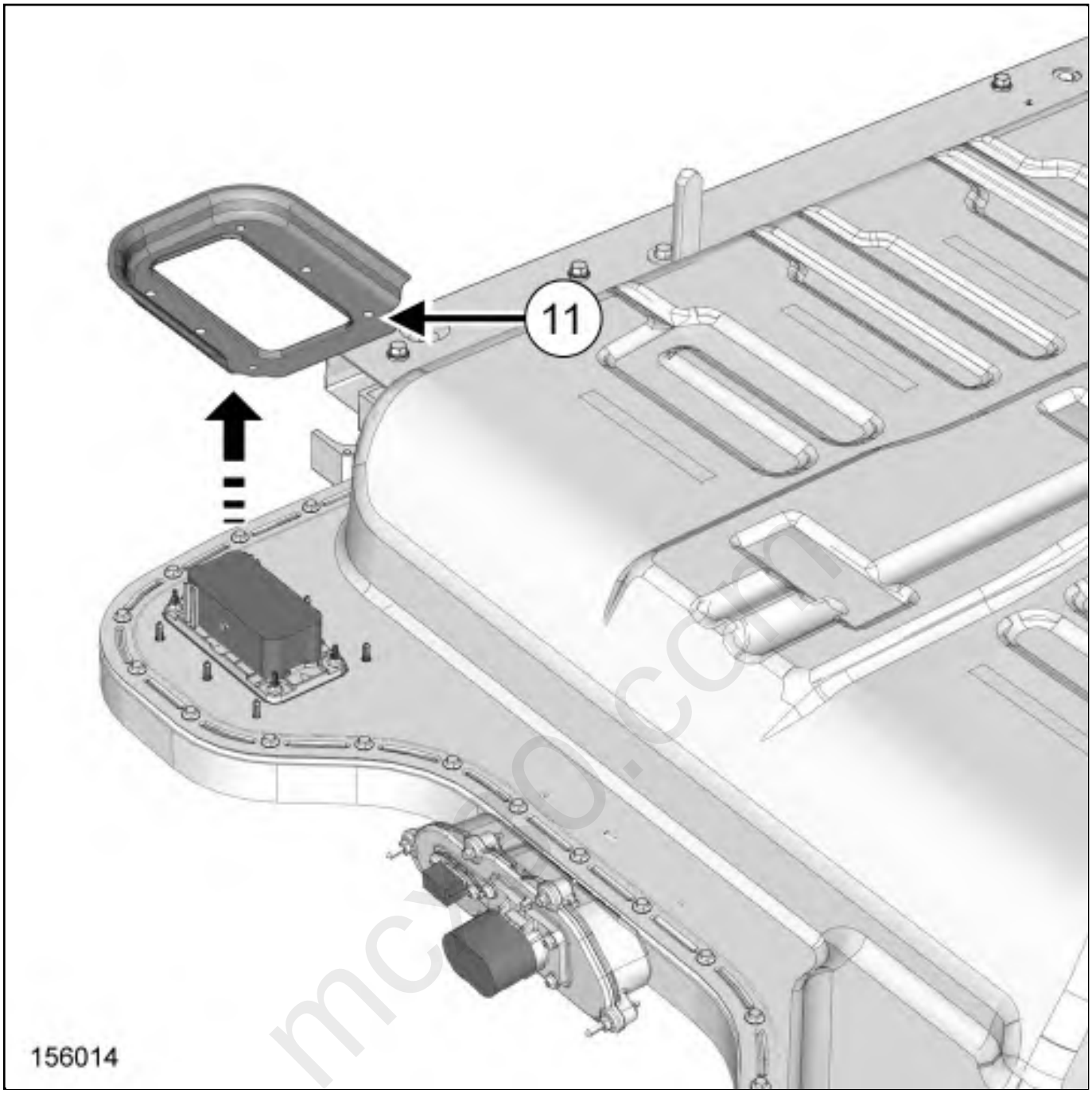
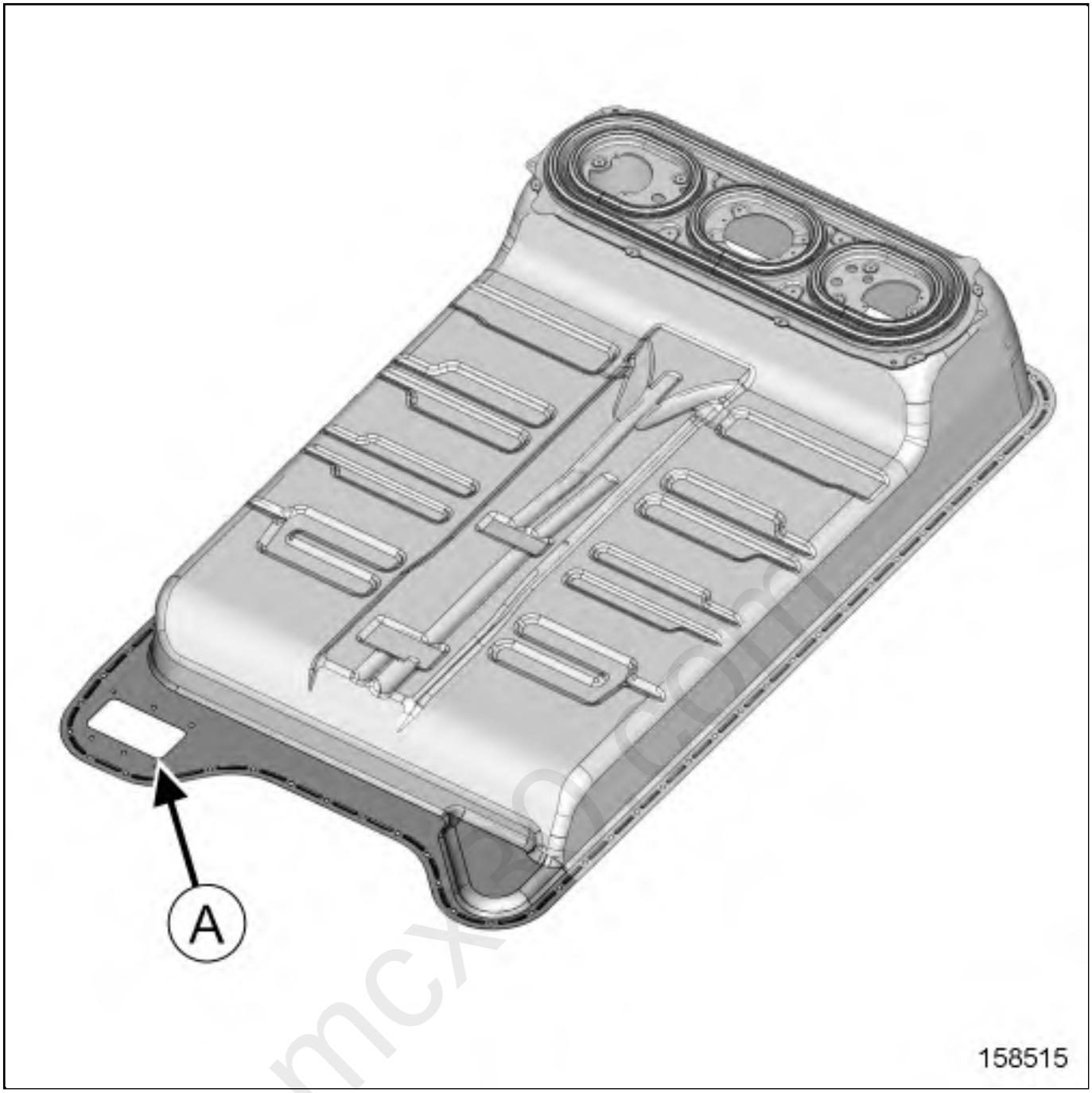


Remove (see 19E, Traction battery, Traction battery housing assembly : Exploded view) :

- the electro magnetic protector nuts(10) using an insulated magnetic socket,
- the electro magnectic protector(11) ,
- the upper cover screws using an insulated magnetic socket,
- the traction battery upper cover.

Note:

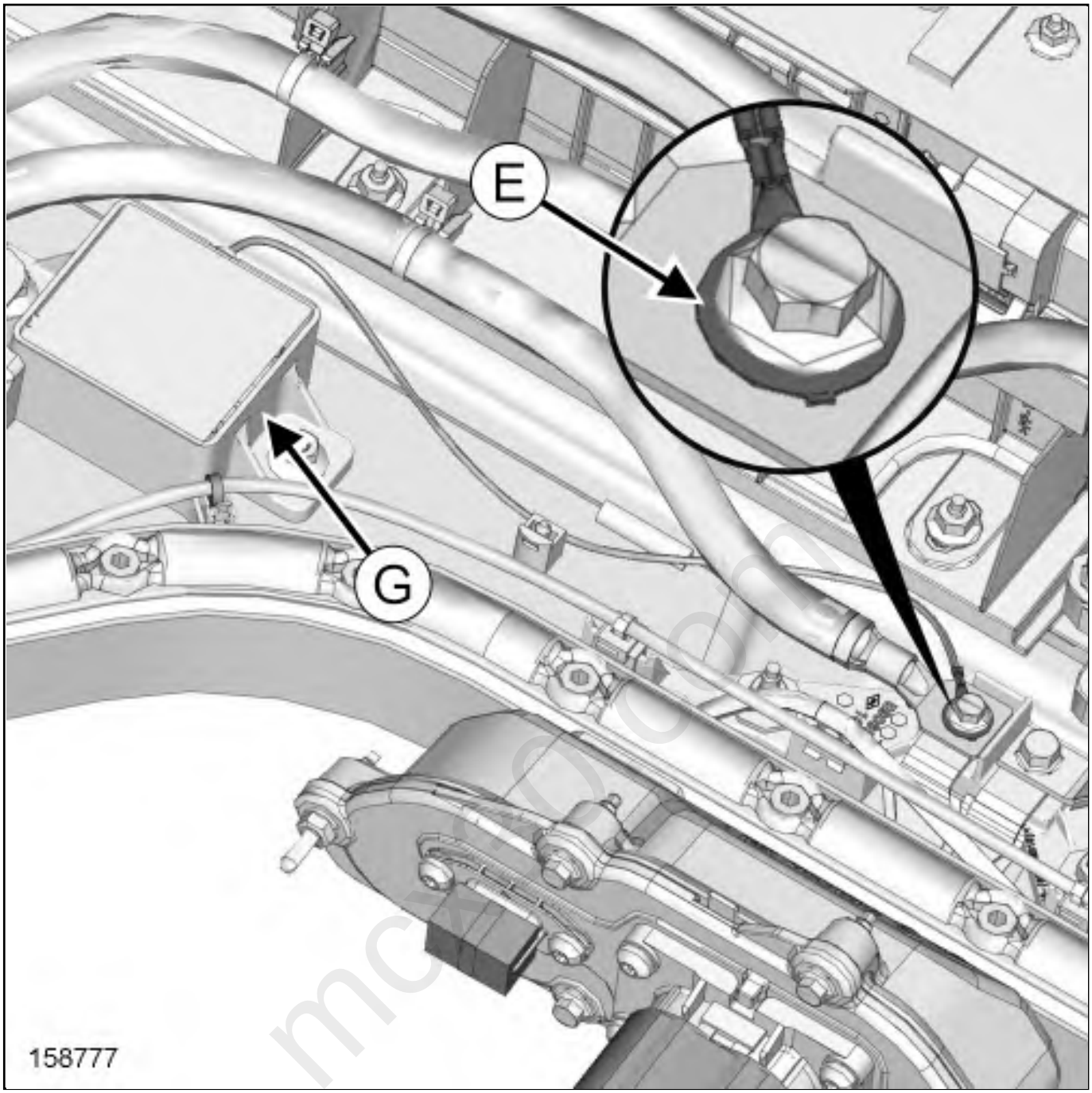
This operation requires two operators.



- Do not randle the upper cover on the flat zone(A) .

Note:

Fit the traction battery upper cover on a plane and clean area.



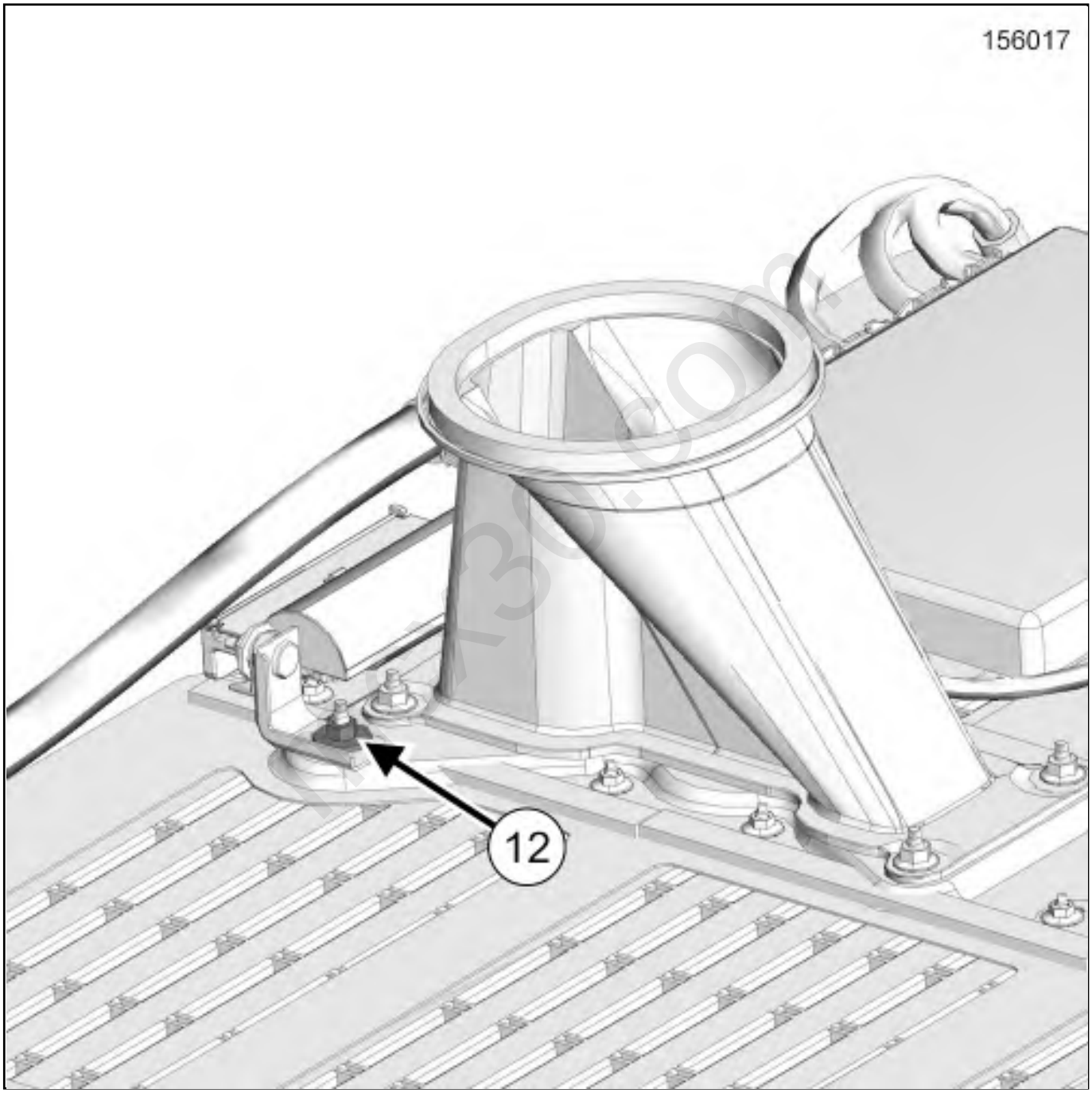
❑ Check that there is no voltage using a voltage detectorVoltage detector(Ele. 1993) between the 2 terminals of the traction battery high voltage connector (1 measurement).

Note:

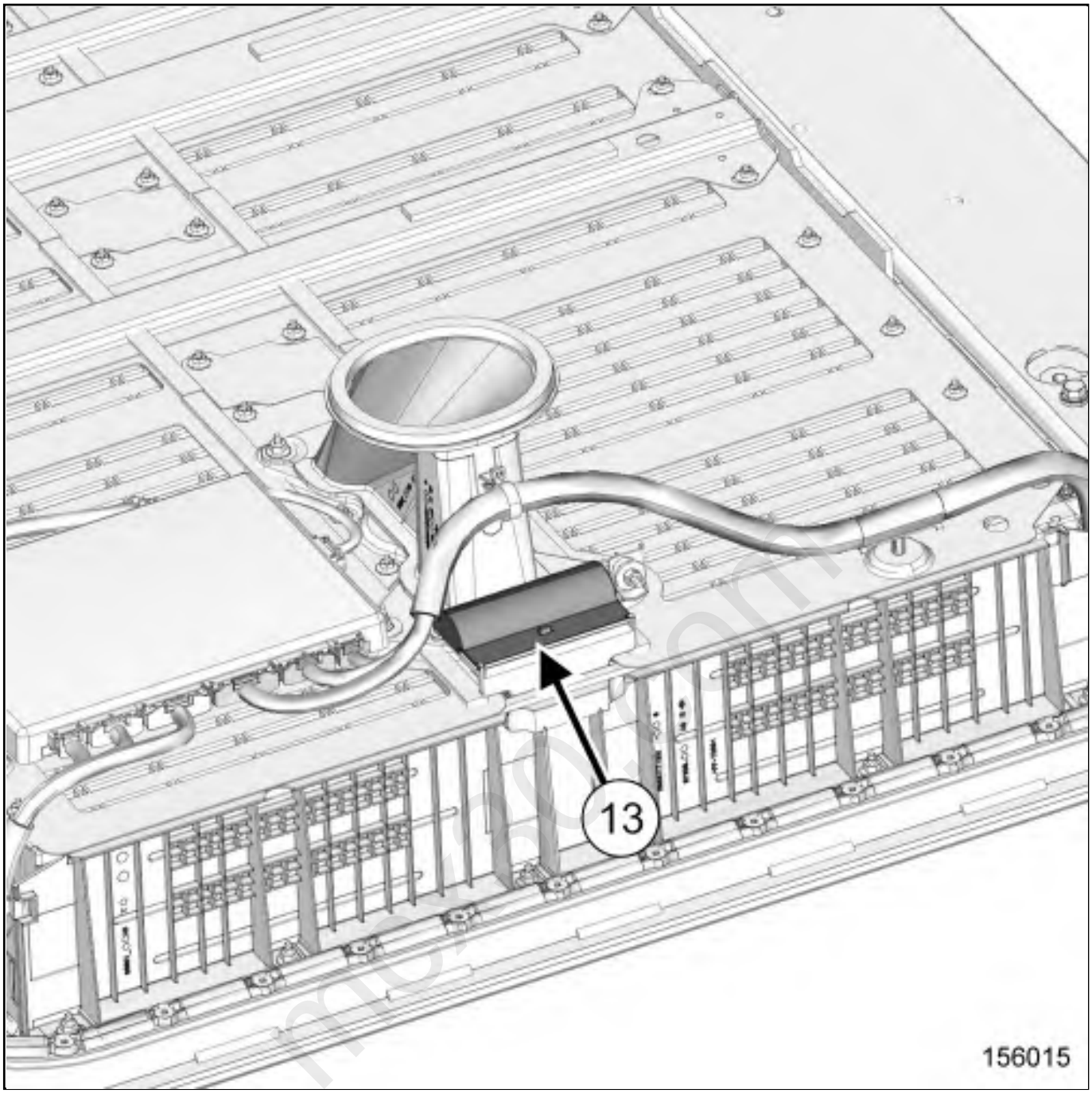
Measure between the terminals lug 8(E) and the body filter 7(G) this measure must provide zero-voltage value or capacitive value (non-permanent voltage).

Note:

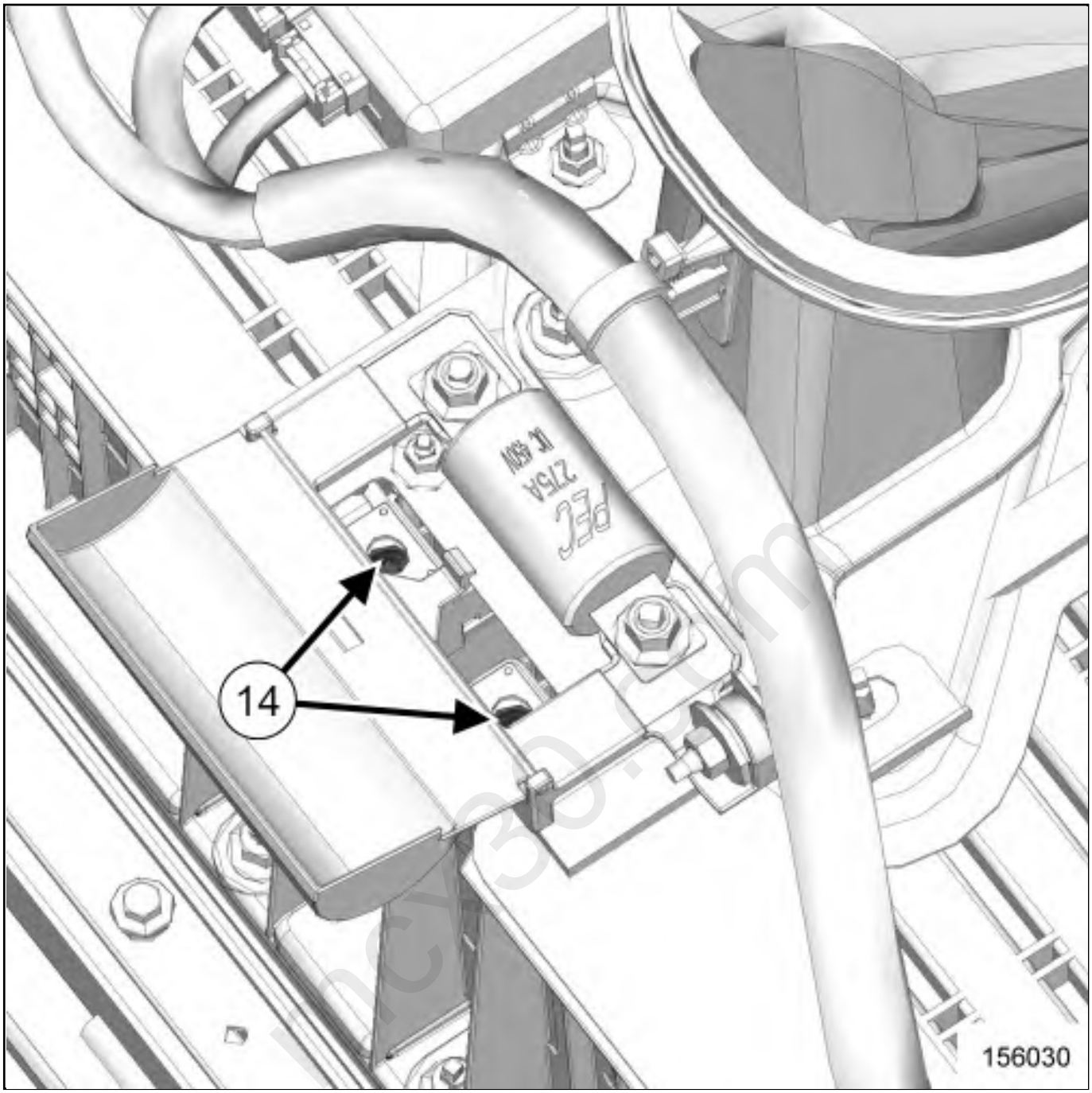
Scratch the material to be measured with the tip of the voltmeter to ensure good electrical contact.



- Remove the fuse between stacks mount tab nut(12) using an insulated magnetic socket(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .



- Unclip the fuse between stack mount cover(13) using insulated needle nose pliers.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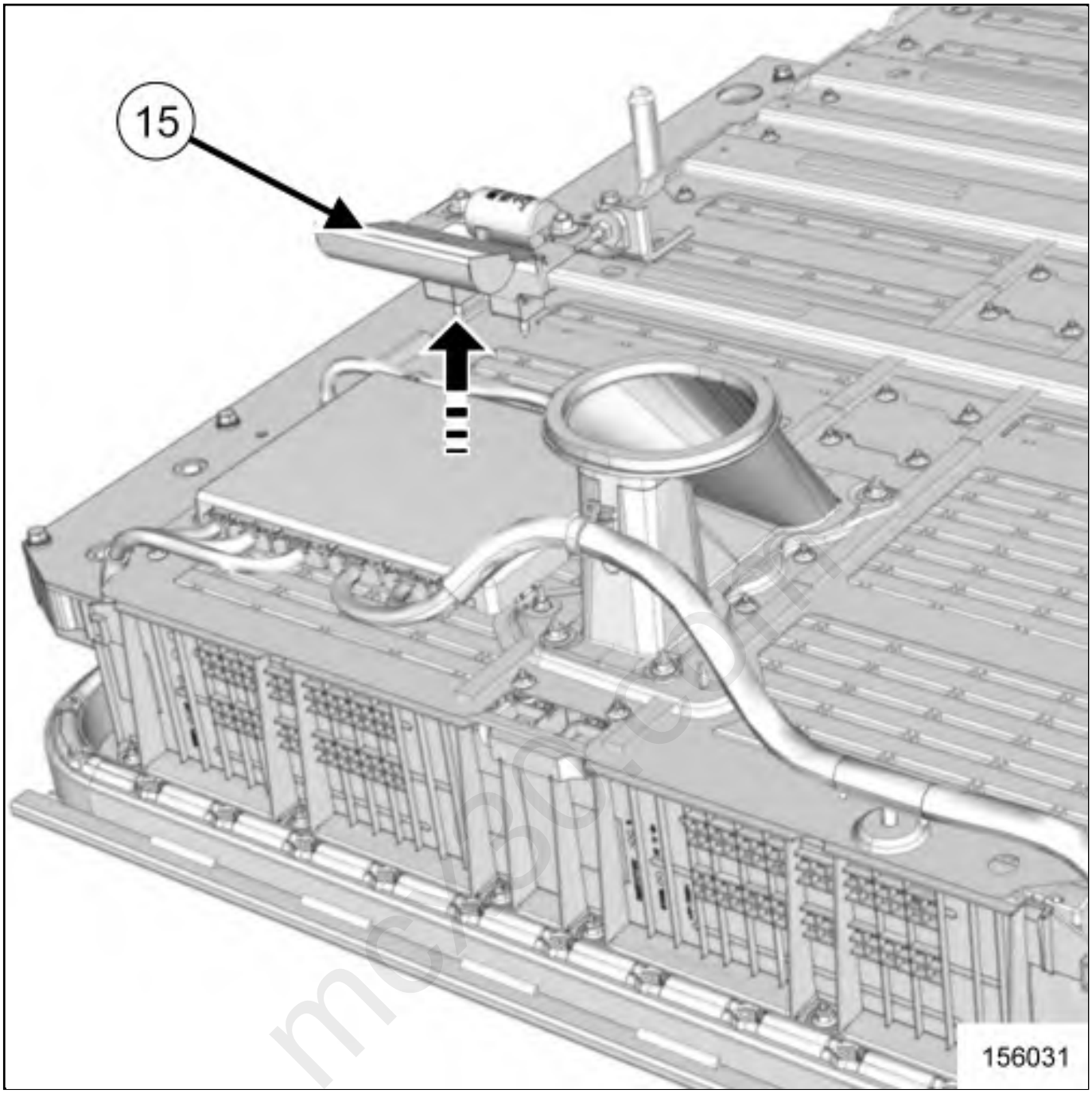
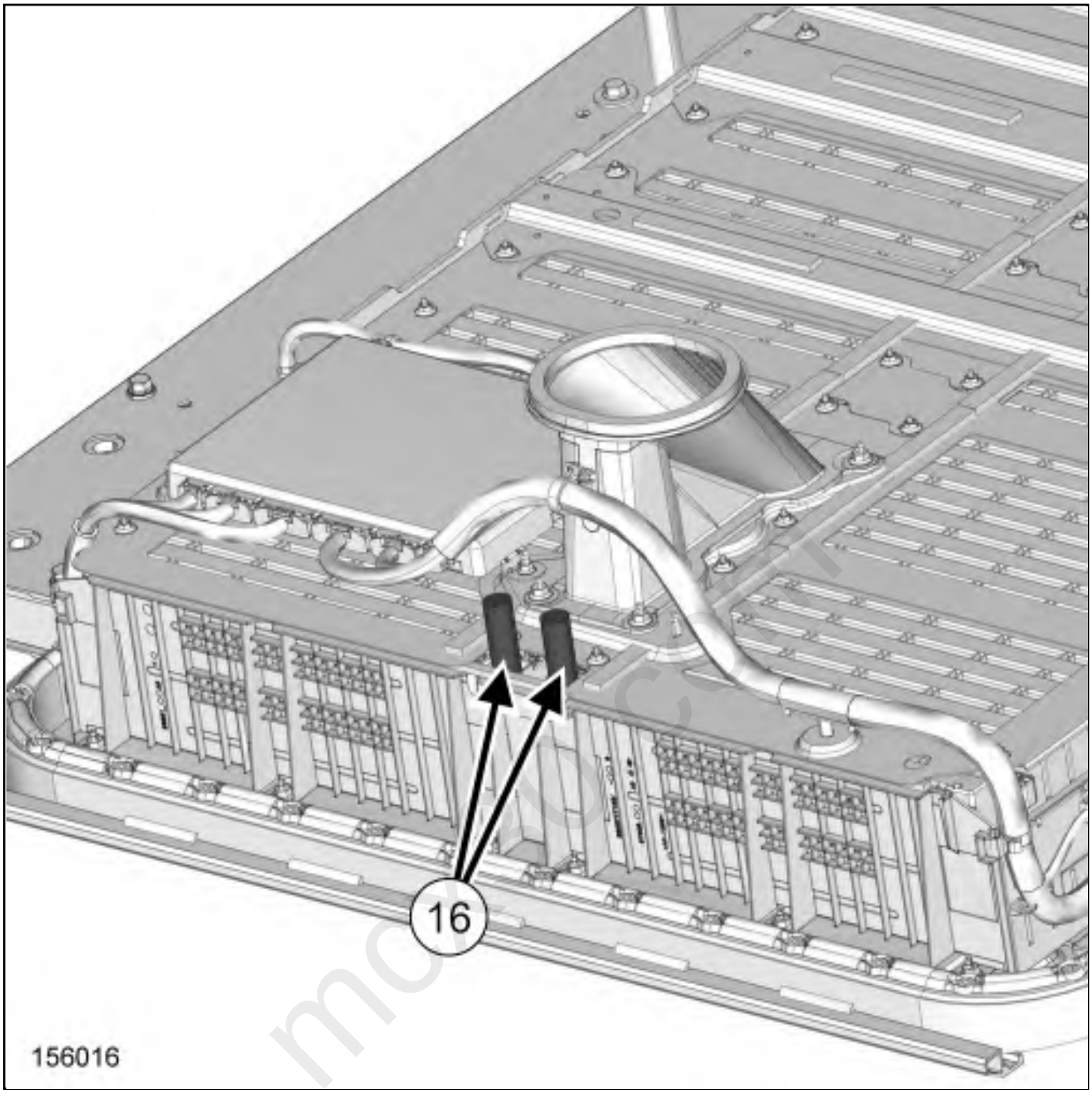
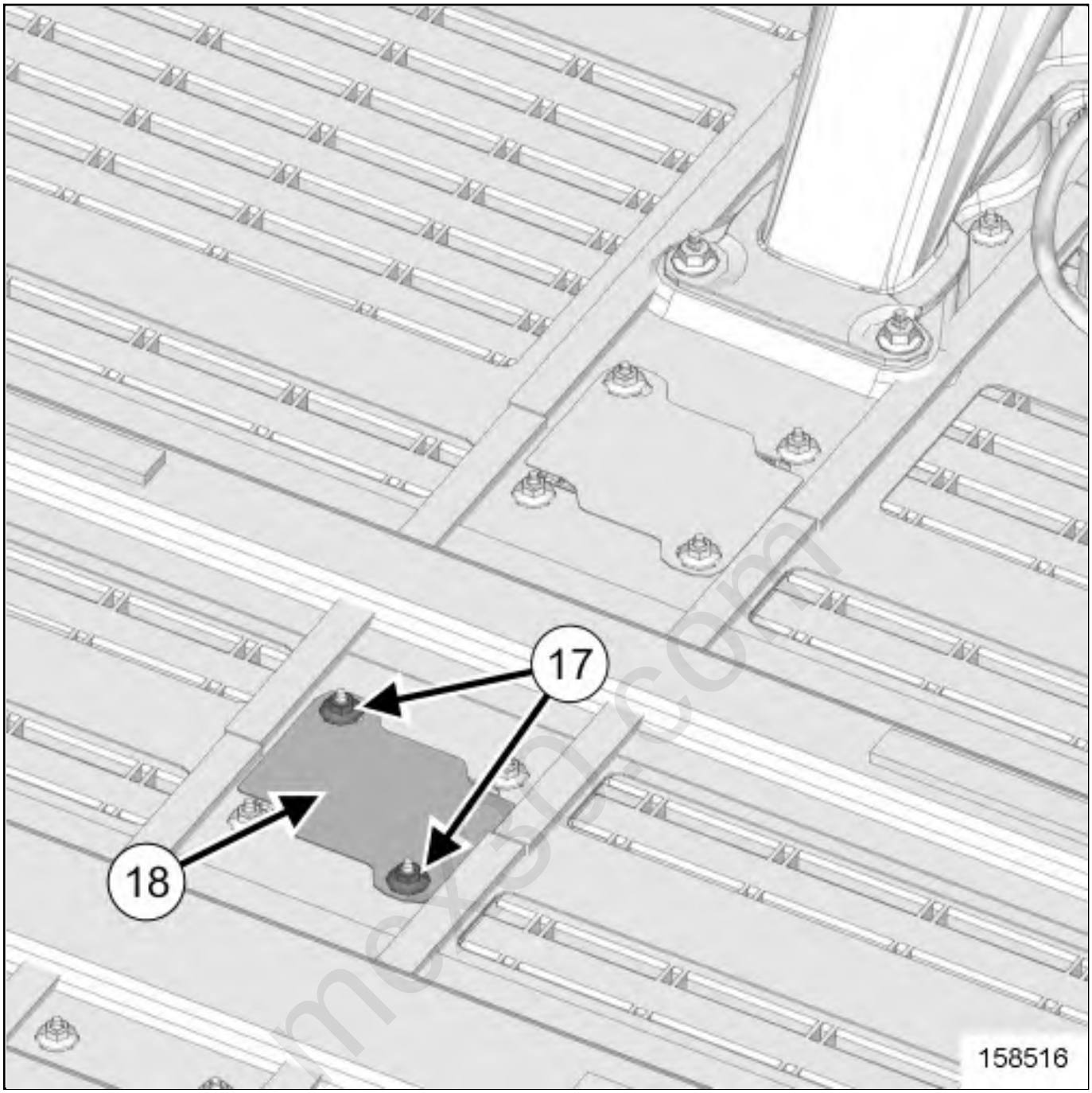


Remove (see 19E, Traction battery, Traction battery module stack assembly : Exploded view) :

- the fuse between stacks mount screws from the rear modules terminals(14) using an insulated magnetic socket,
- the fuse between stacks mount(15) .



- Insulate the rear modules terminals with insulated covers(16) .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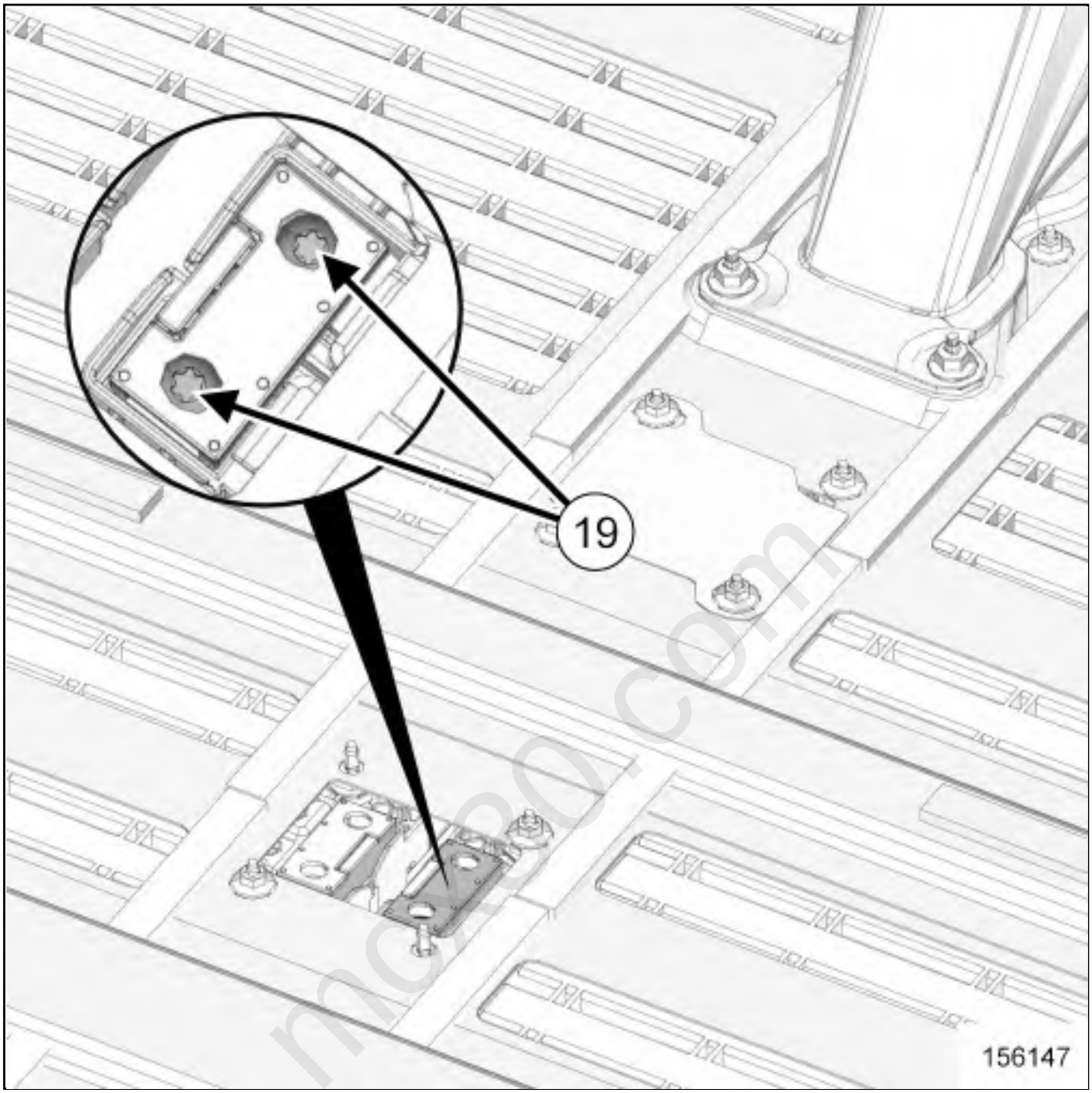
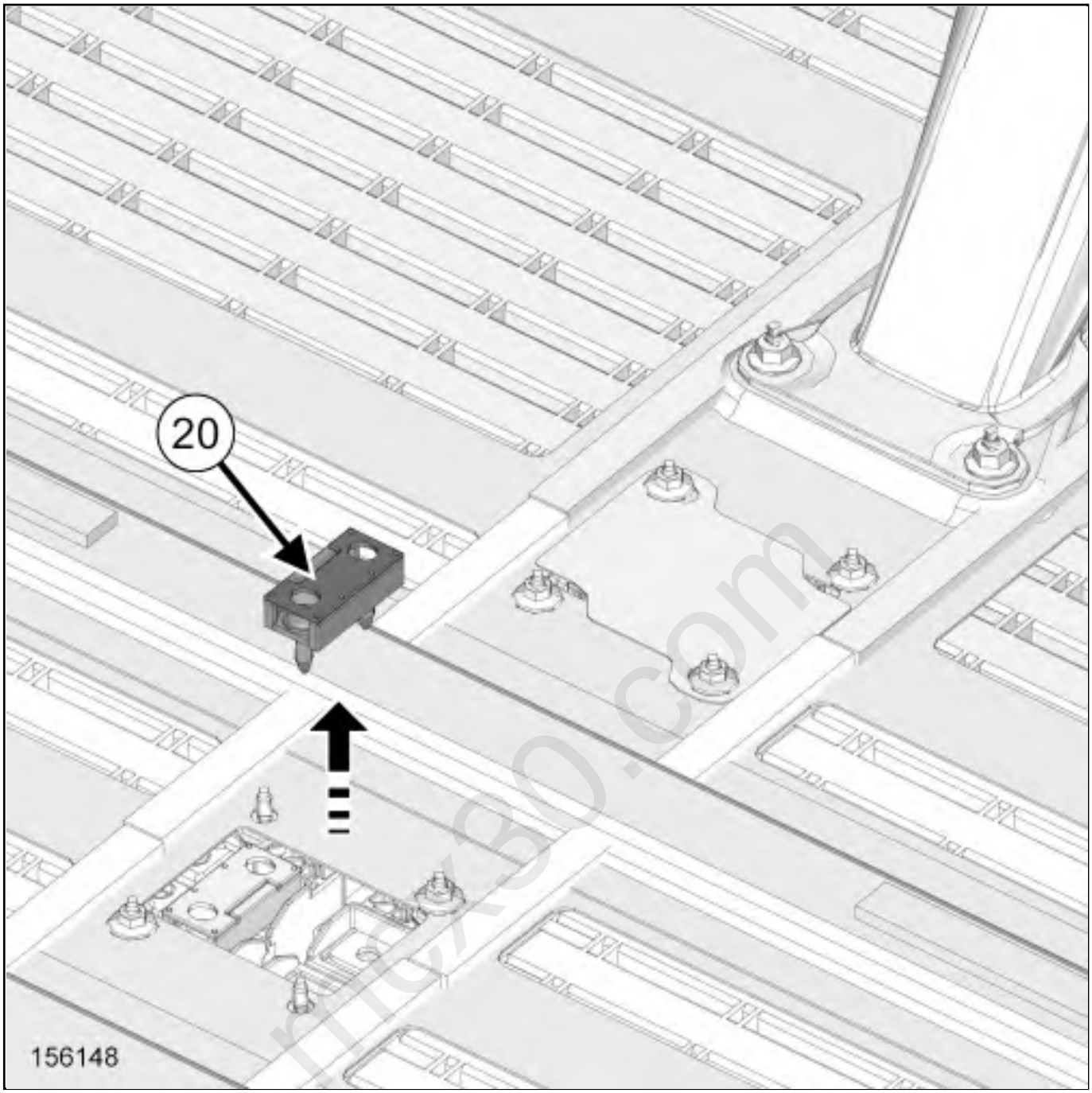
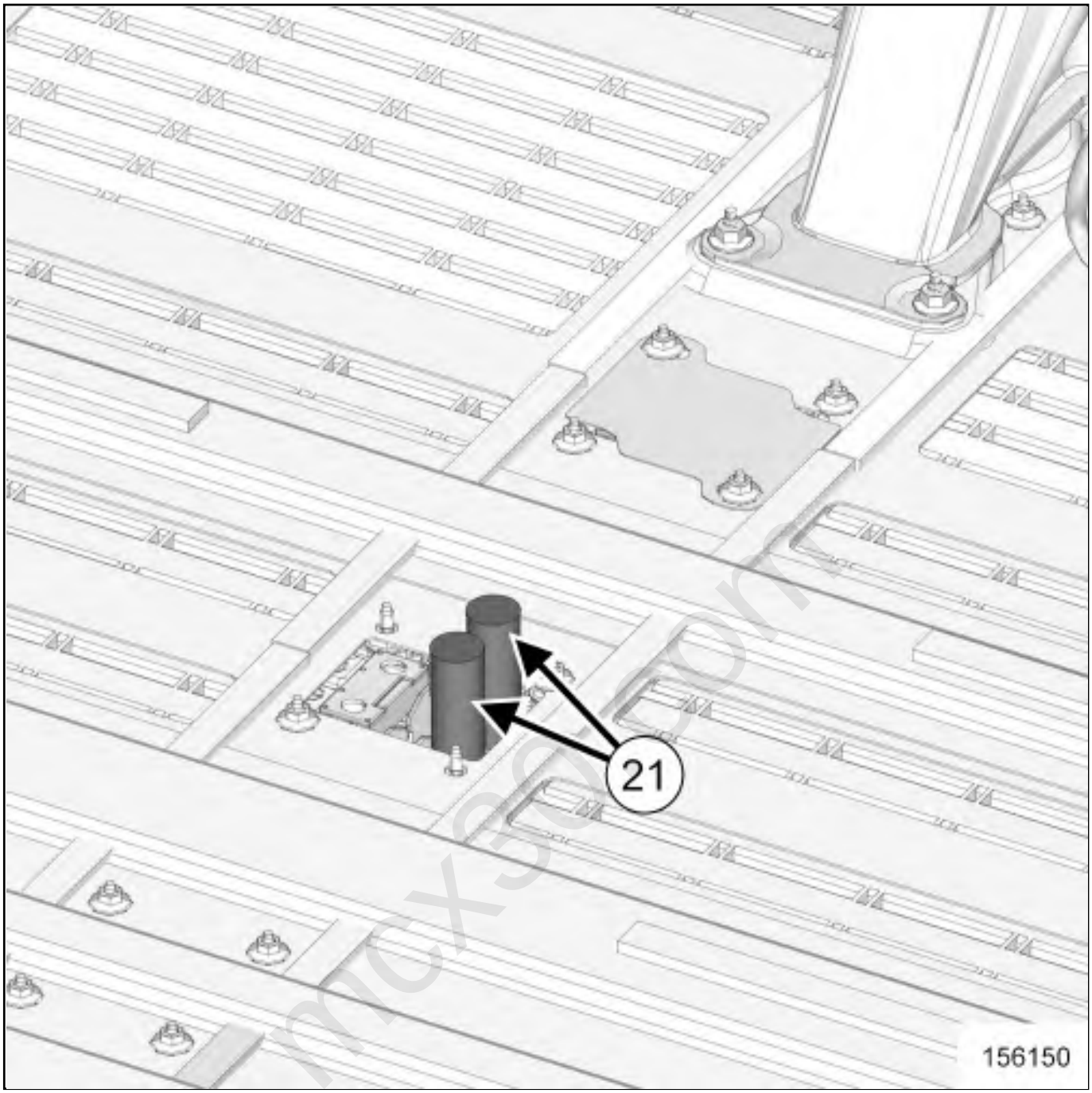




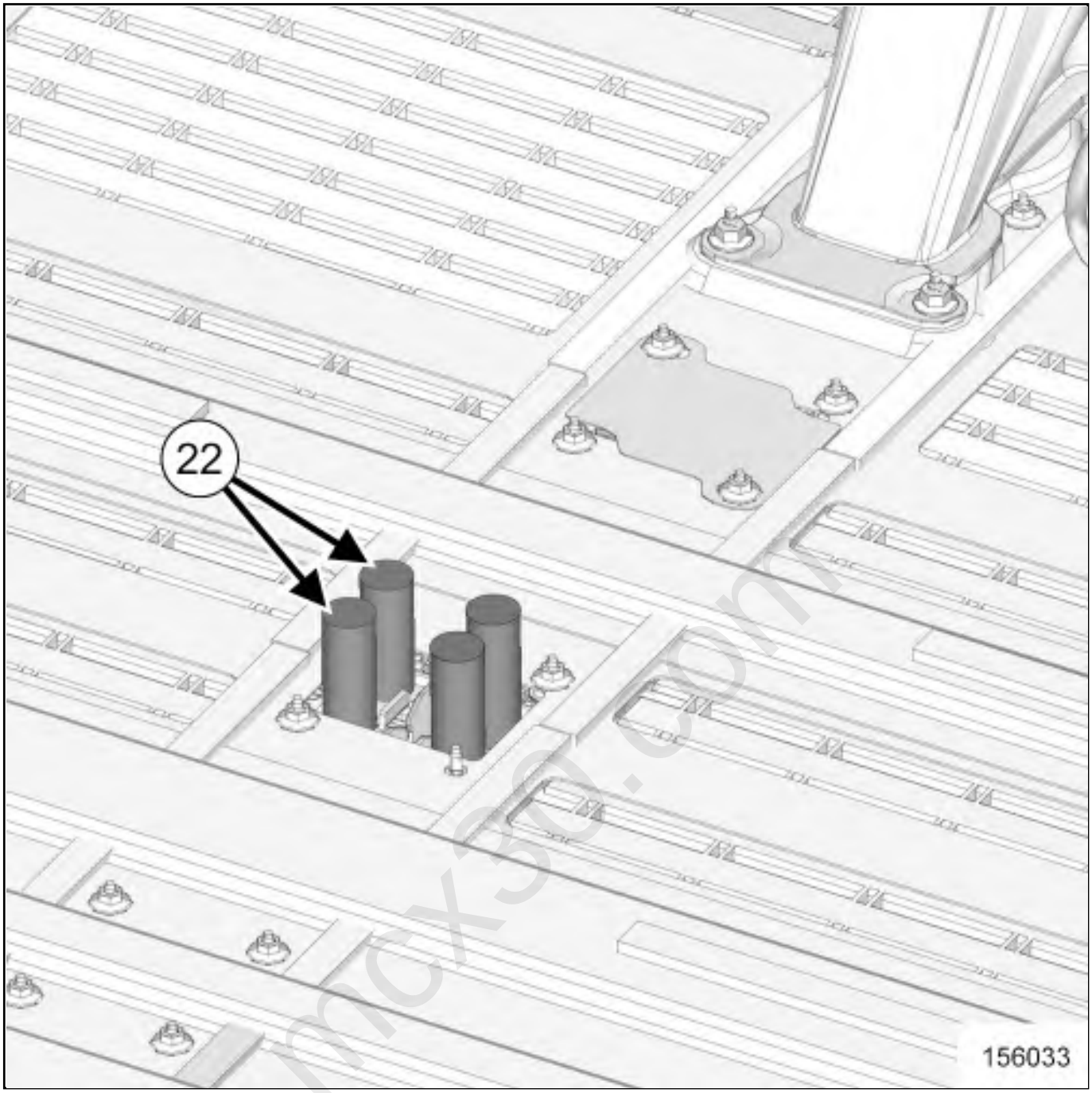
Remove (see 19E, Traction battery, Traction battery module stack assembly : Exploded view) :

- the middle jumper connection cover nuts(17) using an insulated magnetic socket,
- the middle jumper connection cover(18) using the toolSet of trim removal levers.(Car. 1363) ,
- the first jumper connection screws(19) using an insulated magnetic socket,
- the first jumper connection(20) using the toolSet of trim removal levers.(Car. 1363) .



- Insulate the module terminals with insulated covers(21) .

- Remove (see 19E, Traction battery, Traction battery module stack assembly : Exploded view) :
  - the second jumper connection screws using an insulated magnetic socket,
  - the second jumper connection using the toolSet of trim removal levers.(Car. 1363) .



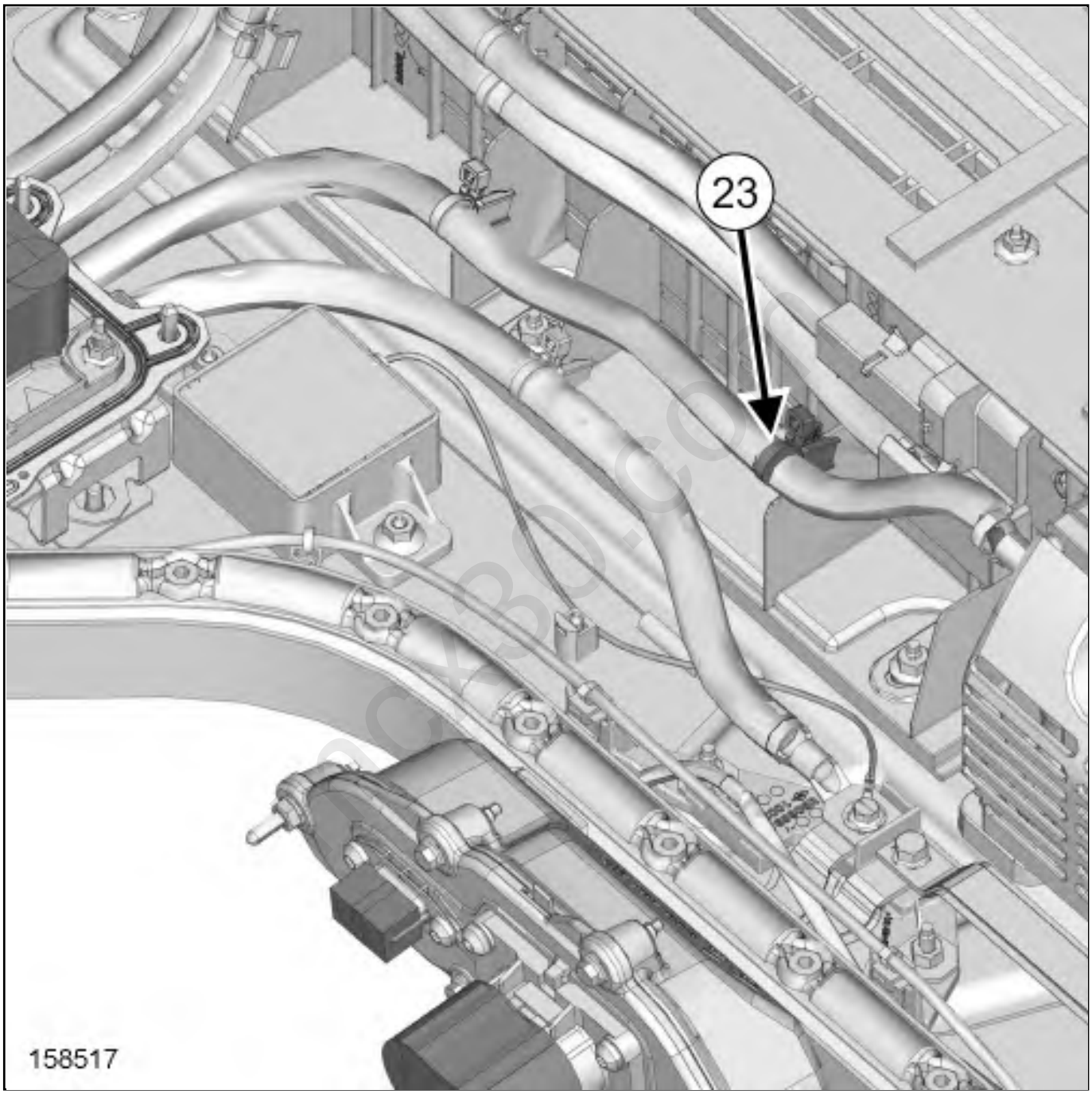
- Insulate the module terminals with insulated covers(22) .

Note:

Repeat these operations with the rear jumper connections.

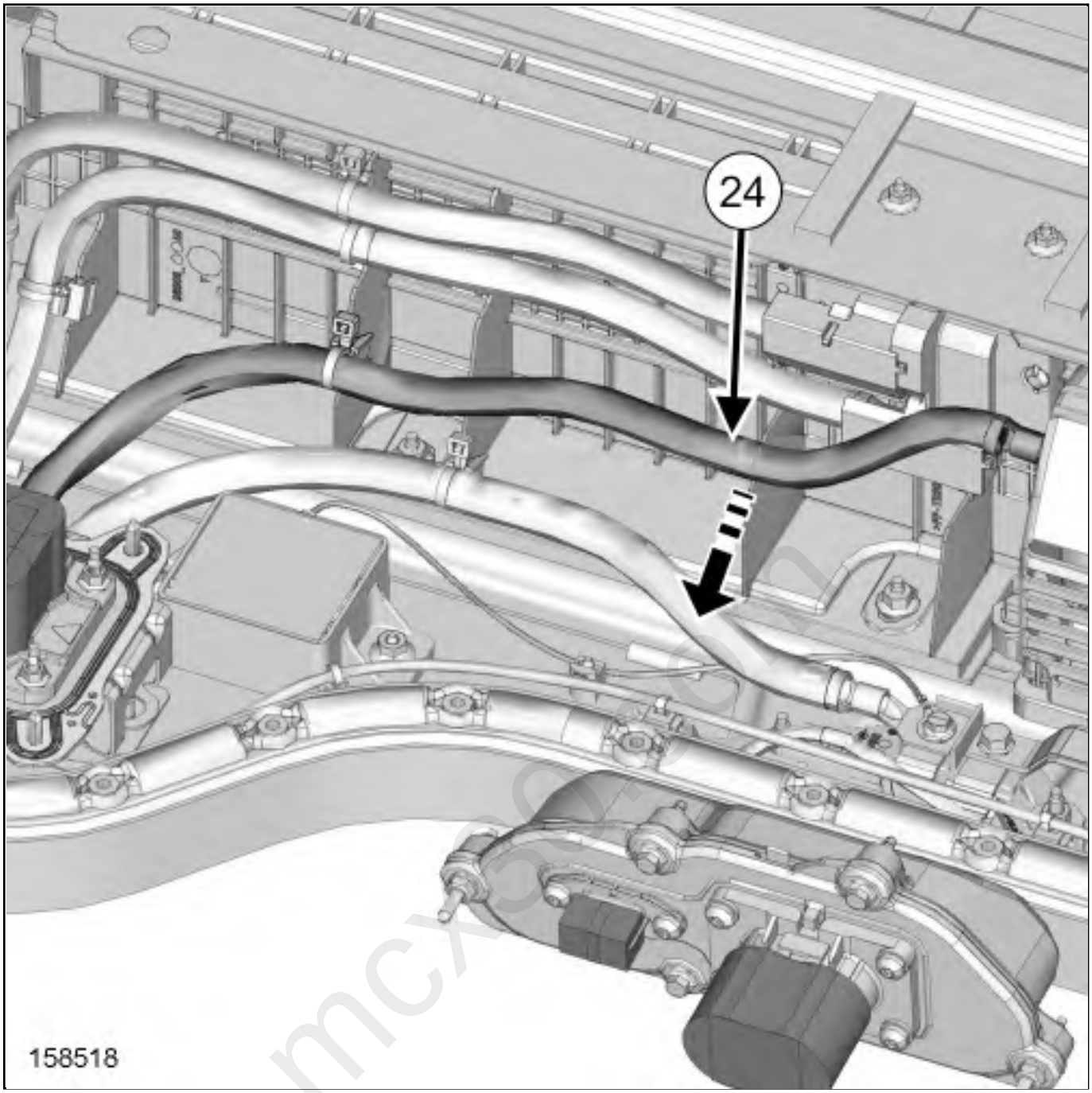
Note:

Repeat these operations with the front jumper connections.

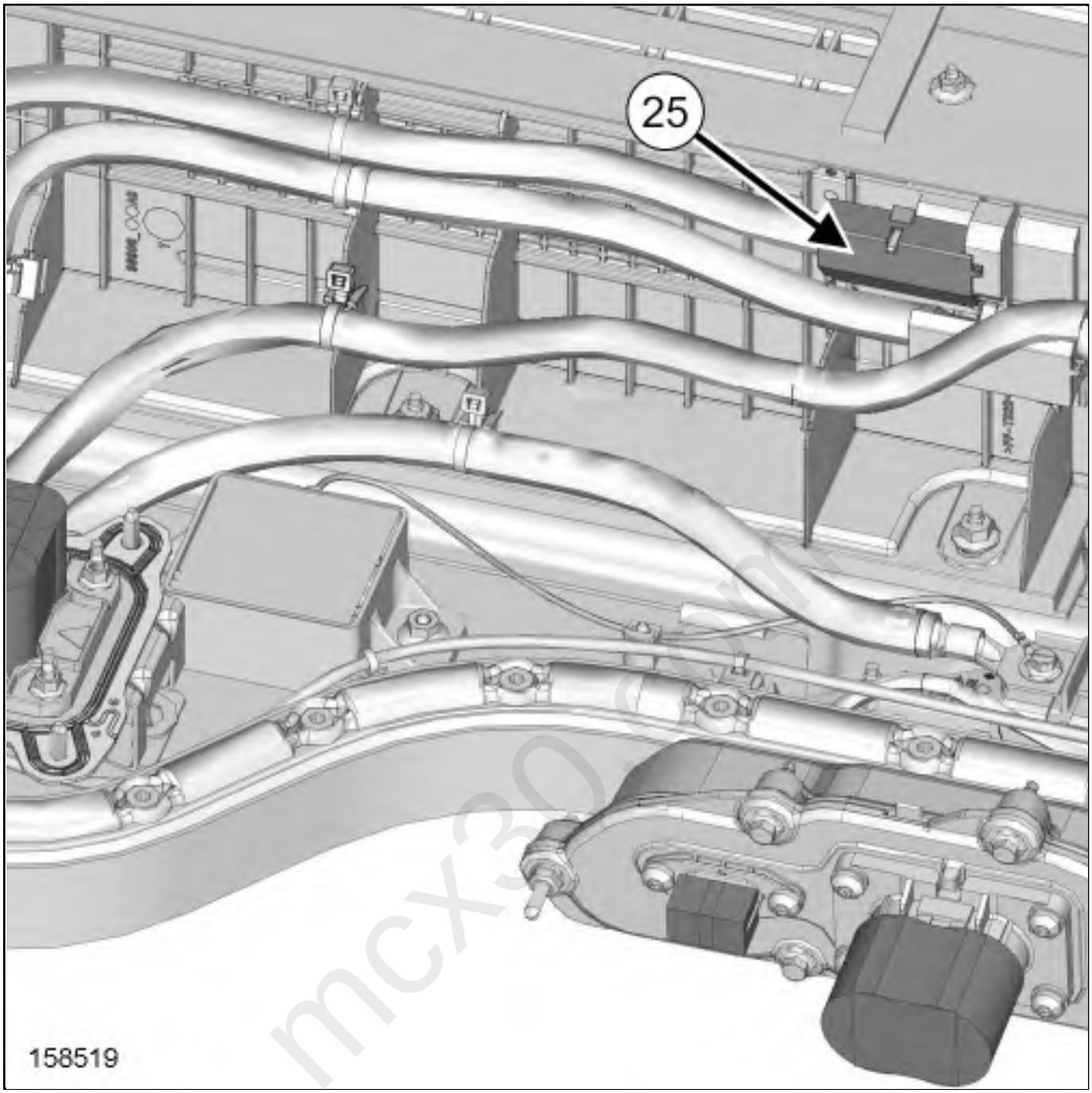


- Mark the location of the clamp clip(23) on the power number 3(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) using a paint marker.

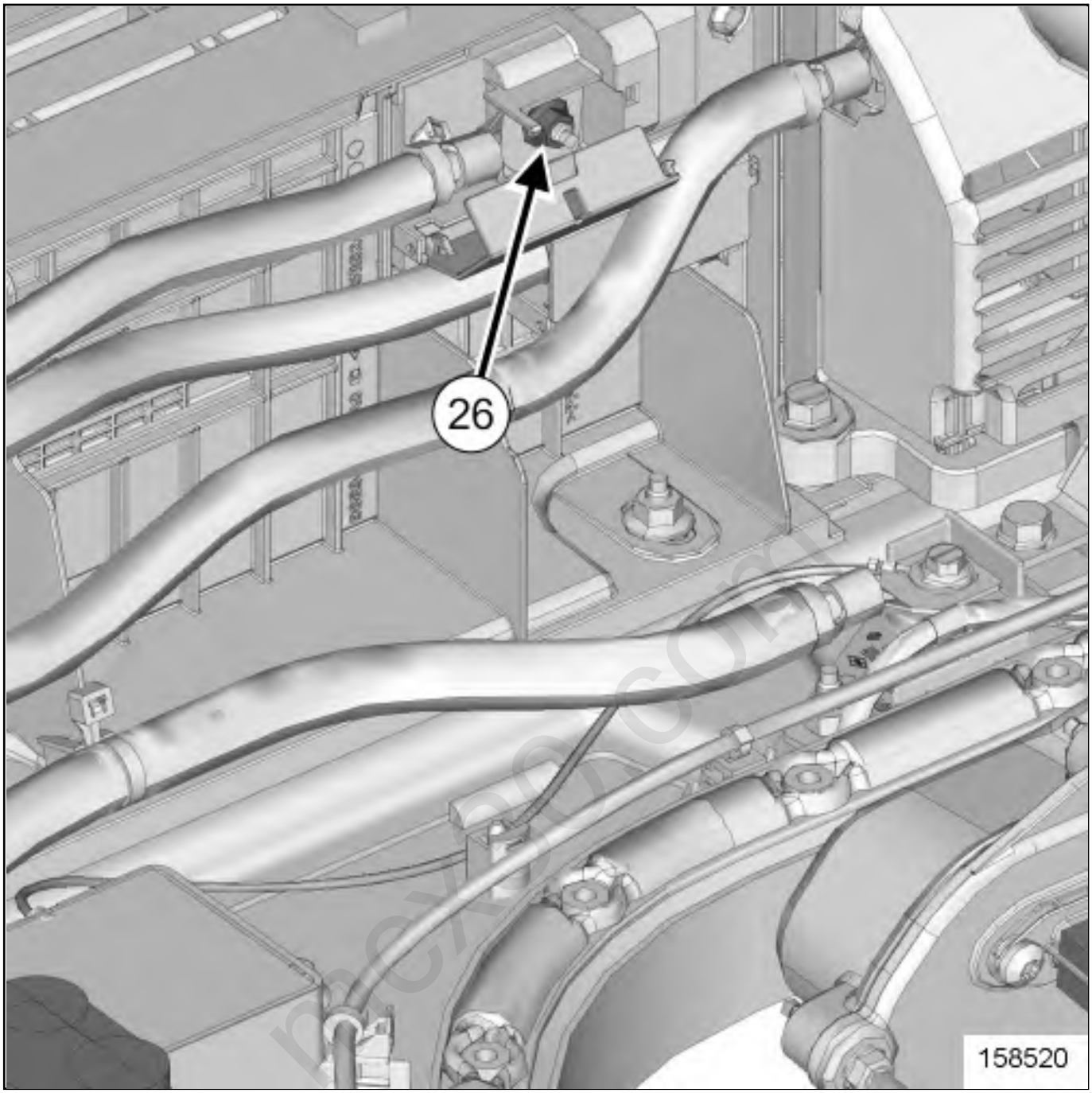
- Cut the clamp clip(23) on the power wire number 3 using insulated cutting pliers.



- Move the power wire number 3(24) .

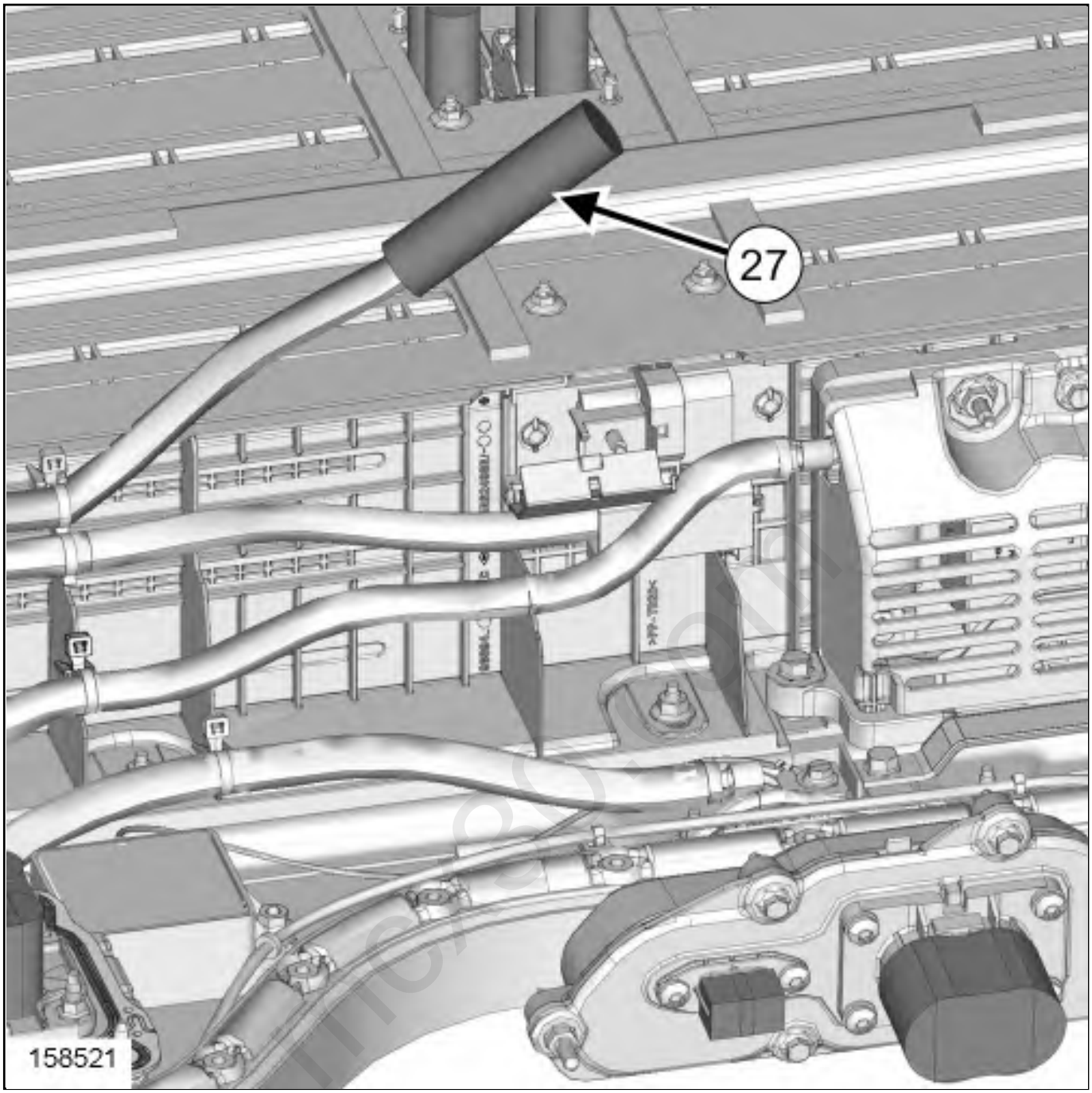


- Unclip the upper cover of the bus bar(25) using the toolSet of trim removal levers.(Car. 1363) .

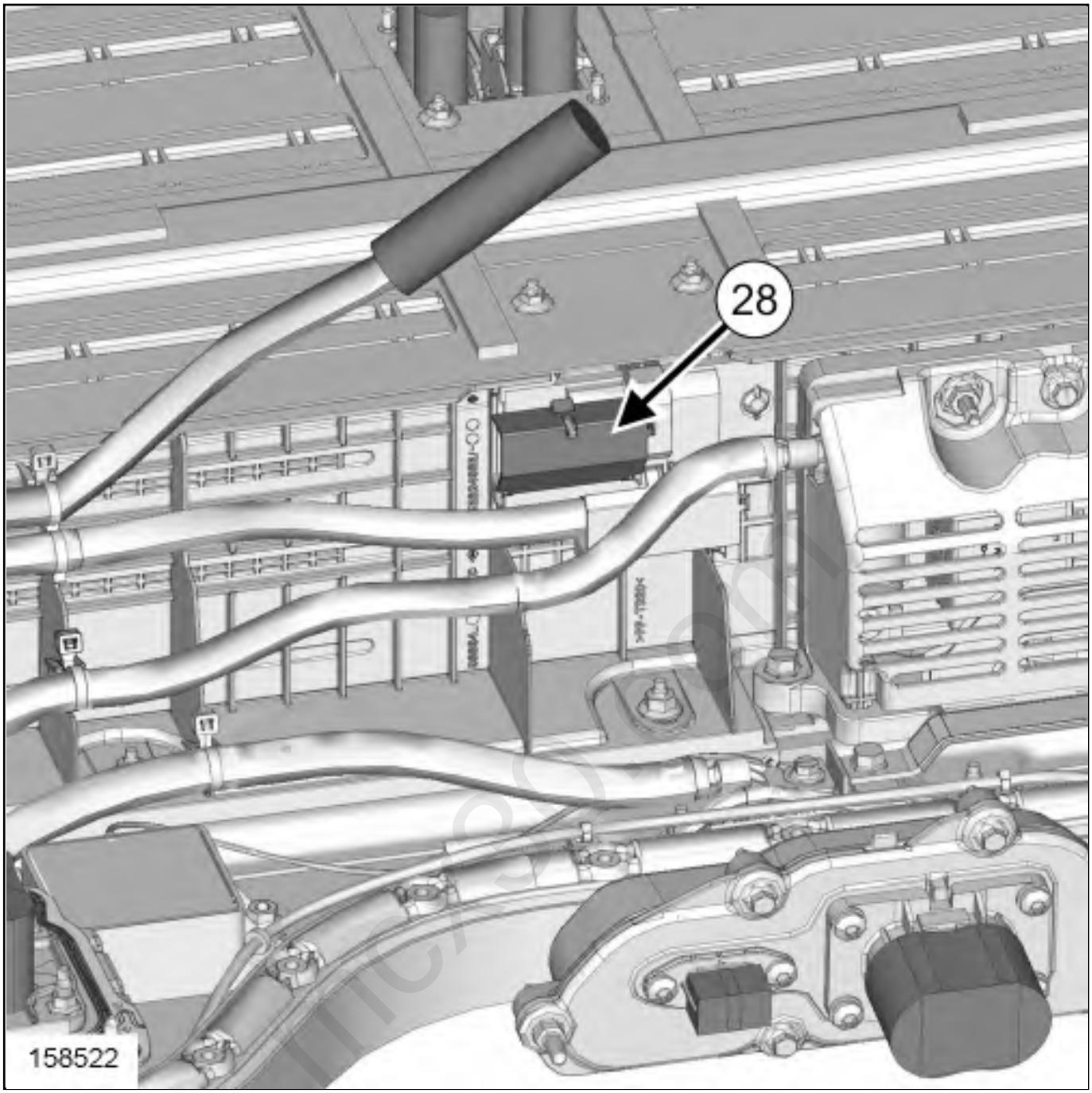


- Remove the upper terminal nut(26) **(see 19E, Traction battery, Traction battery module stack assembly : Exploded view)** from the bus bar using an insulated magnetic socket.

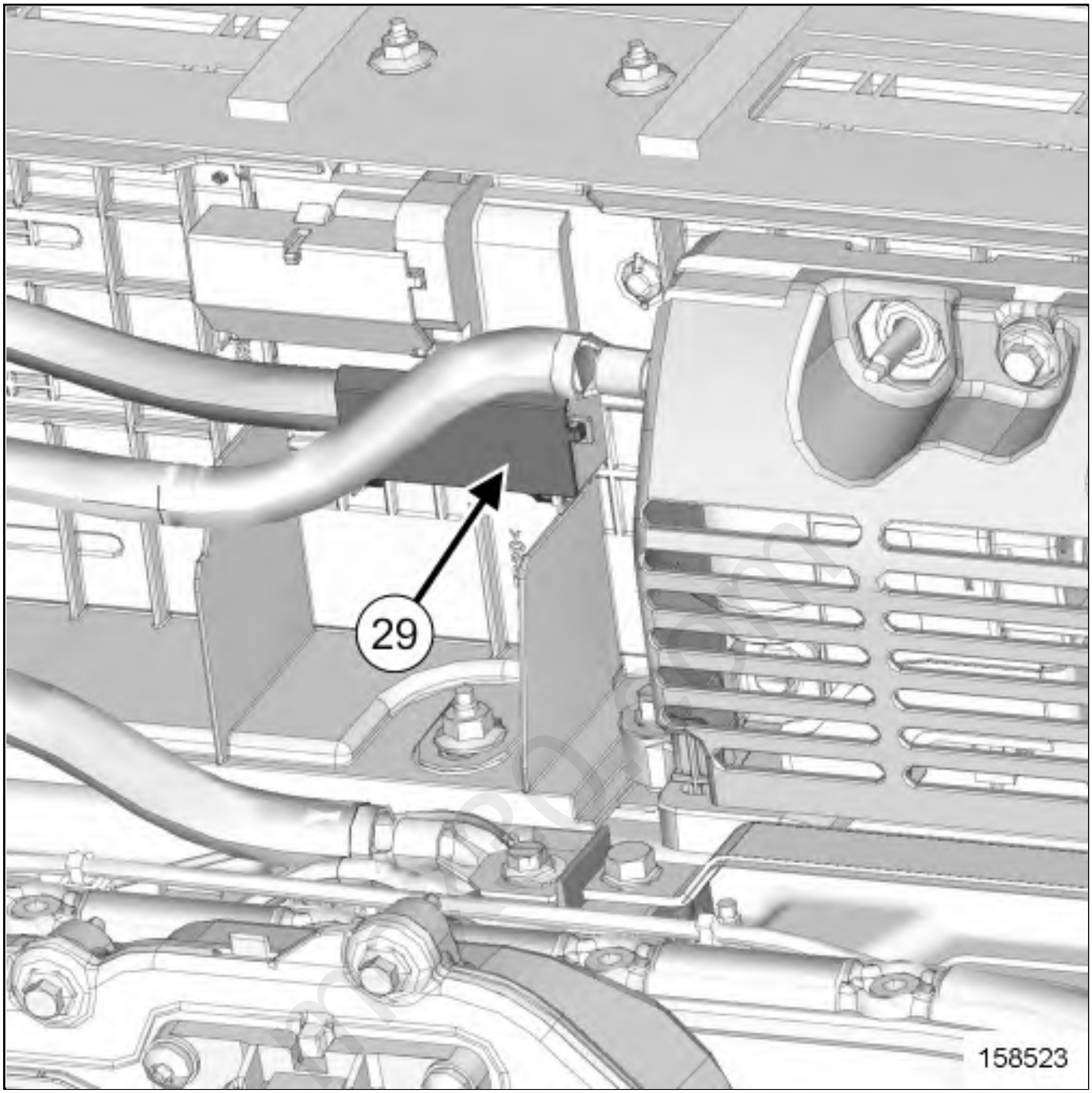
- Move the power wire number 1.



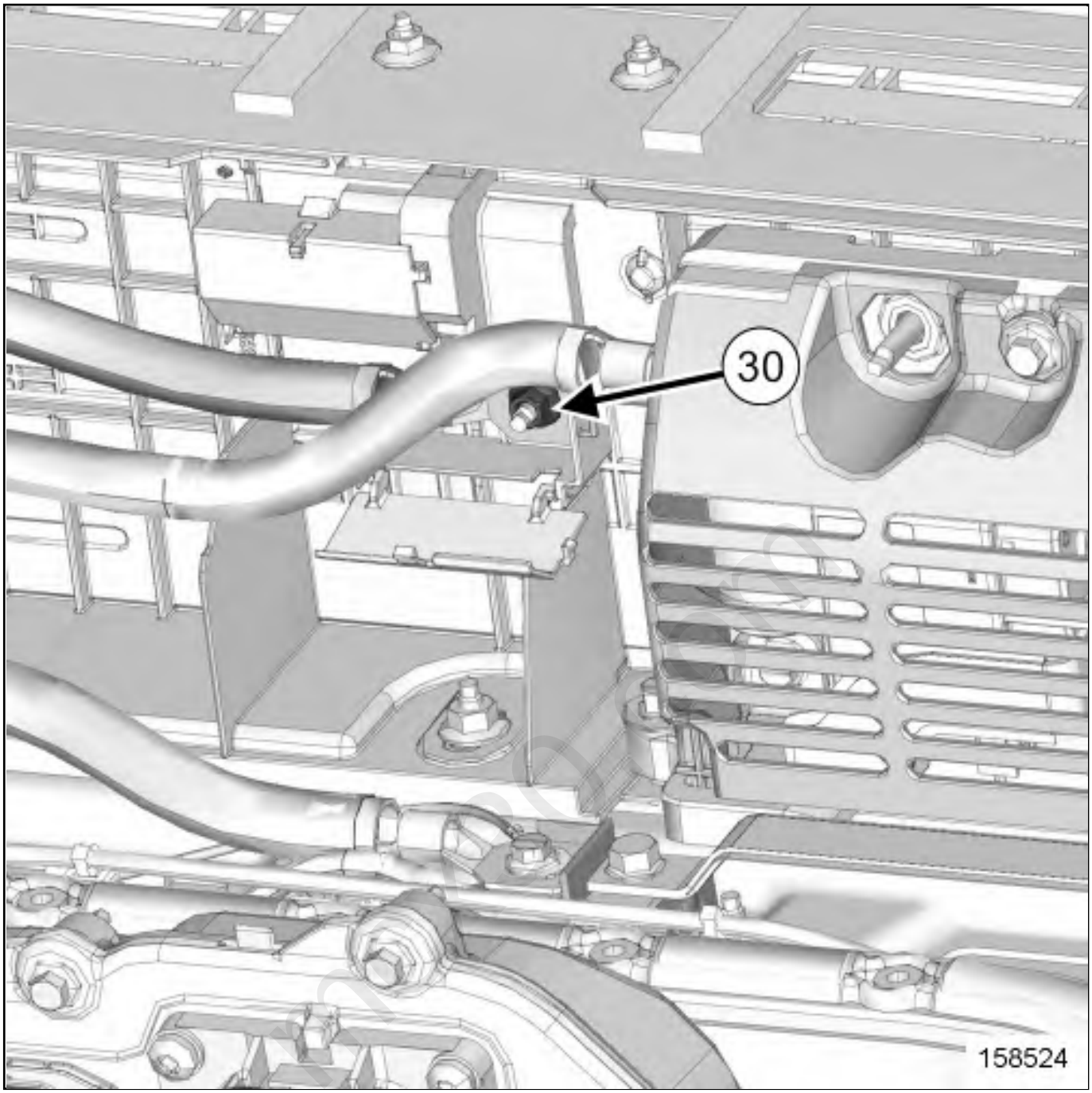
- Insulate the power wire number 1 lug with an insulated cover(27) .



- Clip the upper cover of the bus bar(28) .

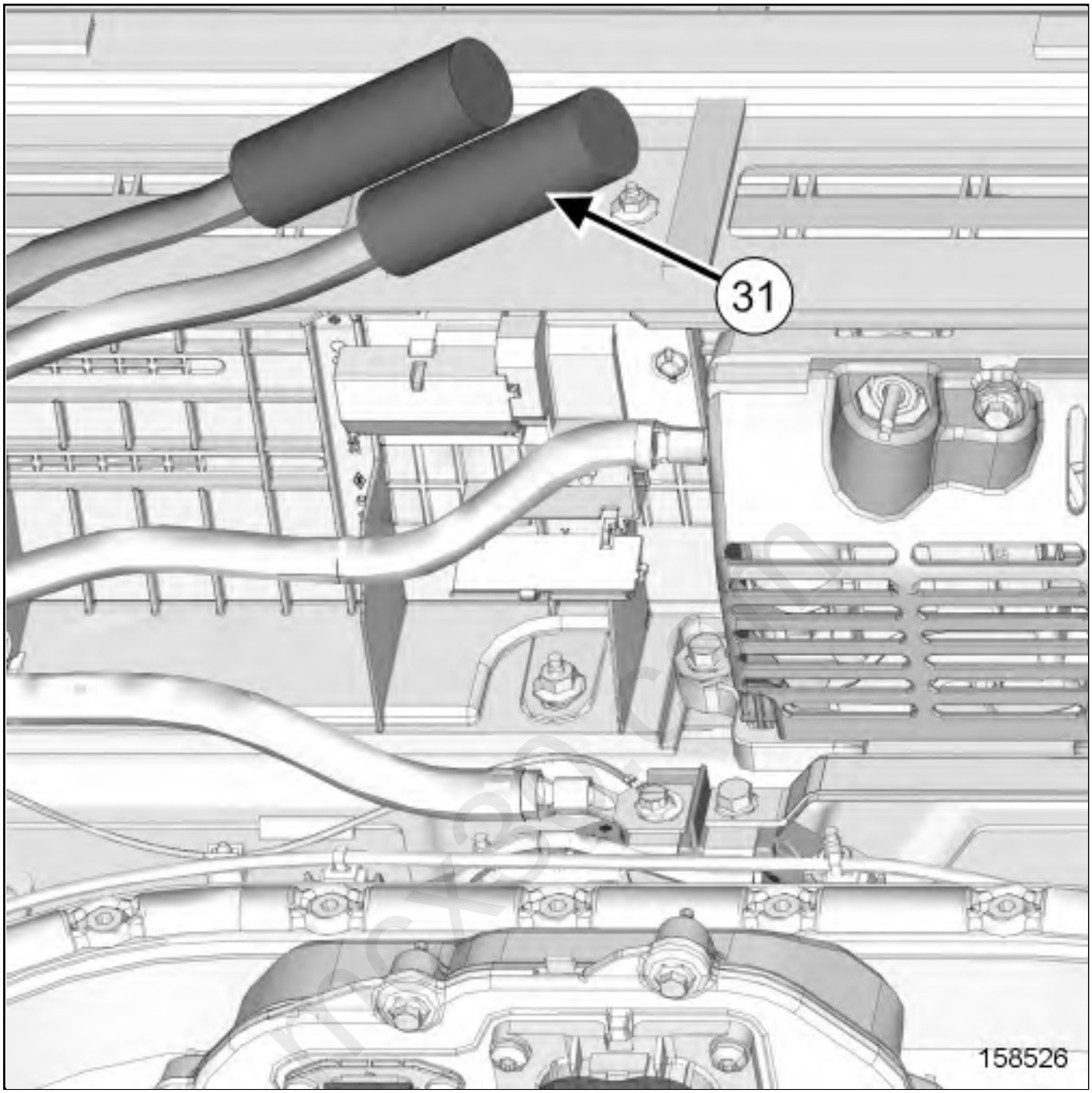


- Unclip the lower cover of the bus bar(29) using the toolSet of trim removal levers.(Car. 1363) .

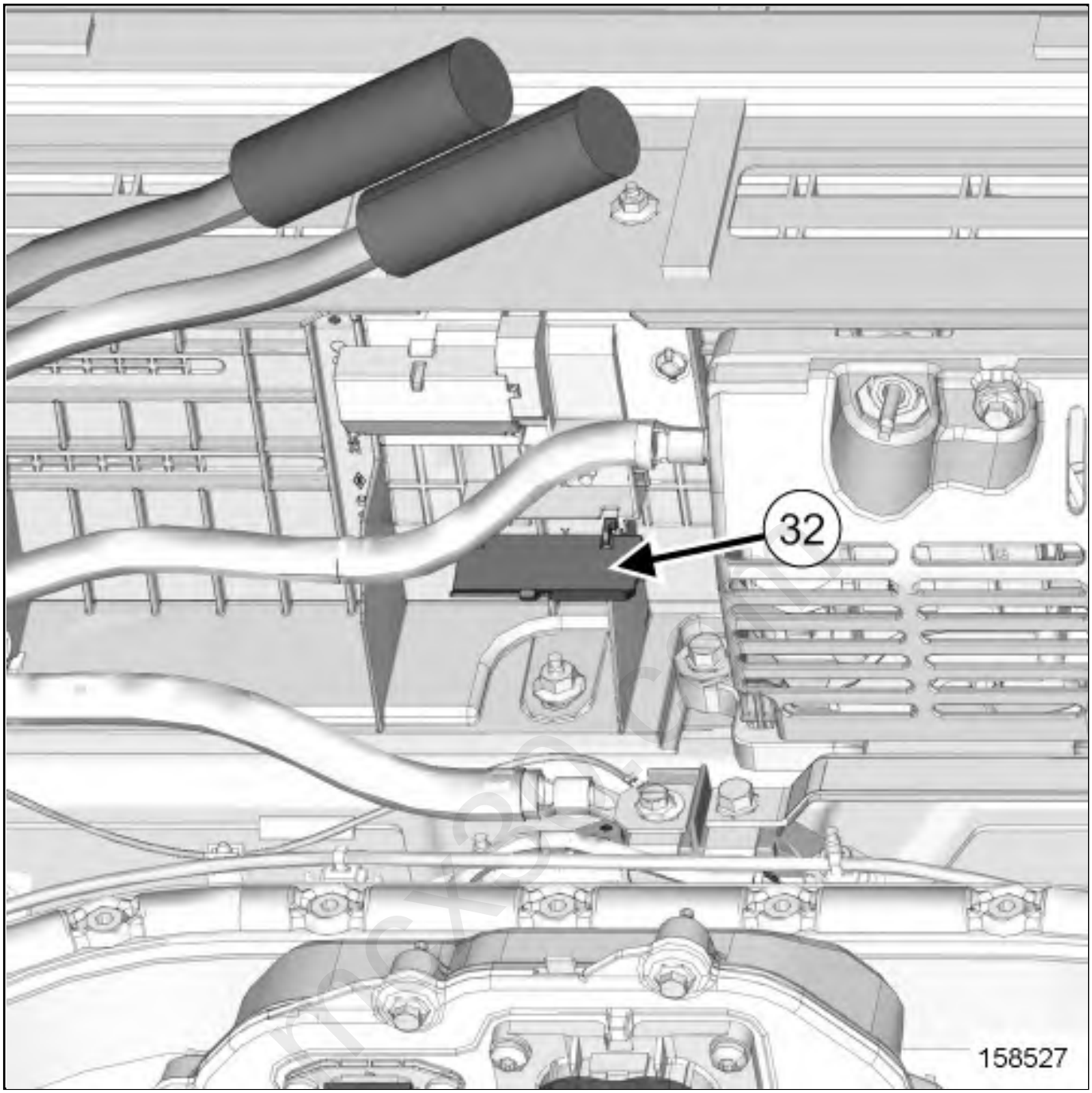


- Remove the lower terminal nut(30) (see 19E, Traction battery, Traction battery module stack assembly : Exploded view) from the bus bar using an insulated magnetic socket.

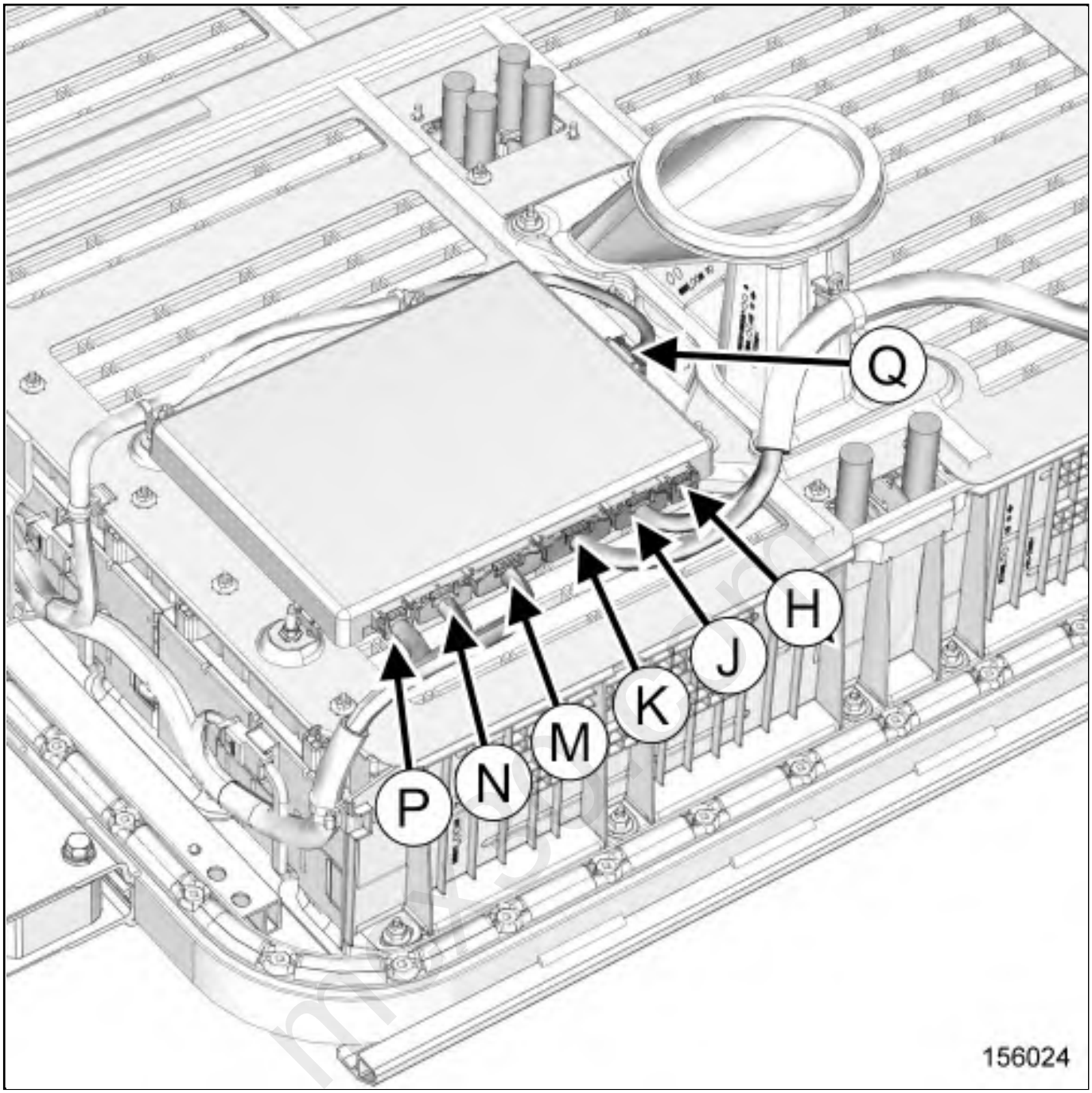
- Move the power wire number 2.



Insulate the power wire number 2 lug with an insulated cover(31) .



Clip the lower cover of the bus bar(32) .



Disconnect the traction battery computer plugs using the toolSet of trim removal levers.(Car. 1363)
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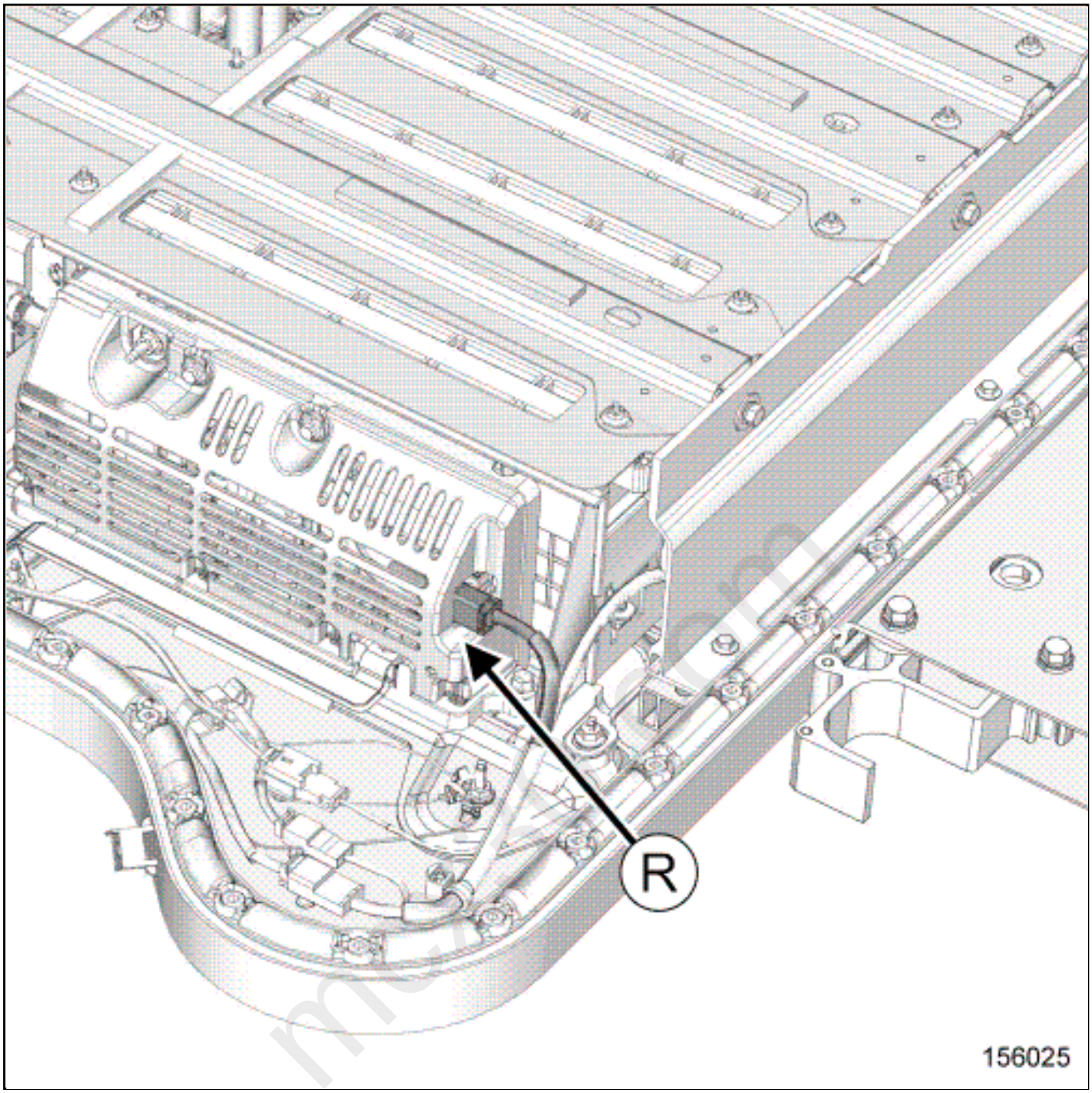
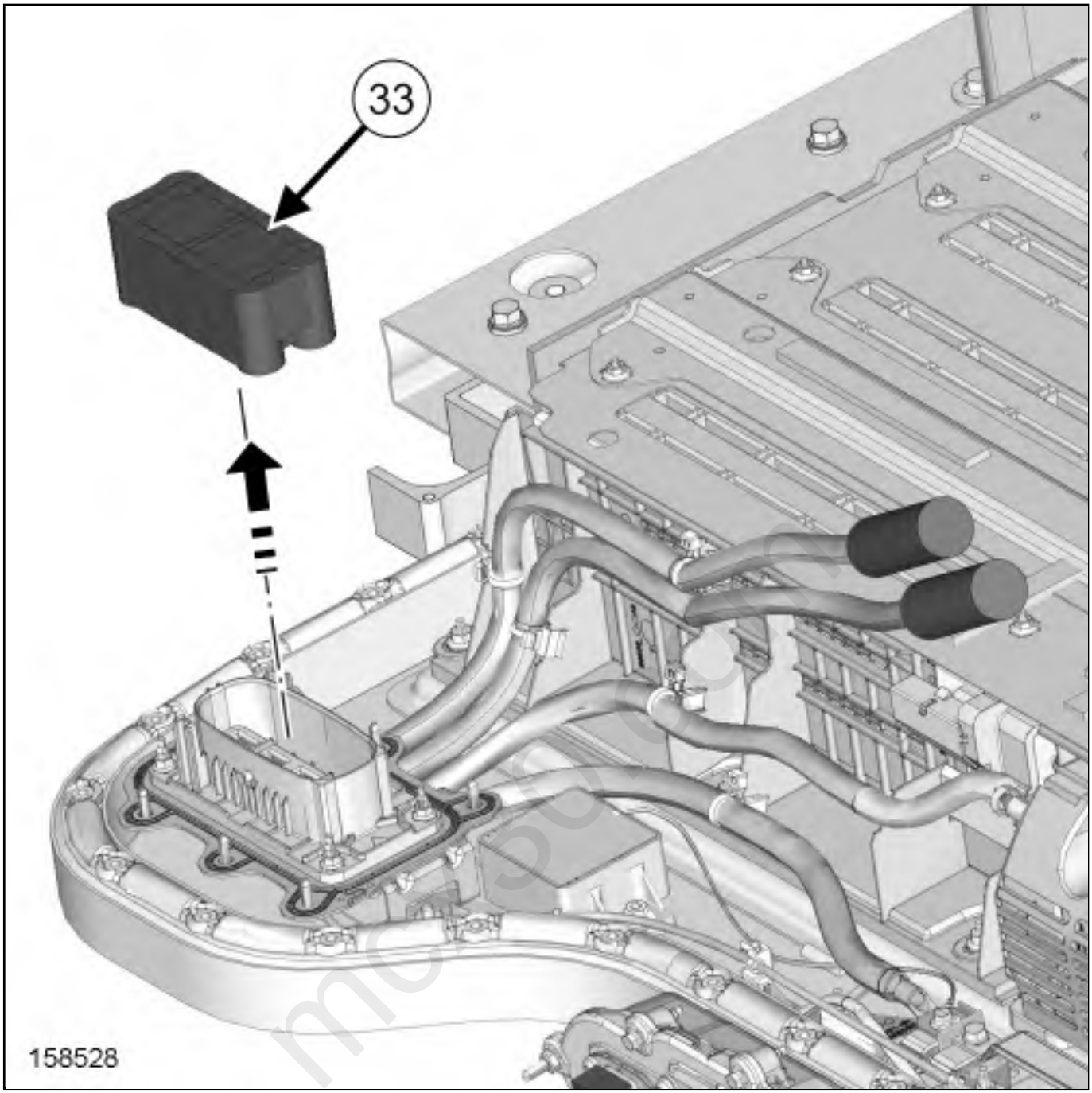
Note:

Removal order: 7(Q) ; 6 (P) ; 5 (N) ; 4 (M) ; 3 (K) ; 2 (J) ; 1 (H) .

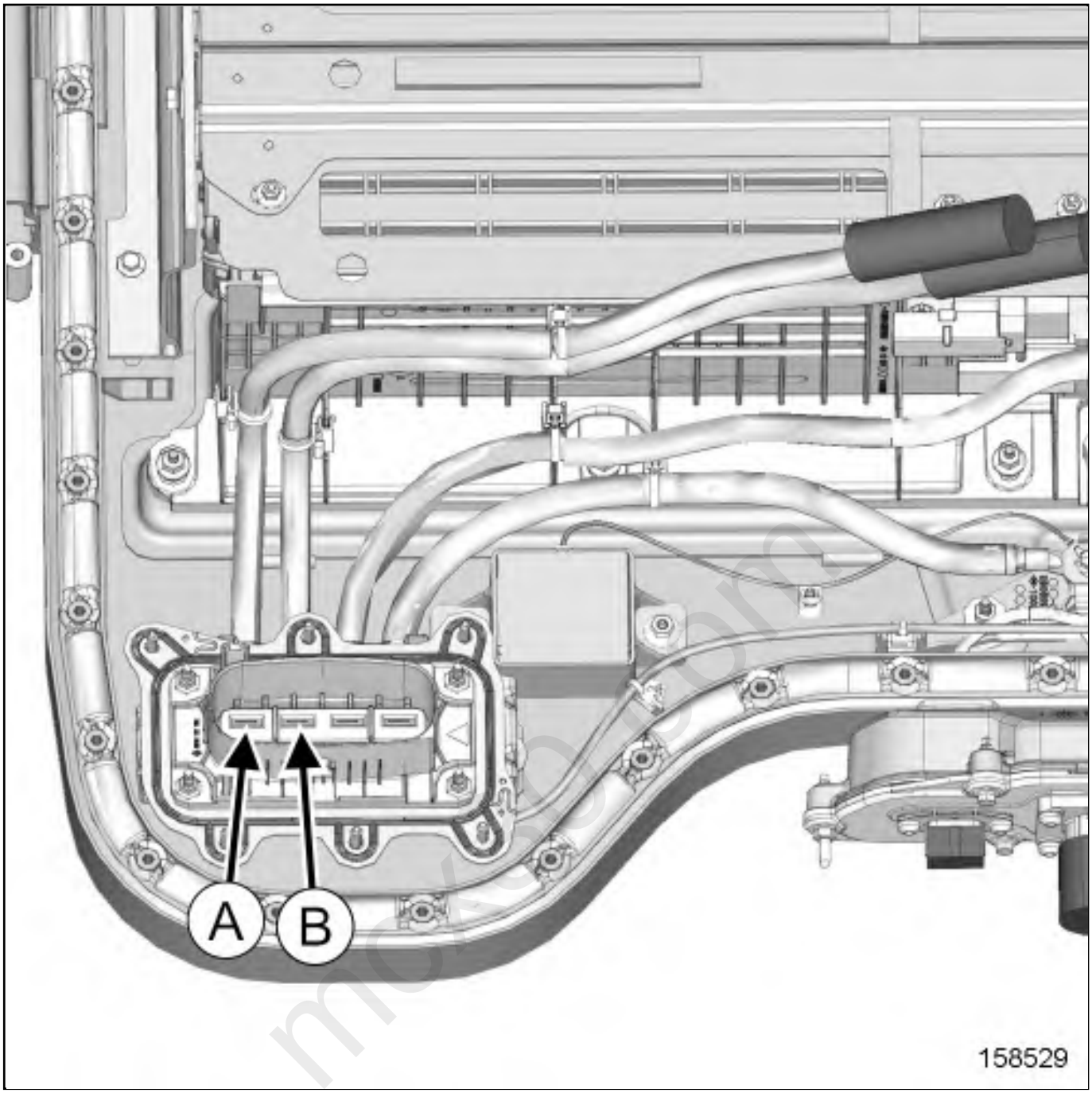


Unclip plug from the internal junction box wiring connector(R) using the toolSet of trim removal levers. (Car. 1363) .



- Remove the protective cover(33) from the safety device switch socket.

- Make sure that the voltage detectorVoltage detector(Ele. 1993) is working correctly before measuring.

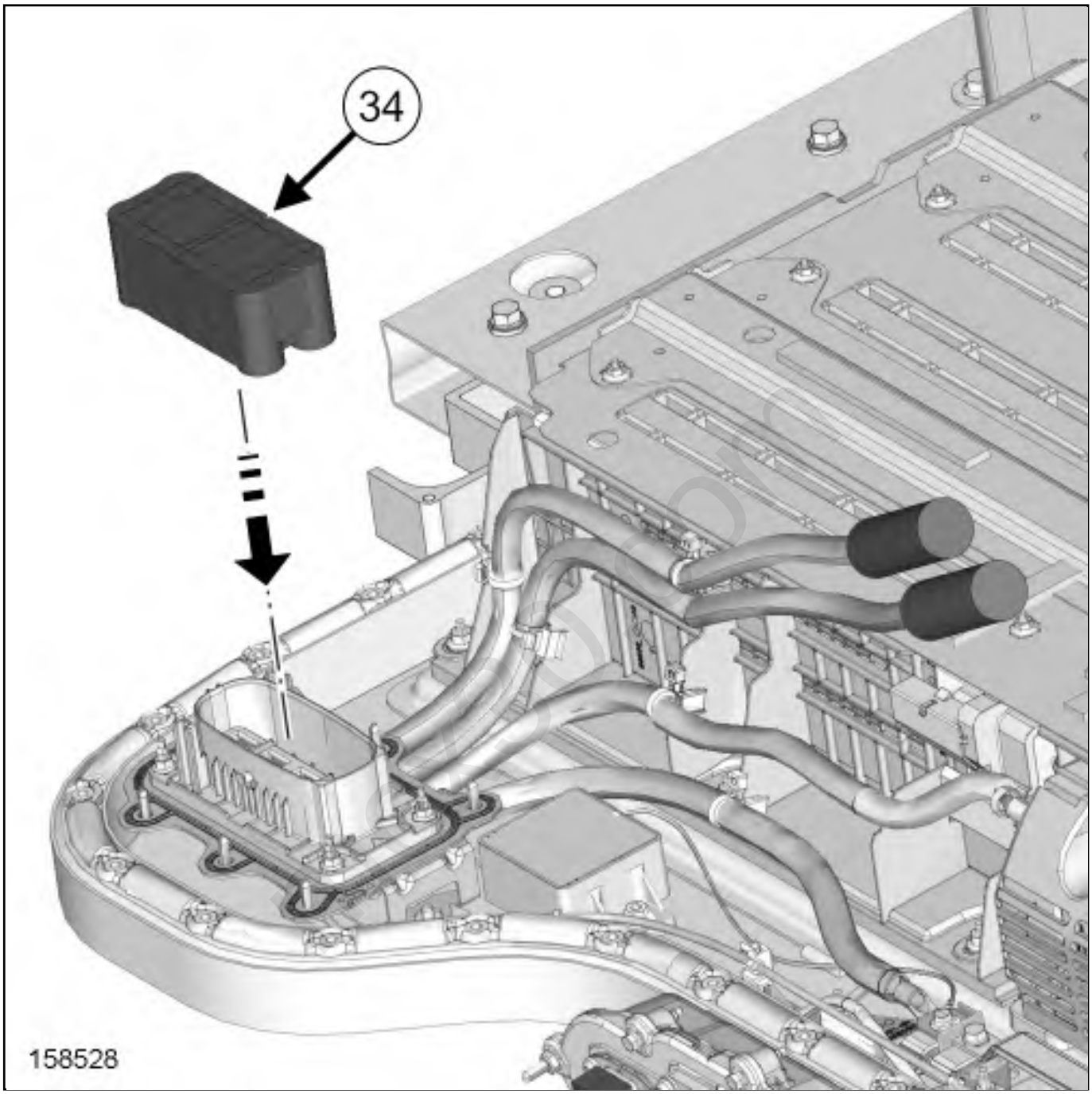


Check there is no voltage using a voltage detectorVoltage detector(Ele. 1993) between the terminals 1 (A) and 2 (B) of the traction battery safety device switch socket (1 measurement).

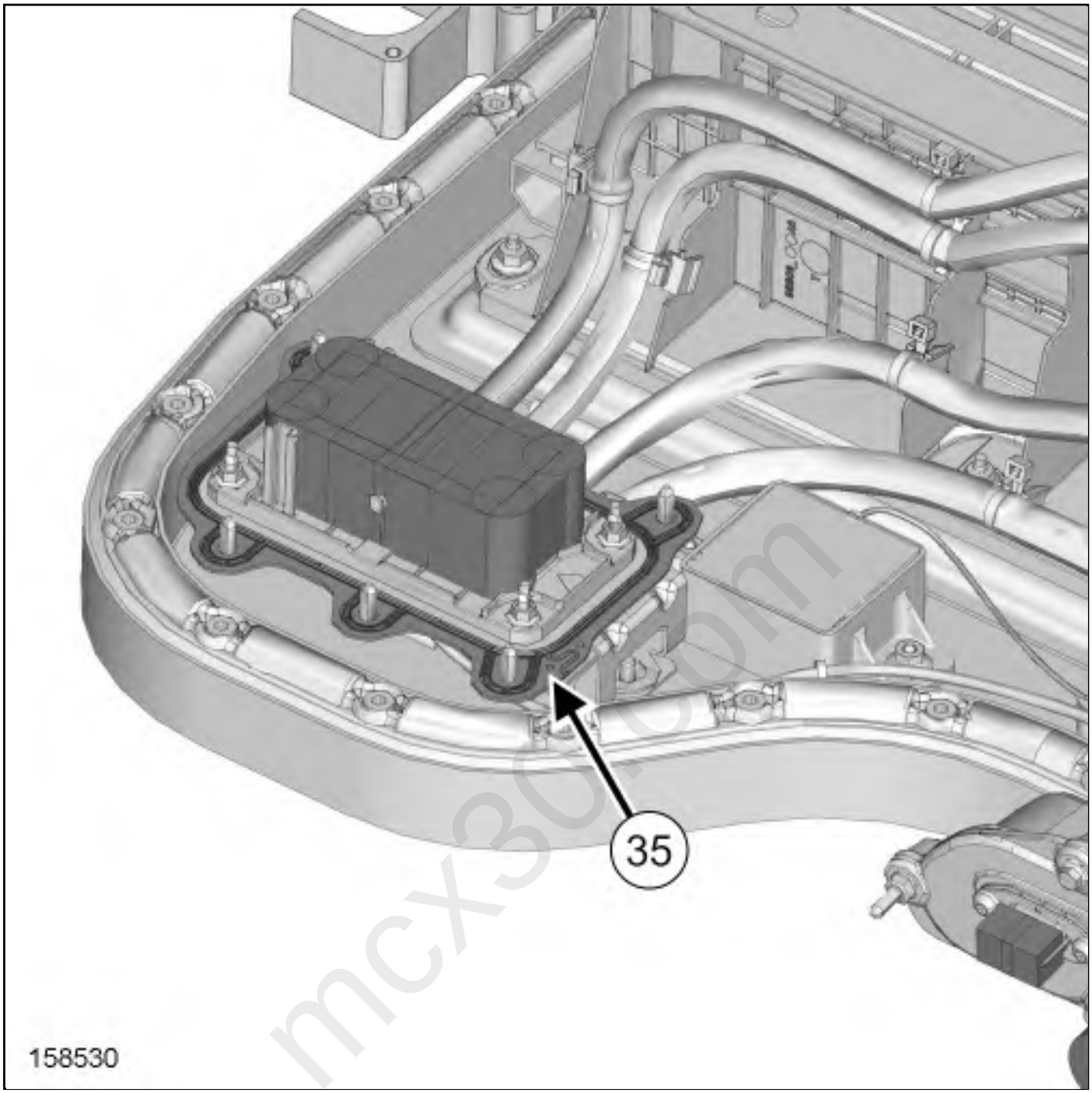
Note:

Between the contact 1(A) and 2 (B) . This measure must provide values zero-voltage or capacitives values (non-permanent voltage).

Make sure that voltage detectorVoltage detector(Ele. 1993) is working correctly after measurement.



Refit the protective cover(34) on the safety device switch socket.



Remove the seal between upper cover and safety device switch socket(35) (see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

REFITTING

1. REFITTING PREPARATION OPERATION

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

- the traction battery upper cover screws,
- the seal between upper cover and safety device switch socket.

Note:

Check the state of the bus bars, power wire lugs and fuse support terminals (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 ending). Replace it in case of damage and analyse the origin.

Note:

This operation require two operators.

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

Note:

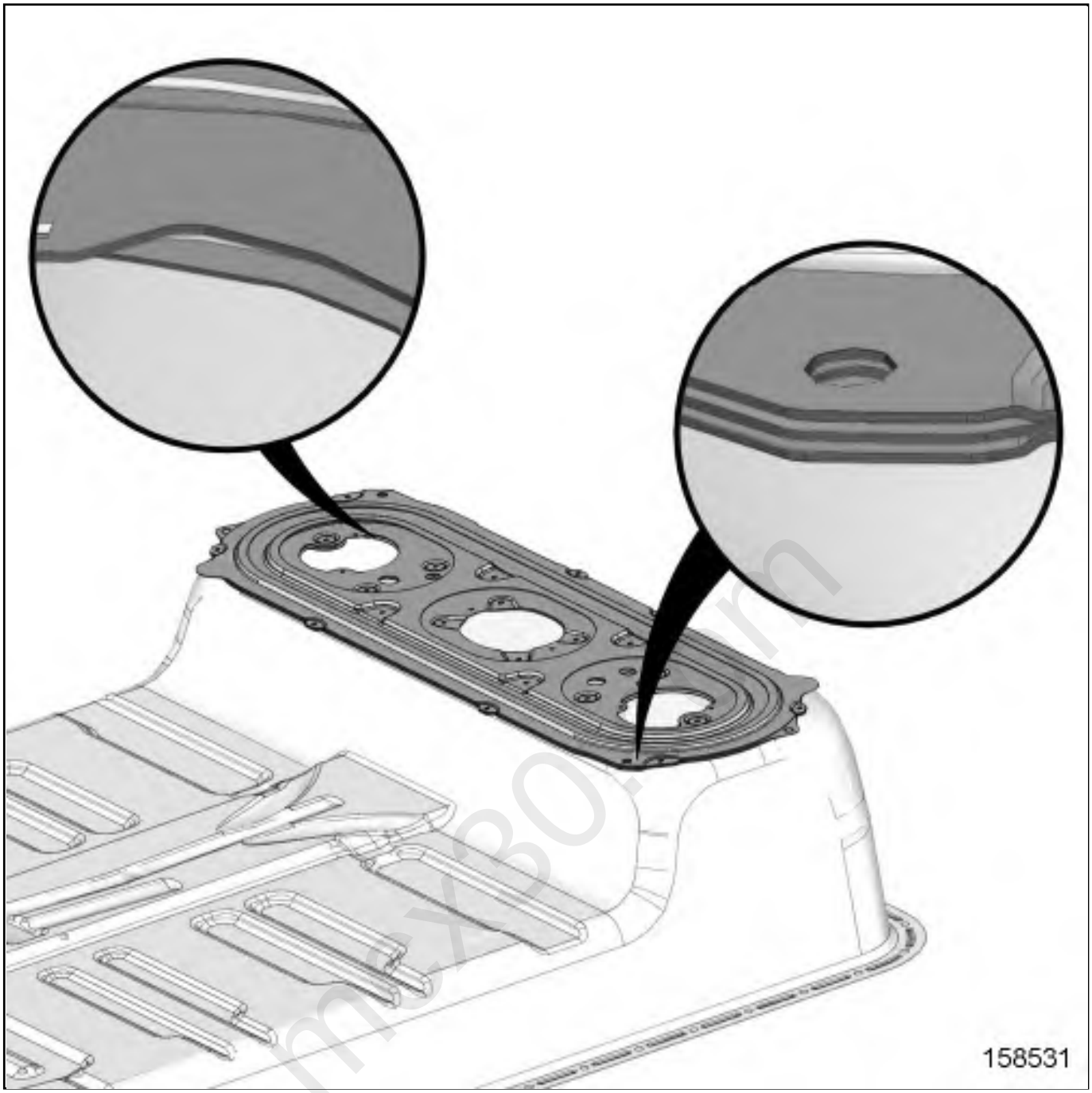
Pay attention to the seals on the upper cover.

Note:

Check the cleanliness of the areas without cataphoresis.

Note:

Check the good state of the sealing surface on the upper cover otherwise replace the upper cover.



Note:

Check the good state of the rebates otherwise replace the upper cover.

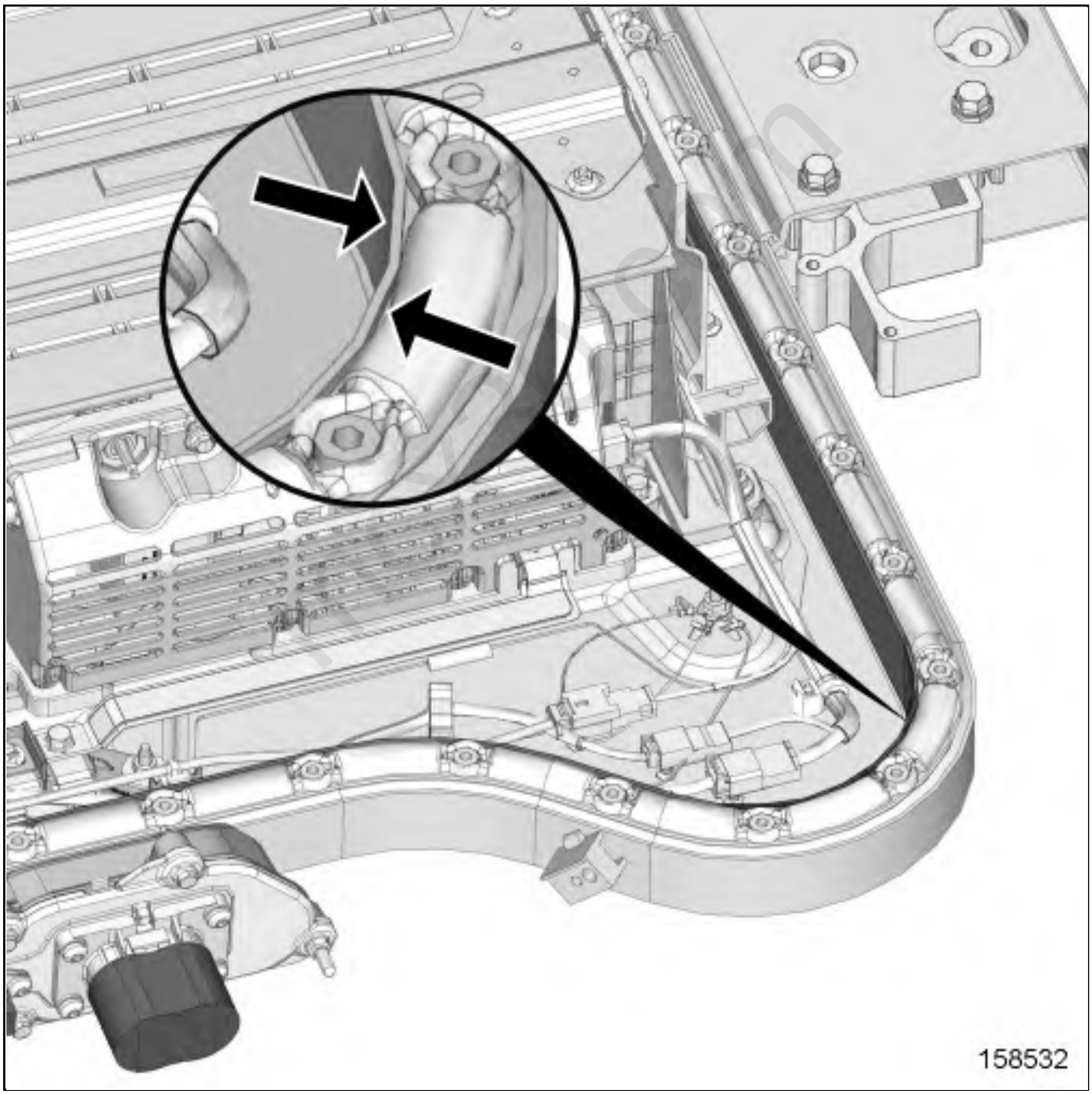
Clean the sealing surface of the upper cover using brake cleanerand lint-free cloth(see **Vehicle: Parts and consumables for the repair**) **.**

Note:

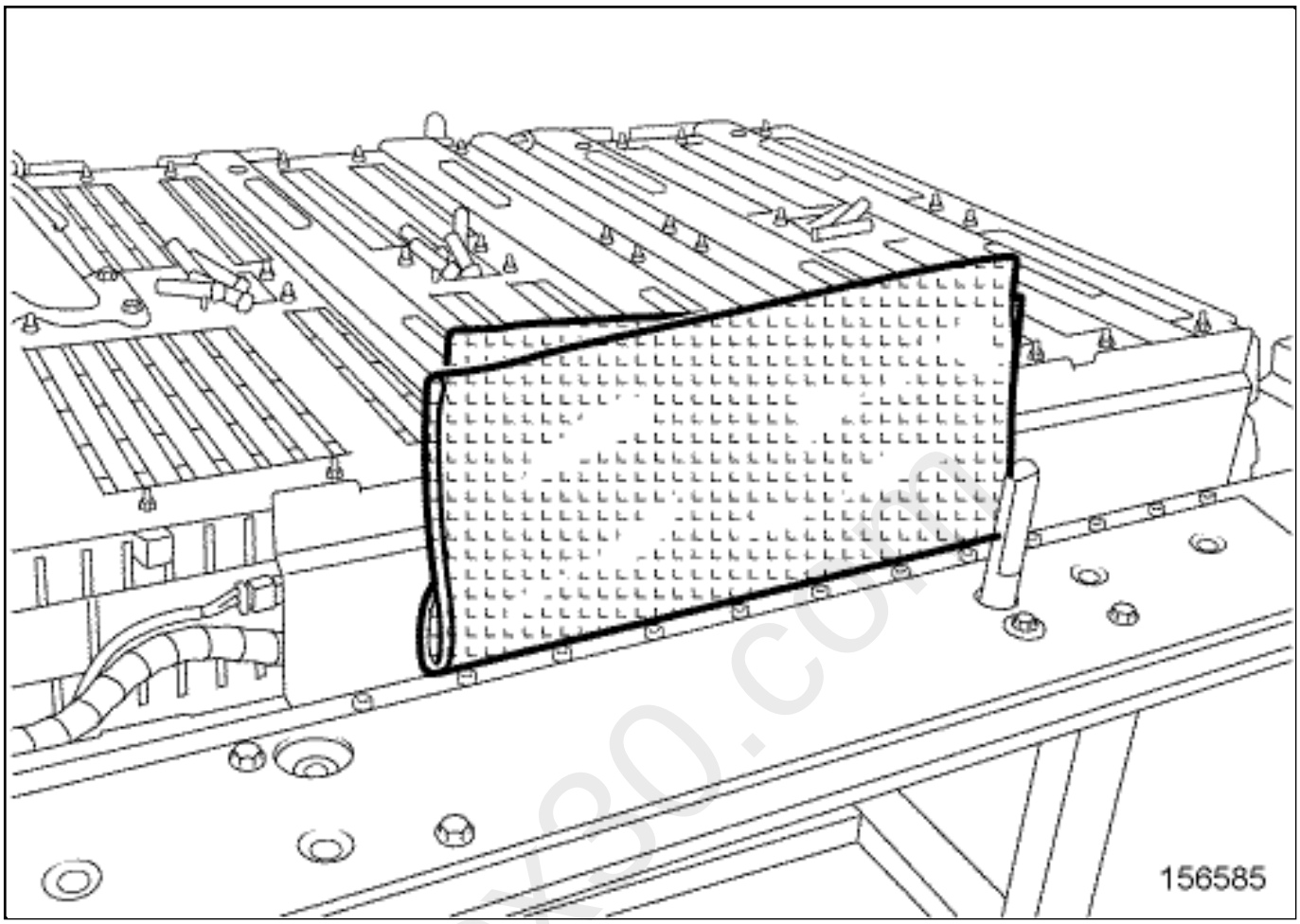
Let the Break cleanerget dry.

Note:

Protect the traction battery using an insulating coverbefore cleaning.



Check the absence of craks on the lower cover, check the absence of cracks on the inside and on the outside all along the sealing surface.



Clean each blind rivet nut on the sealing surface of the lower cover using compressed airand tool Set of trim removal levers.(Car. 1363) .

Check the state of each blind rivet nut on the sealing surface of the lower cover(see 19E, Traction battery, Traction battery housing assembly : Exploded view) .

Note:

Replace it if necessary(see 19E, Traction battery, Traction battery lower cover blind rivet nuts : Removal - Refitting) .

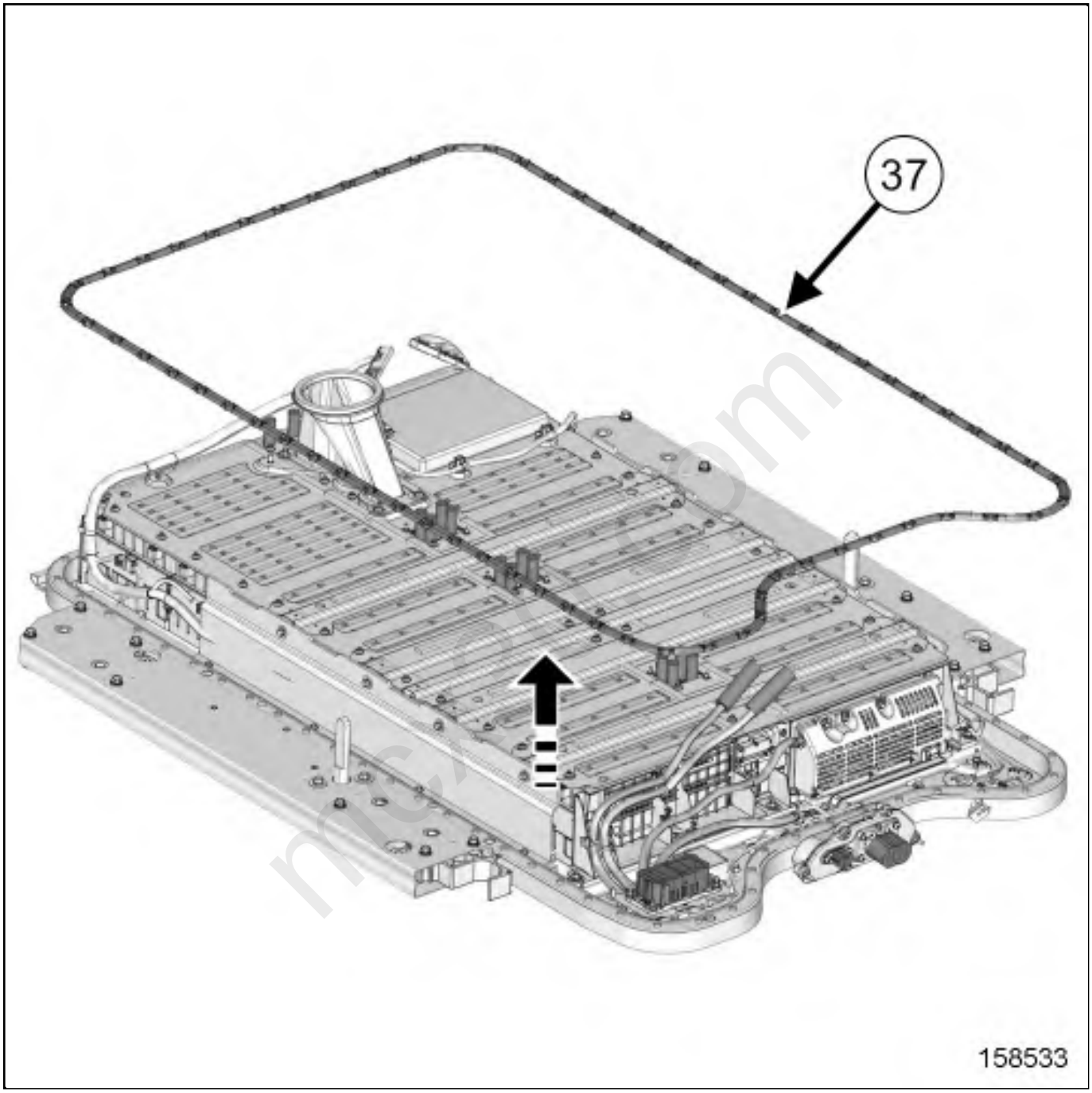
2. REFITTING OPERATION

Refit :

- the safety label(36) if necessary,
- the seals between traction battery and vehicle if necessary on the upper cover(see 19E, Traction battery, Traction battery housing assembly : Exploded view) .

Check the seal between lower cover and upper cover.

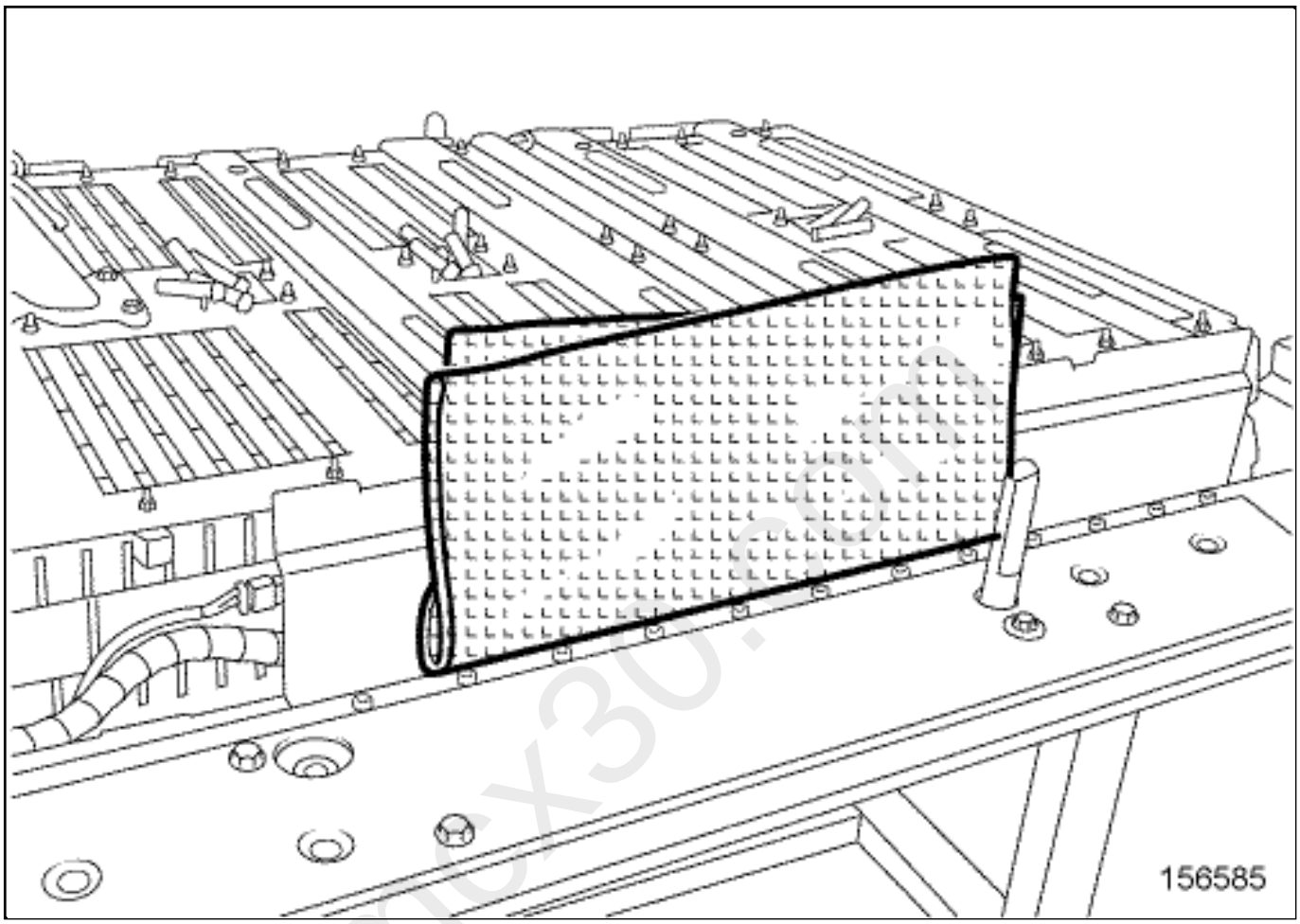
1- IF THE SEAL BETWEEN LOWER COVER AND UPPER COVER IS DAMAGED :



Remove the seal between lower cover and upper cover(37) using the toolSet of trim removal levers. (Car. 1363) .

Note:

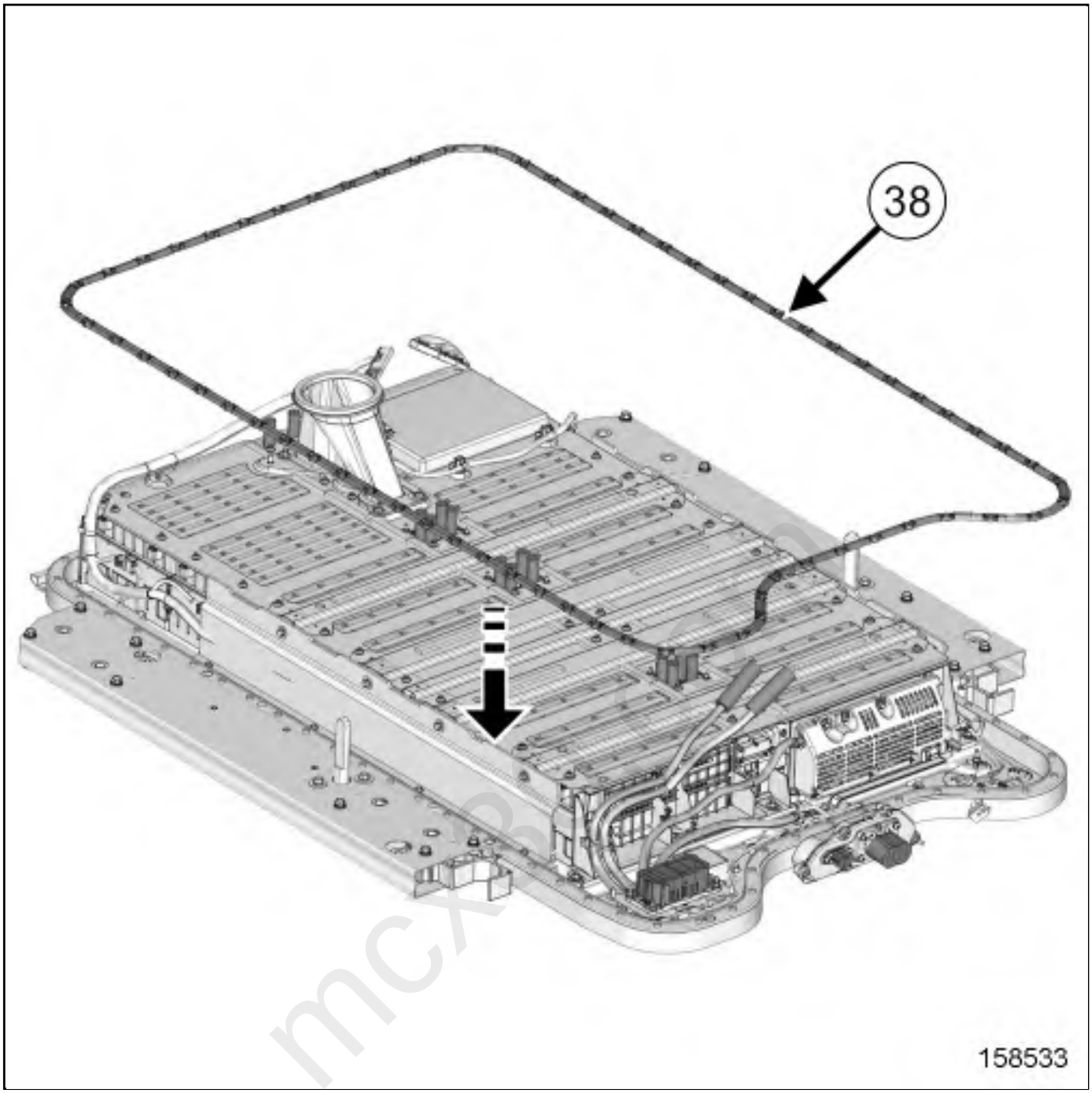
Protect the traction battery using an insulating coverbefore cleaning.



Clean the sealing surface of the lower cover using brake cleanerand lint-free cloth(see **Vehicle: Parts and consumables for the repair**) .

Note:

Let the Break cleanerget dry.


38
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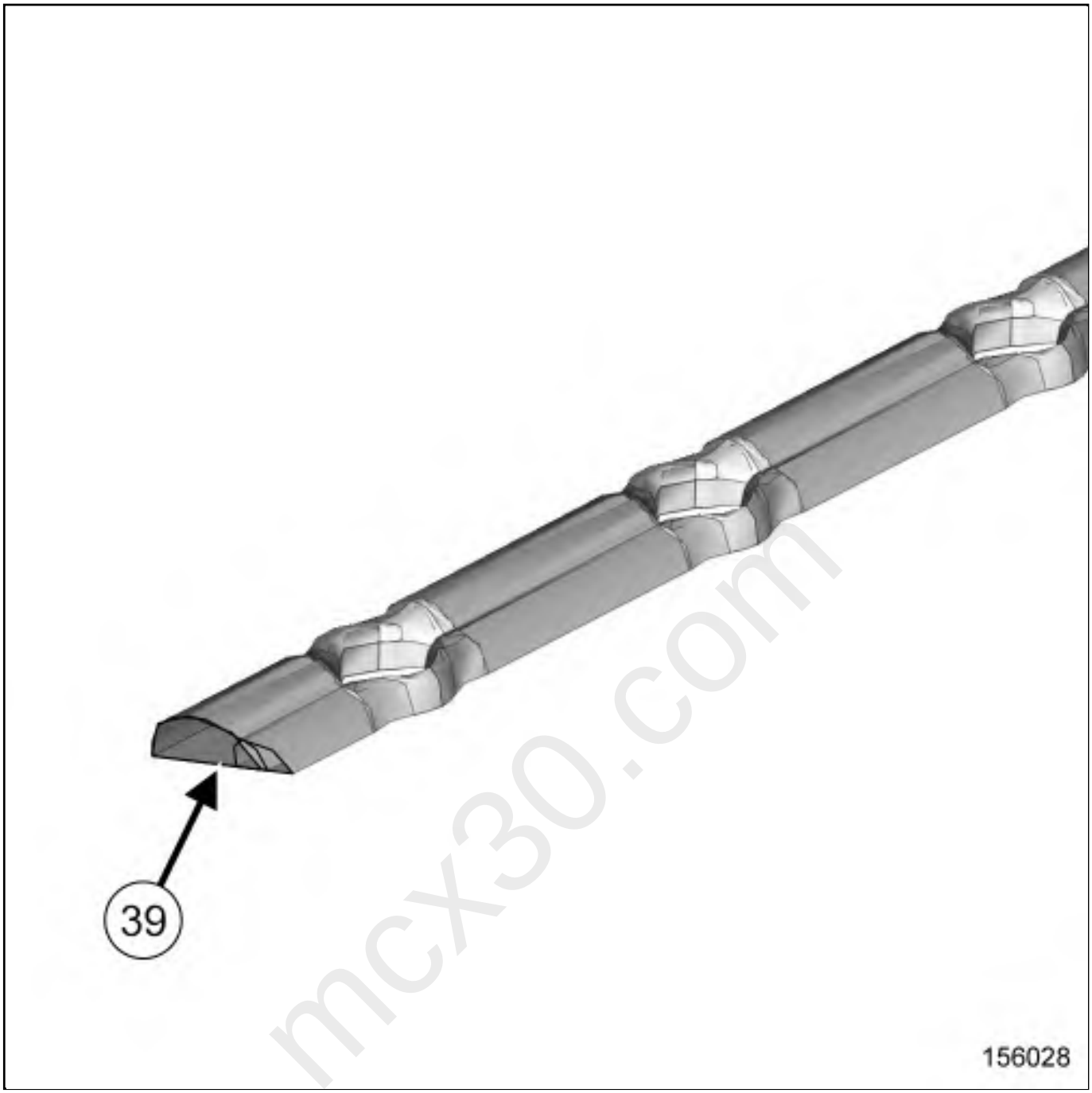
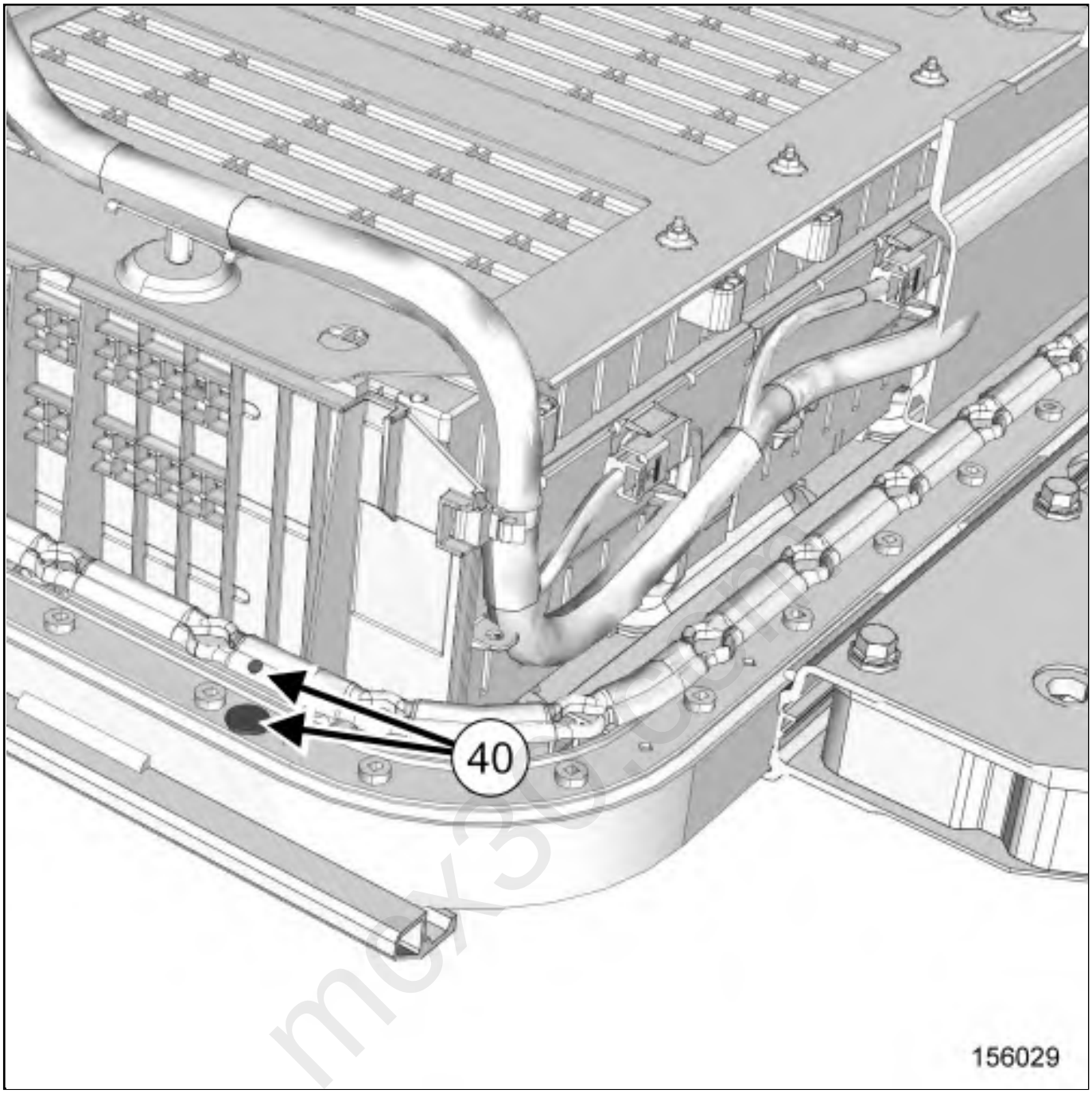




Fit the new seal(38) according to the following illustrations.

Note:

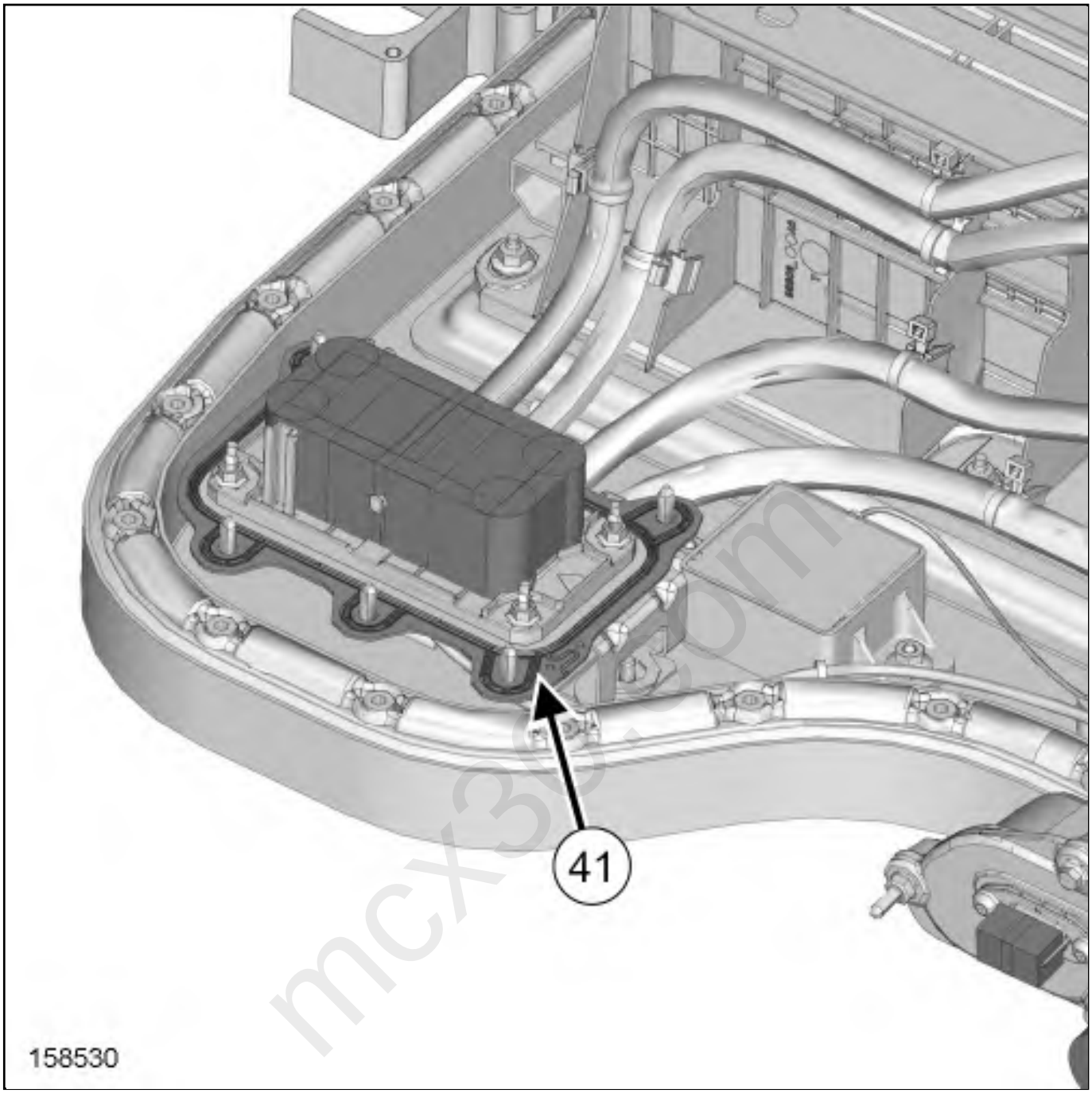
Take care to the direction of fitting (flat section downwards(39)).

Note:

Start fitting the seal by aligning the two marks(40) .

Note:

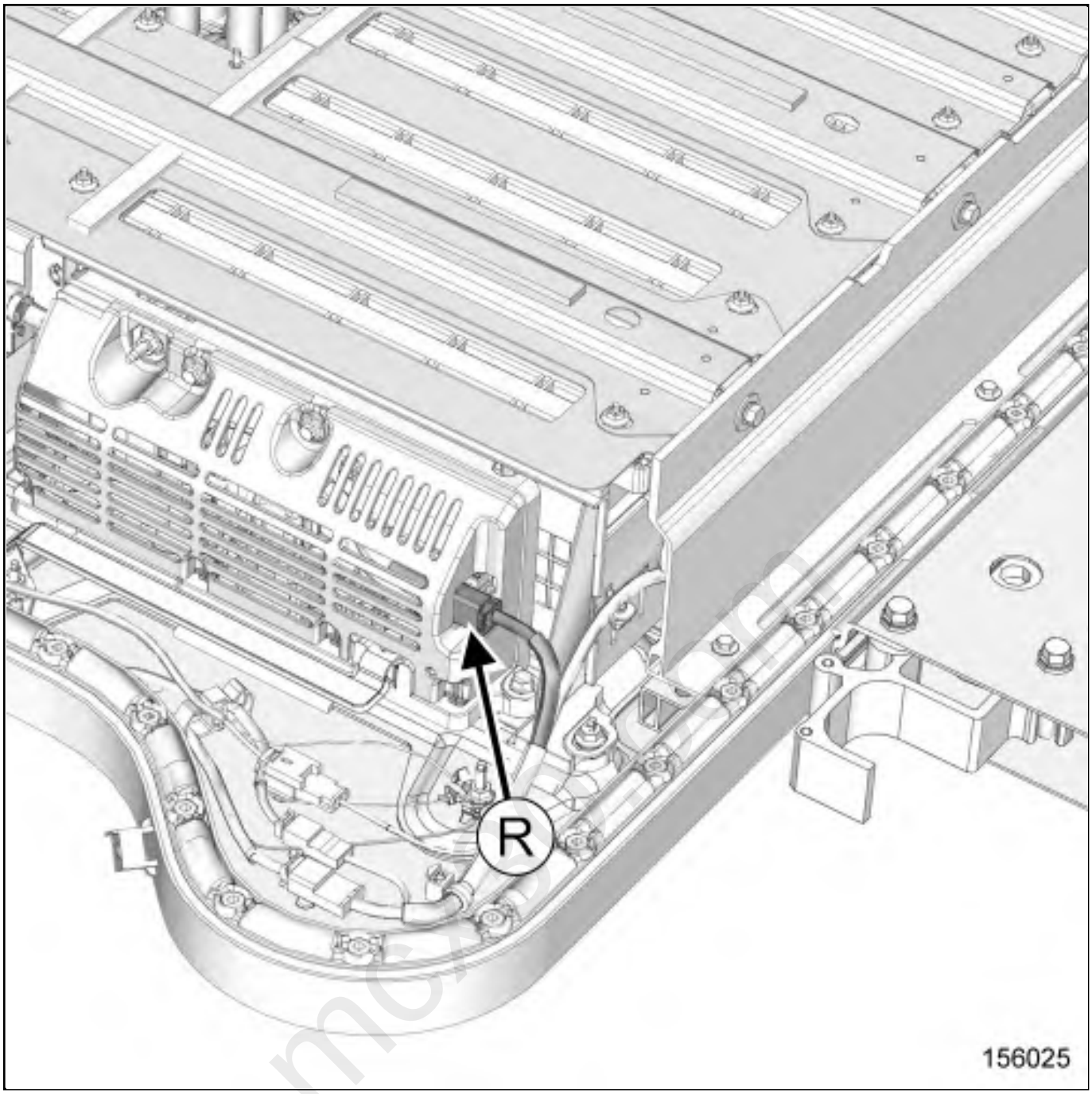
This operation require two operators.



Put the seal between upper cover and safety device switch socket(41) (see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

Note:

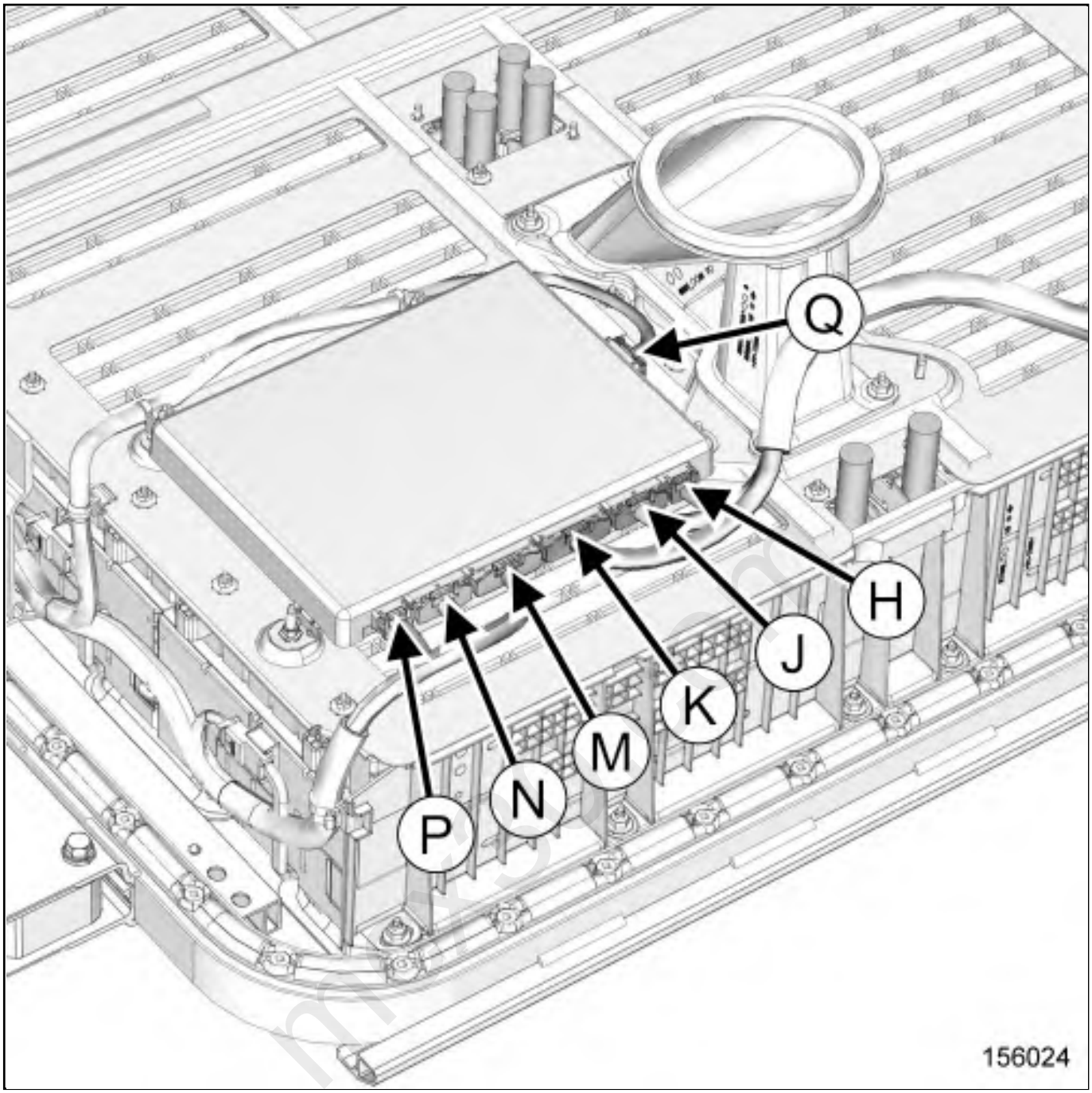
Pay attention to the mechanical coding.



Clip the plug on the internal junction box wiring connector 8(R) using the toolSet of trim removal levers. (Car. 1363) .

Note:

Make a push-pull test on the connector.



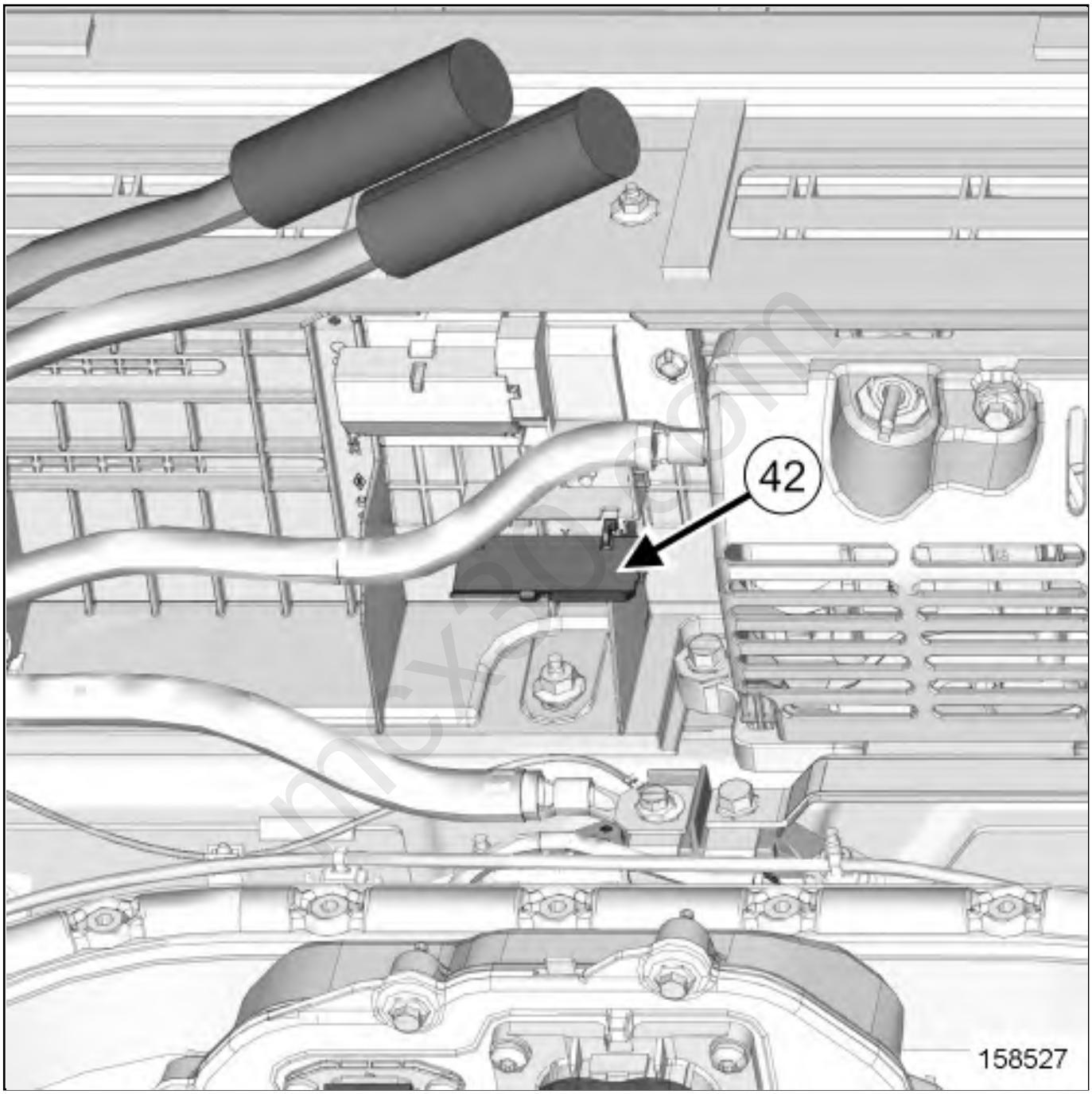
Connect the traction battery computer plugs using the toolSet of trim removal levers.(Car. 1363) .

Note:

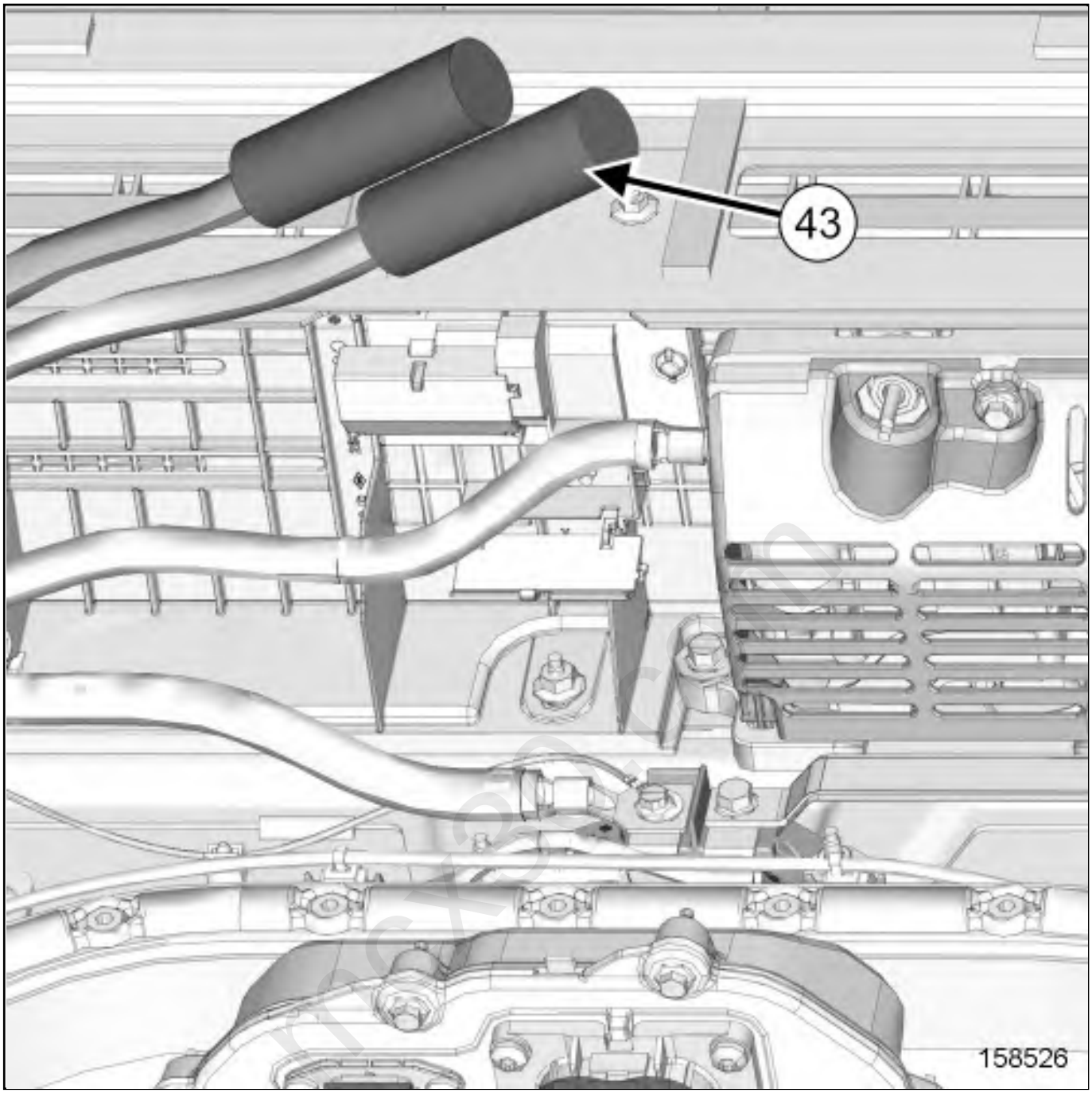
Refitting order: 1 (H) ; 2 (J) ; 3 (K) ; 4 (M) ; 5 (N) ; 6 (P) ; 7 (Q) .

Note:

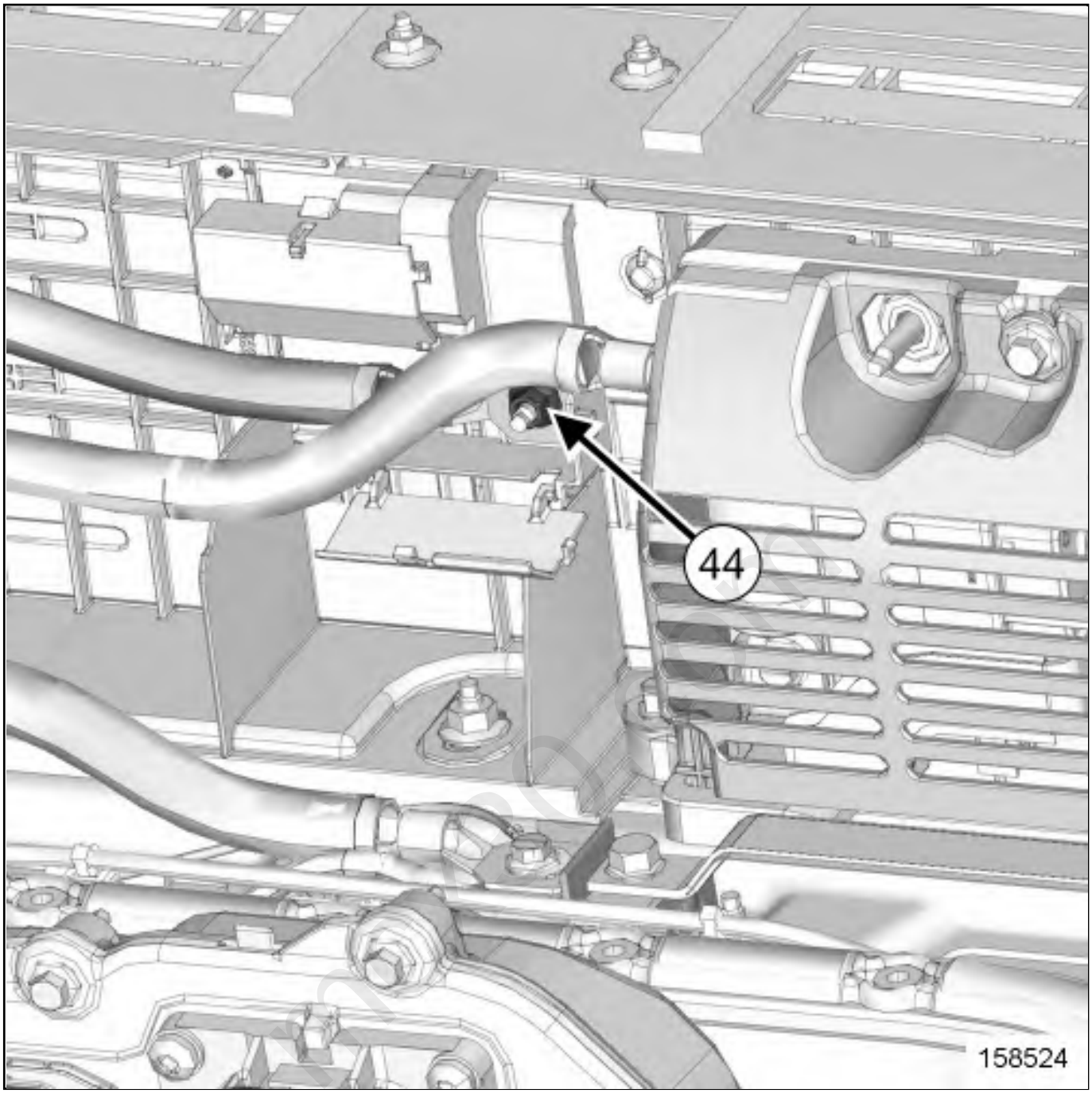
Make a push-pull test on the connectors.



Unclip the lower cover of the bus bar(42) using the toolSet of trim removal levers.(Car. 1363) .



Remove the insulated cover(43) from the power wire number 2 lug.



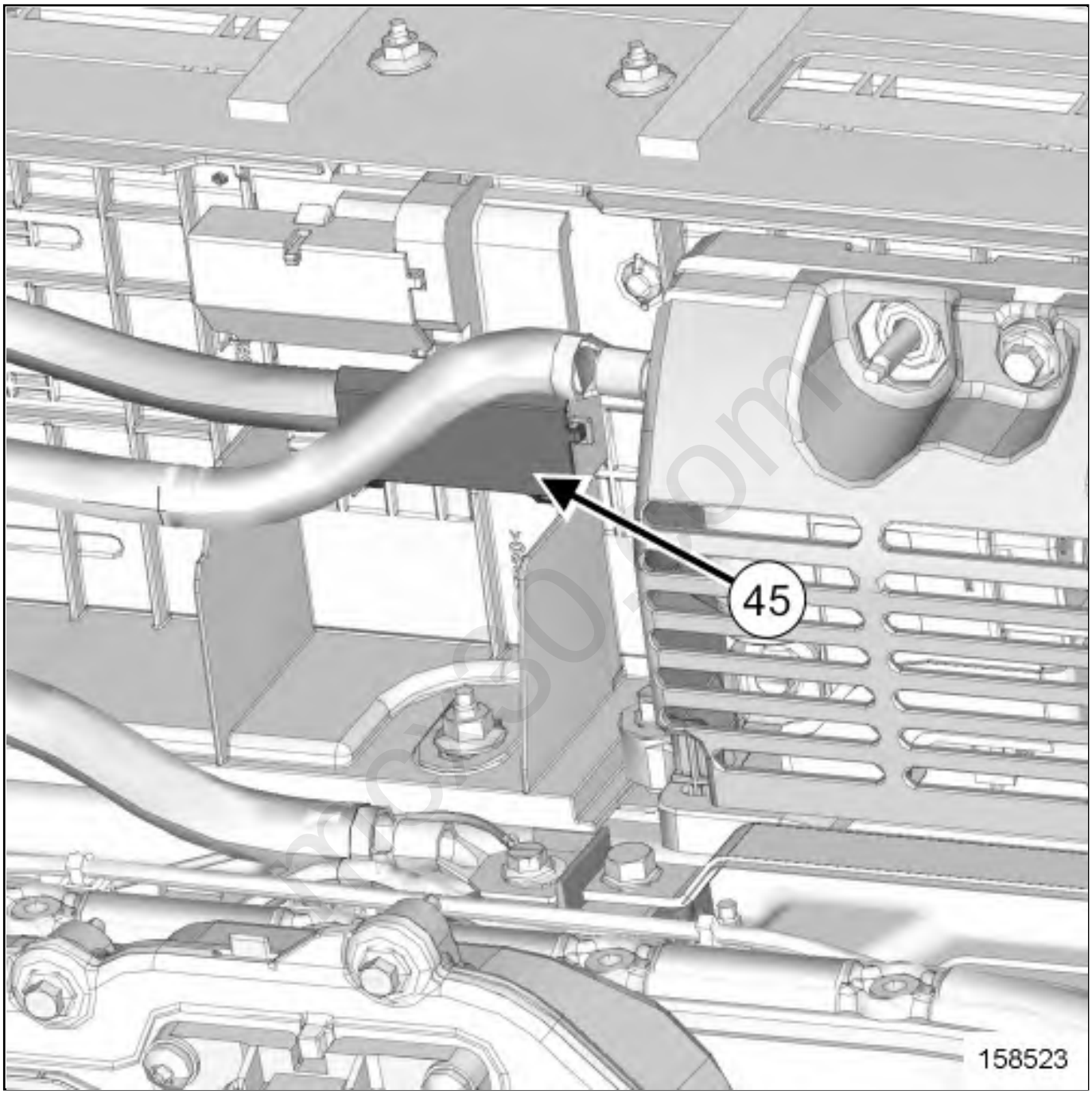
Refit (see 19E, Traction battery, Traction battery module stack assembly : Exploded view) :

- the power wire number 2 using the toolSet of trim removal levers.(Car. 1363) ,
- the lower terminal nut(44) on the bus bar using an insulated magnetic socket.

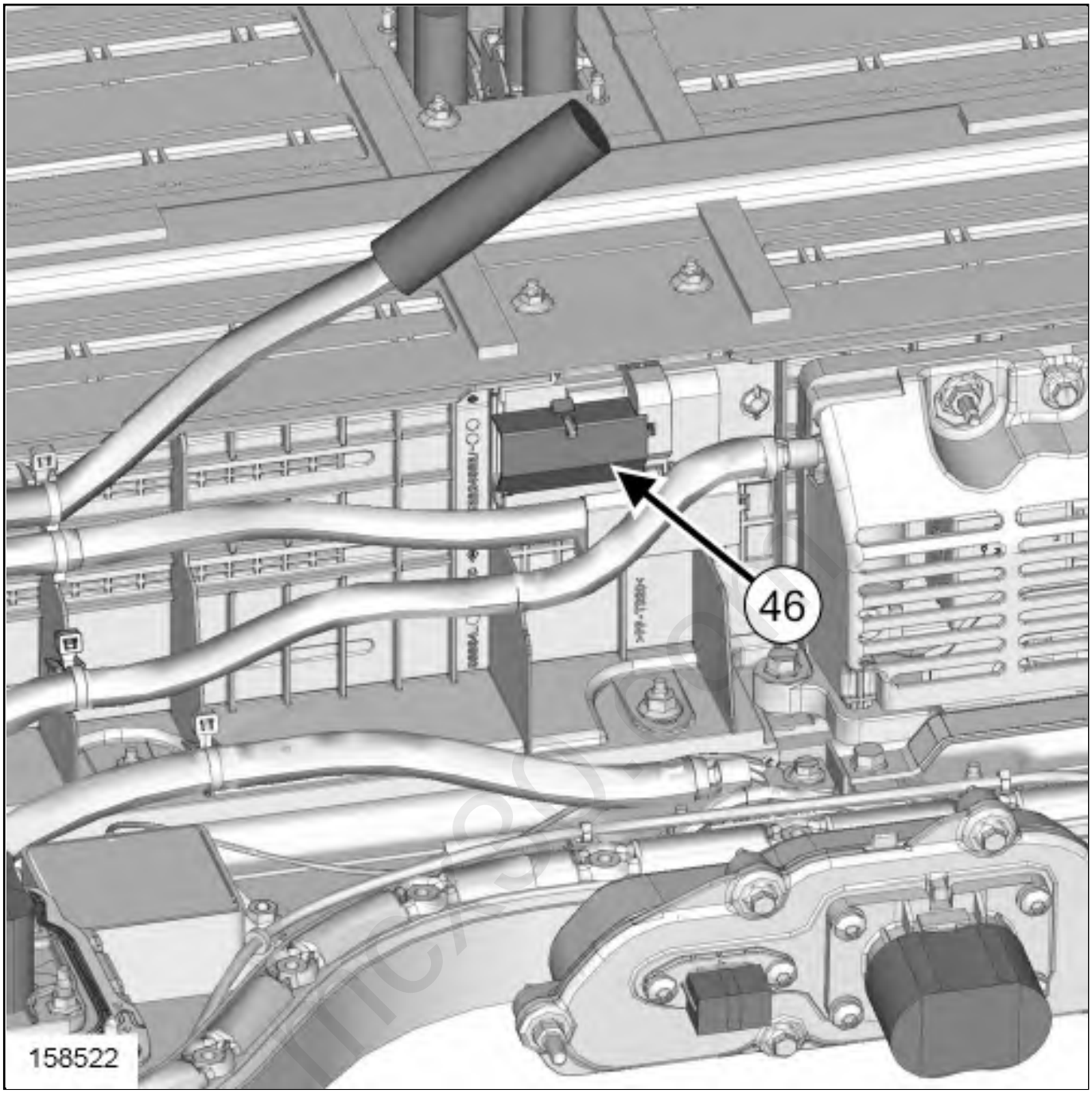
Torque tighten the lower terminal nut(see 19E, Traction battery, Traction battery module stack assembly :

Exploded view) on the bus bar using an insulated magnetic socket.

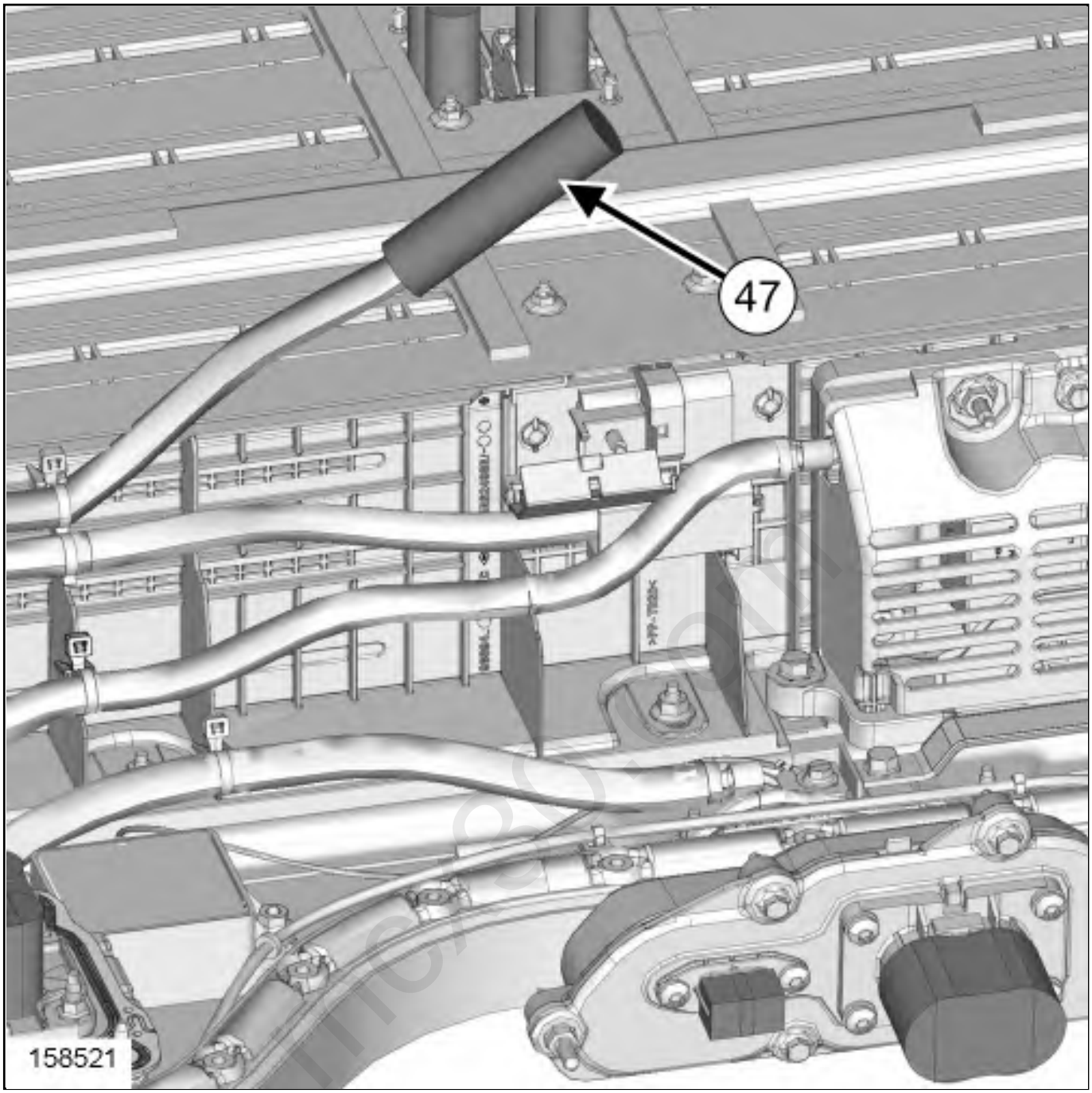
Mark always the nuts with a paint markerof a color different from the original.



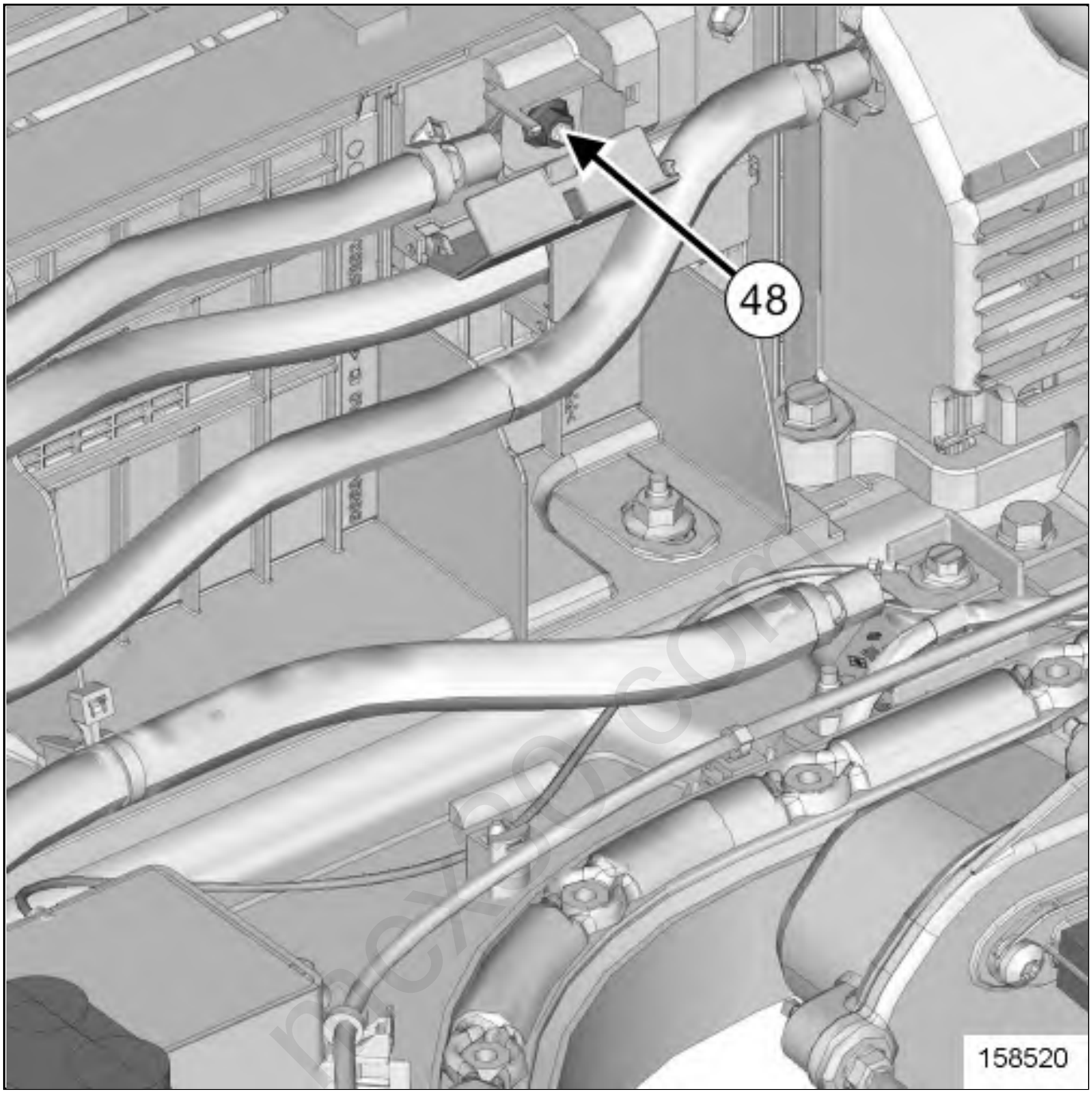
Clip the lower cover of the bus bar(45) using the toolSet of trim removal levers.(Car. 1363) .



Unclip the upper cover of the bus bar(46) using the toolSet of trim removal levers.(Car. 1363) .



Remove the insulated cover(47) from the power wire number 1 lug.



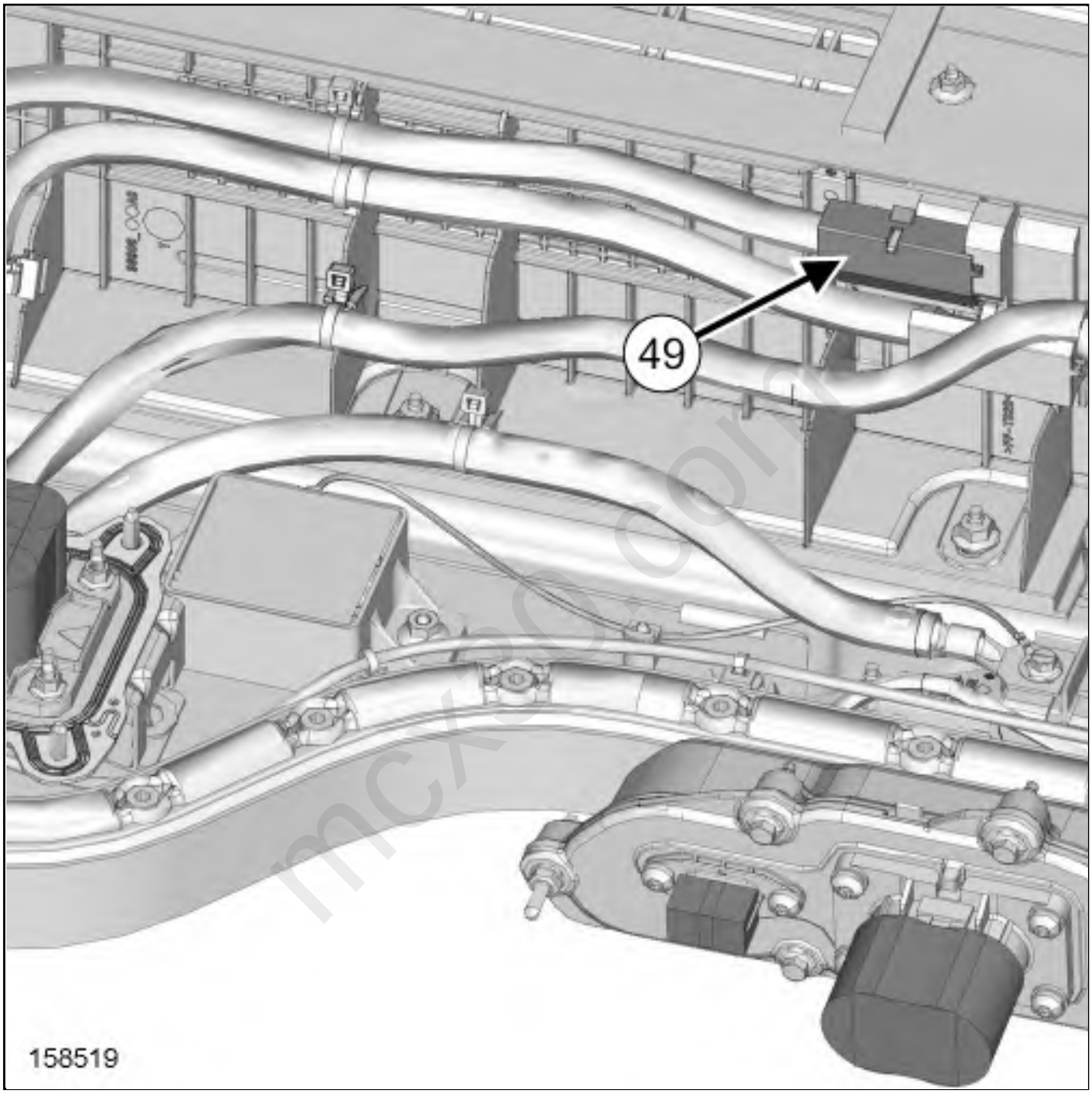
Refit:

- the power wire number 1using the toolSet of trim removal levers.(**Car. 1363**) ,
- the upper terminal nut on the bus bar(**48**) **(see 19E, Traction battery, Traction battery module stack assembly : Exploded view)** using an insulated magentic socket.

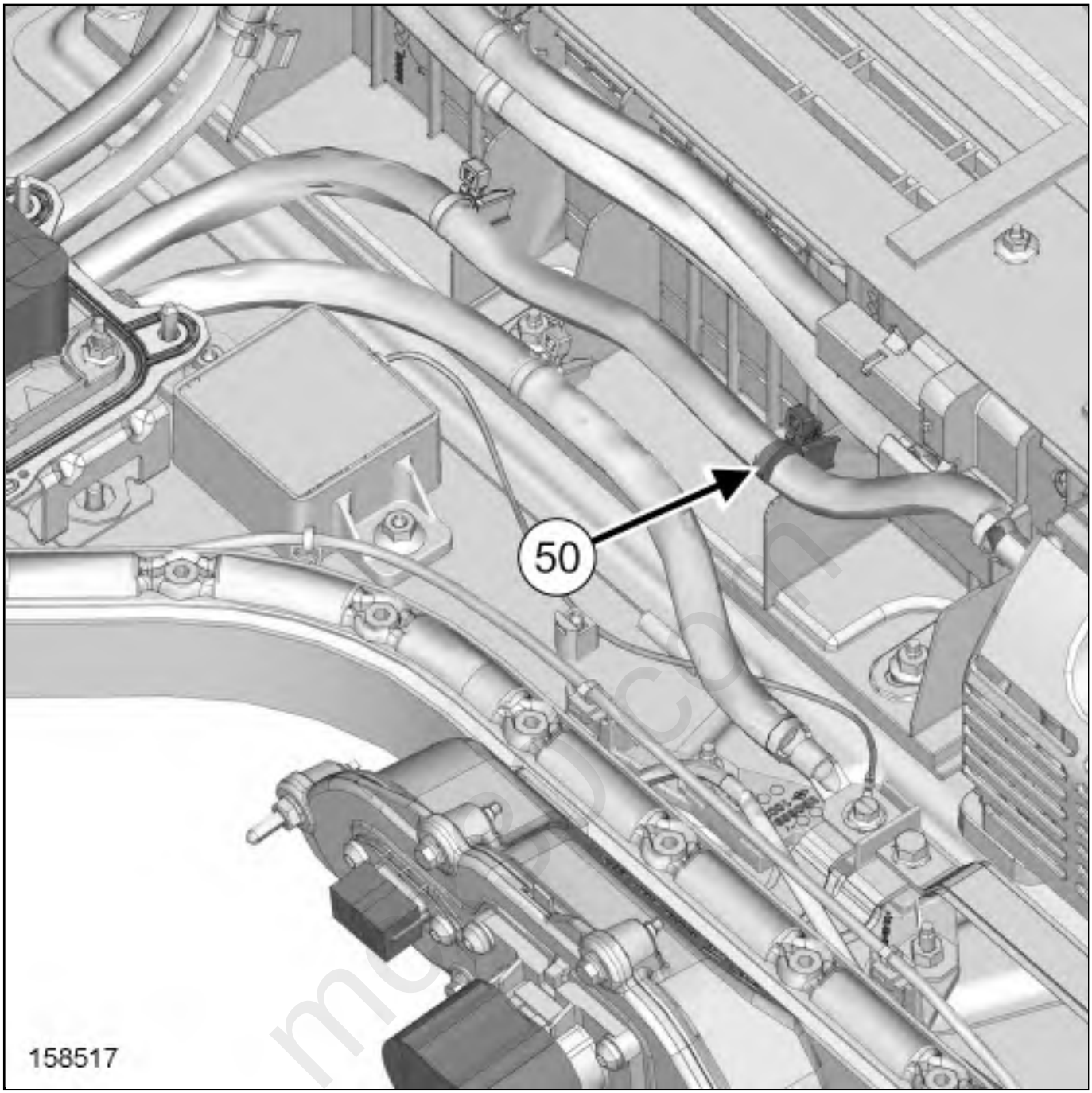
Torque tighten the upper terminal nut on the bus bar**(see 19E, Traction battery, Traction battery module**

stack assembly : Exploded view) using an insulated magentic socket.

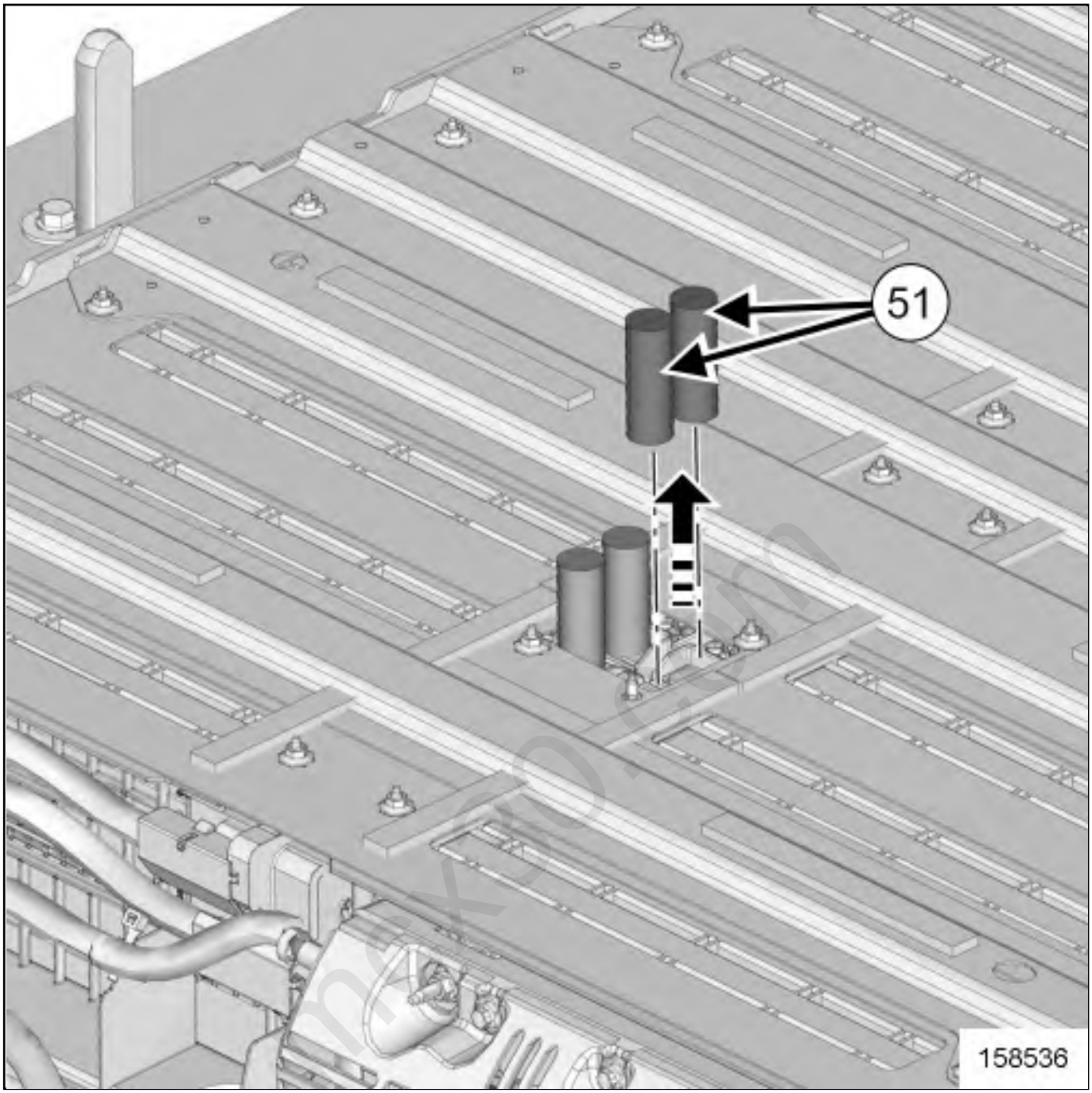
Mark always the nuts with a paint markerof a color different from the original.



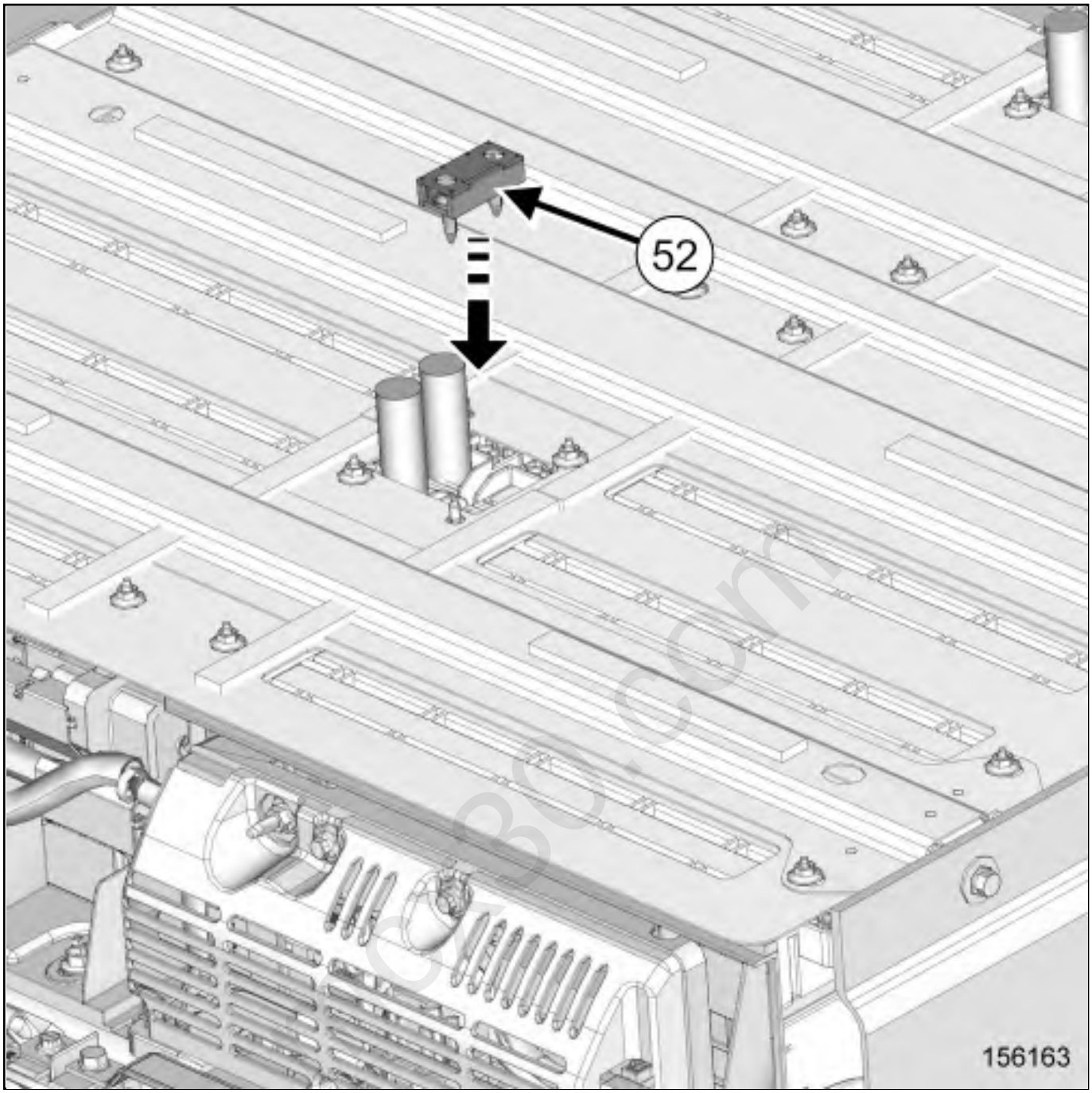
Clip the upper cover of the bus(49) using the toolSet of trim removal levers.(Car. 1363) .



- Fit the clamp at the place indicated on the power wire number 3.
- Clip the clamp clip(50) .
- Cut the clip clamp using insulated cutting pliers.



Remove the 2 insulated covers(51) .


52
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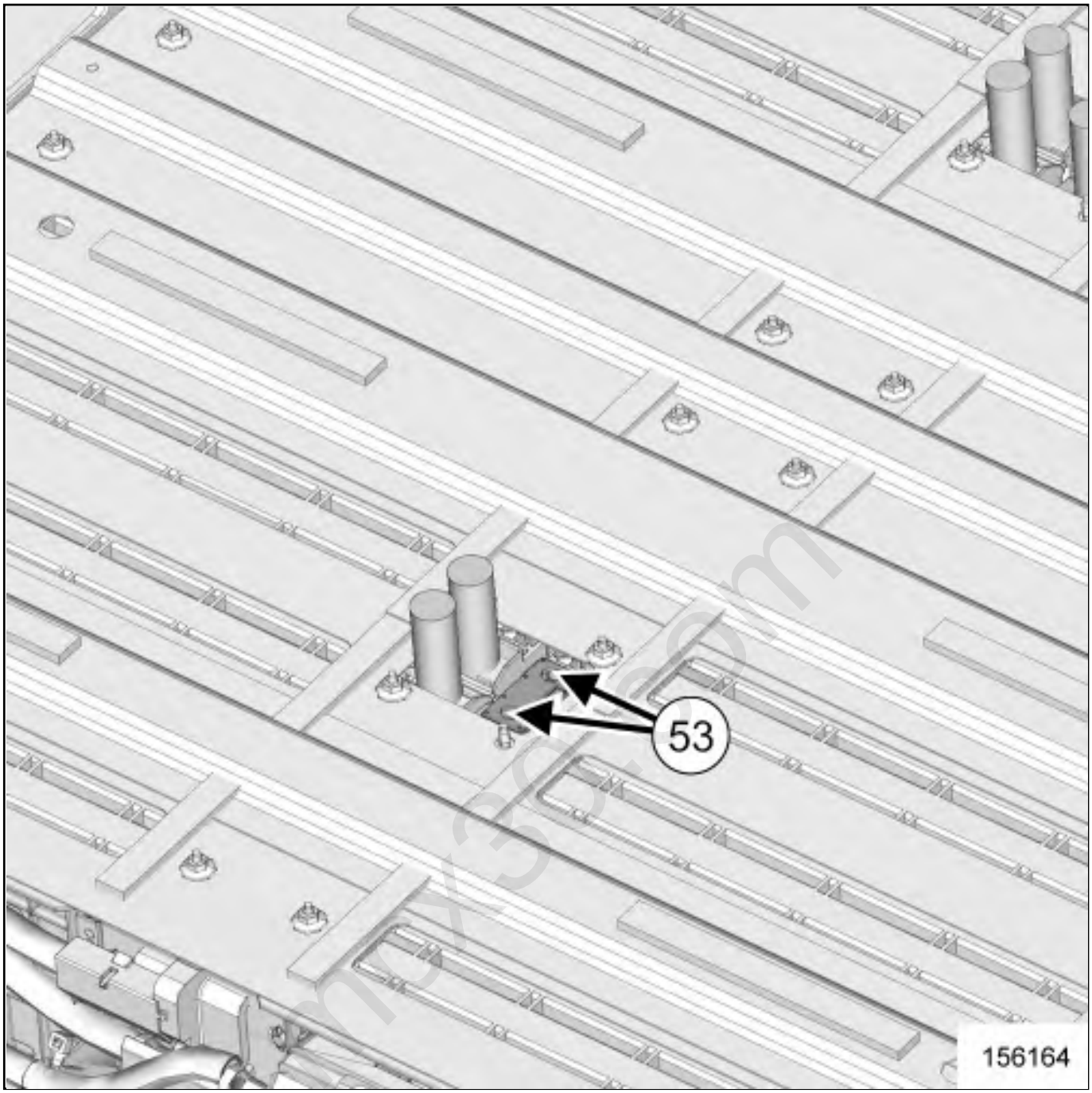


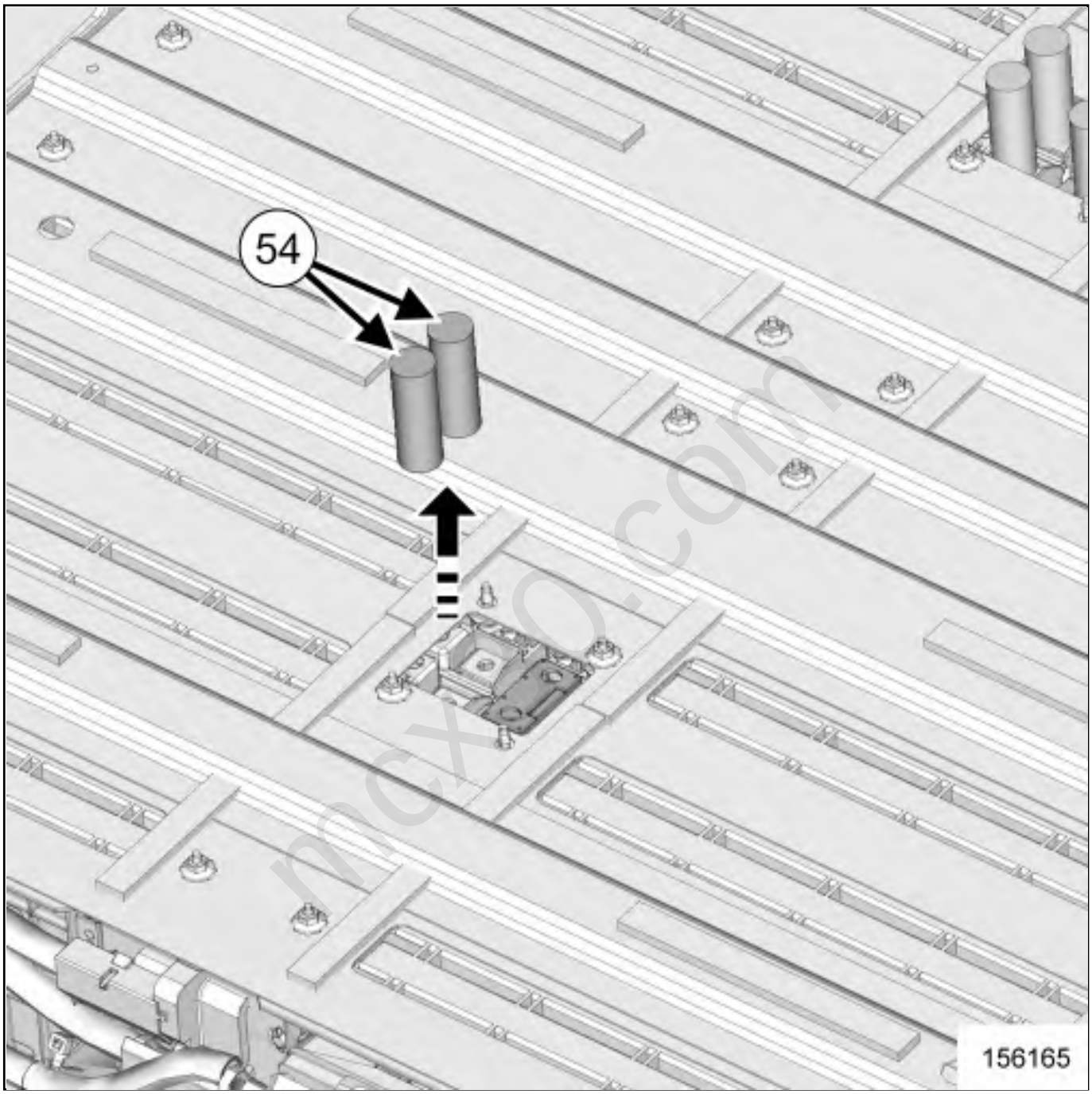
Refit manually(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) :

- the first jumper connection(52) using the toolSet of trim removal levers.(Car. 1363) ,
- the first jumper connection screws(53) using an insulated magnetic socket.

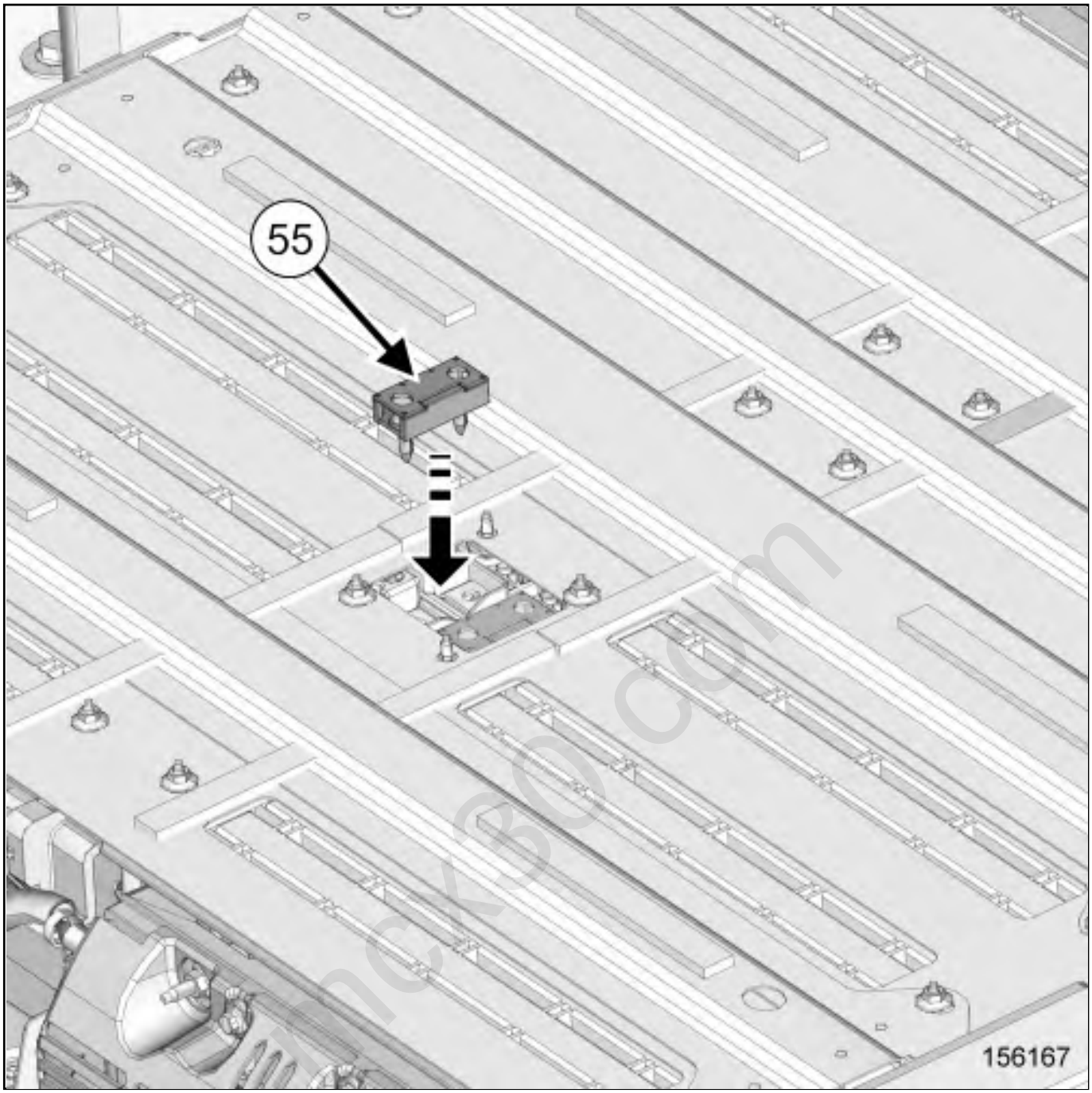
Torque tighten the first jumper connection screws(see 19E, Traction battery, Traction battery module

stack assembly : Exploded view) using an insulated magnetic socket.

Mark always the screws with paint markerof a color different from the original.



Remove the 2 insulated covers(54) .


55
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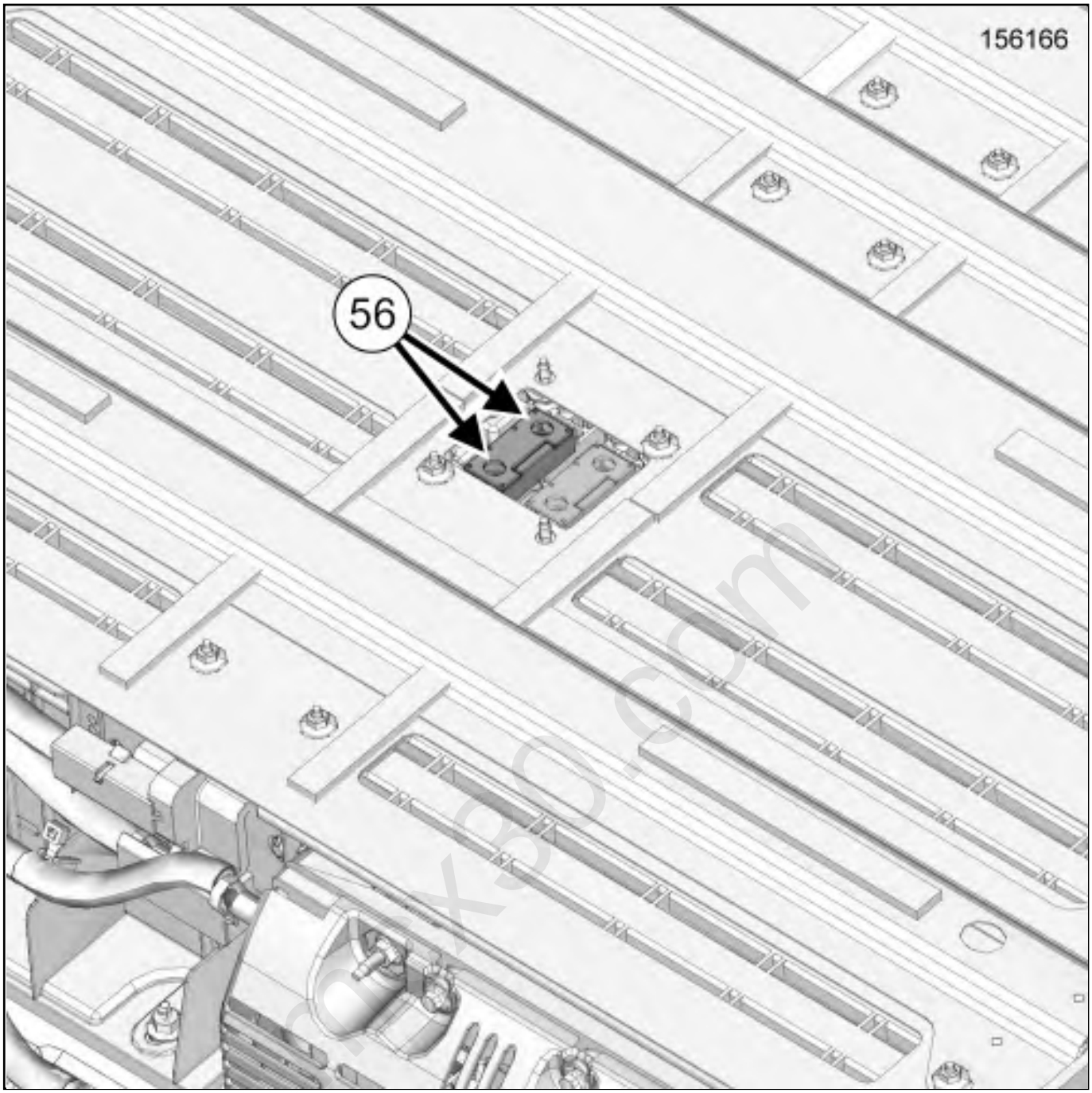


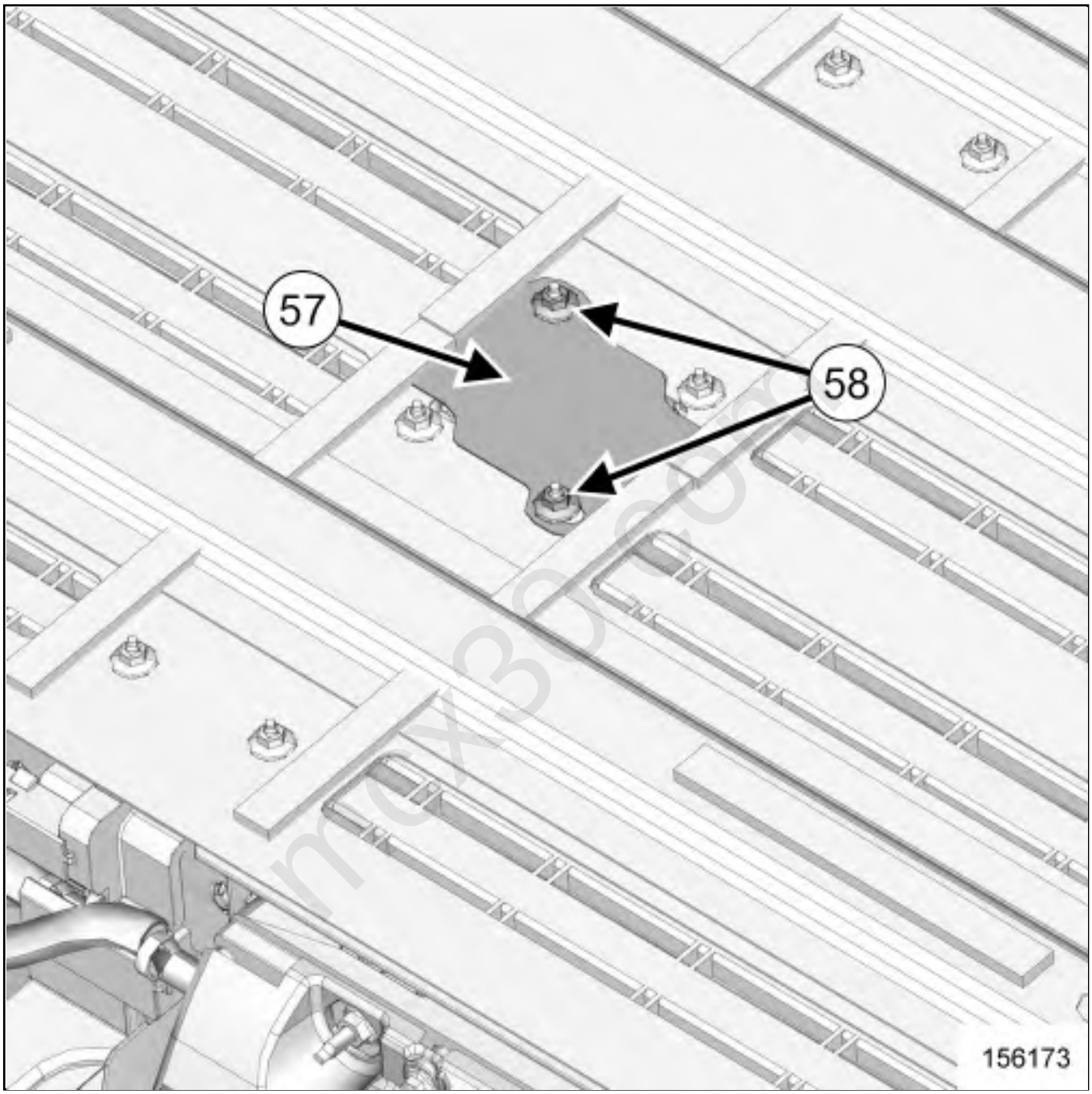
Refit manually(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) :

- the second jumper connection(55) using the toolSet of trim removal levers.(Car. 1363) ,
- the second connection screws(56) using an insulated magnetic socket.

Torque tighten the second jumper connection screws(see 19E, Traction battery, Traction battery

module stack assembly : Exploded view) using an insulated magnetic socket.

Mark always the screws with paint markerof a color different from the original.



Refit:

- the front jumper connection cover(57) ,
- Refit the front jumper connection cover nuts(58) (see 19E, Traction battery, Traction battery module stack

assembly : Exploded view) using an insulated magnetic socket.

Torque tighten the front jumper connection cover nuts(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) using an insulated magnetic socket.

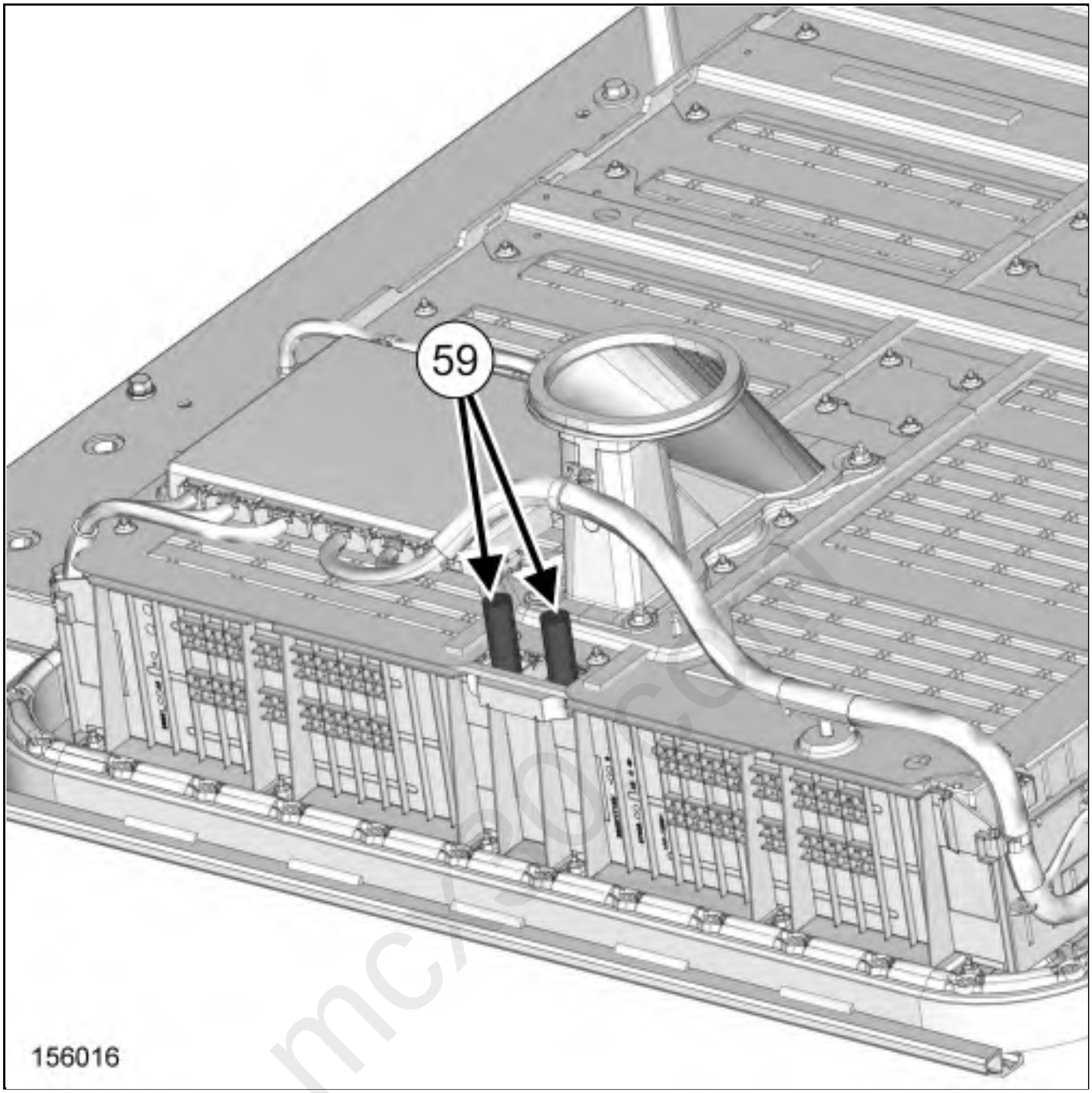
Mark always the nuts with paint markerof a color different from the original.

Note:

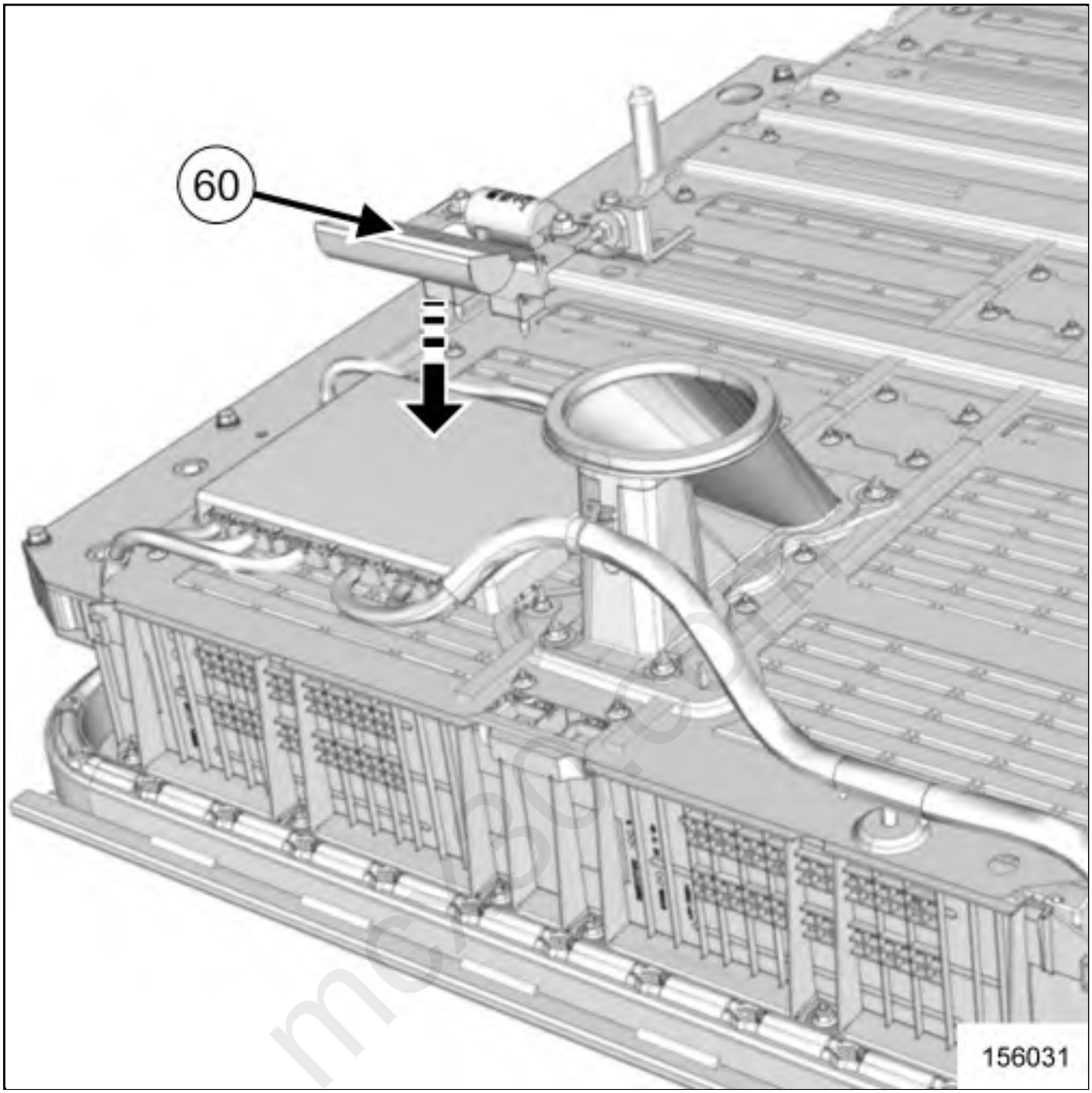
Repeat these operations with the rear jumper connections.

Note:

Repeat these operations with the middle jumper connections.



Remove the insulated covers(59) from rear modules terminals.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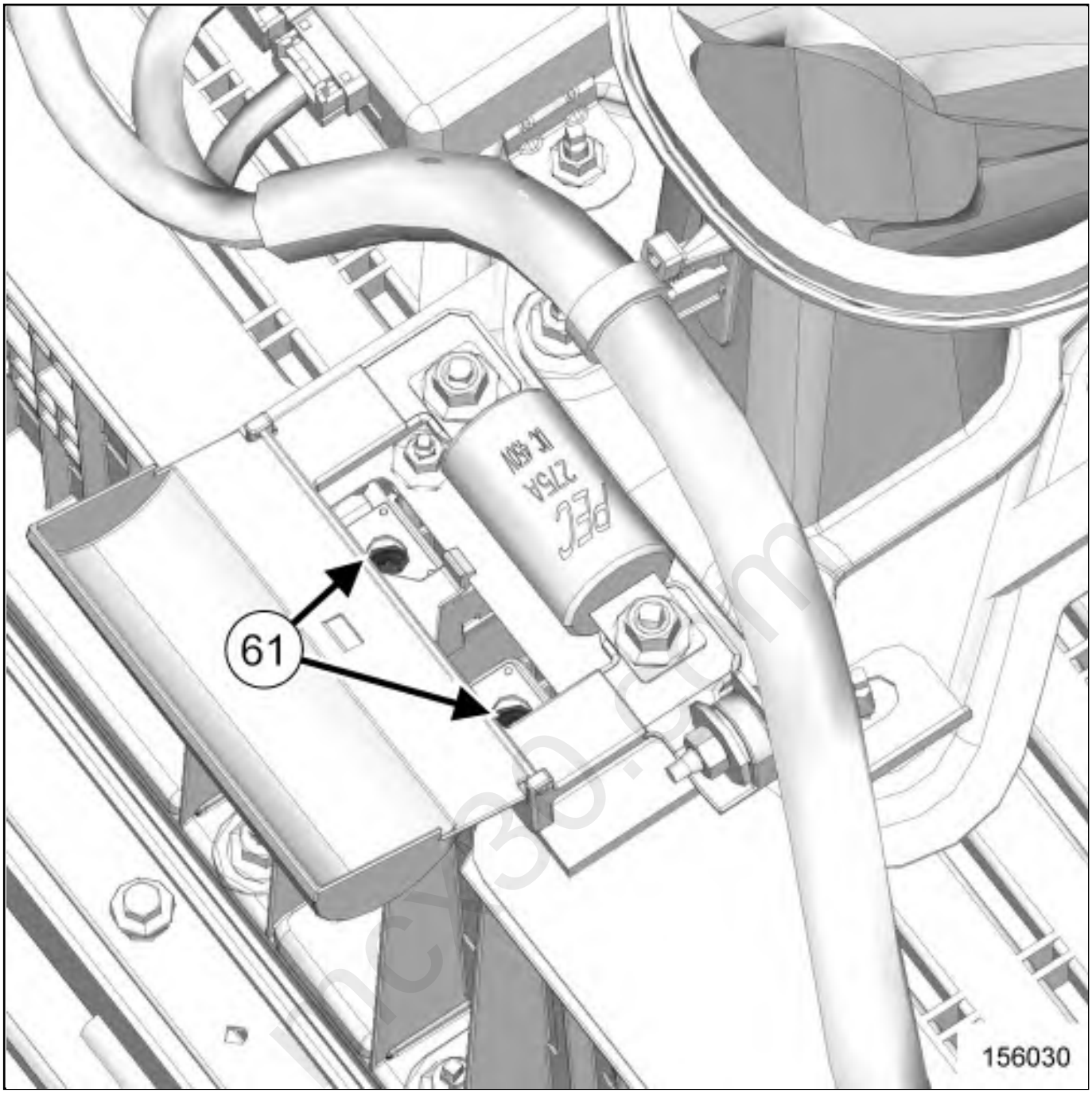


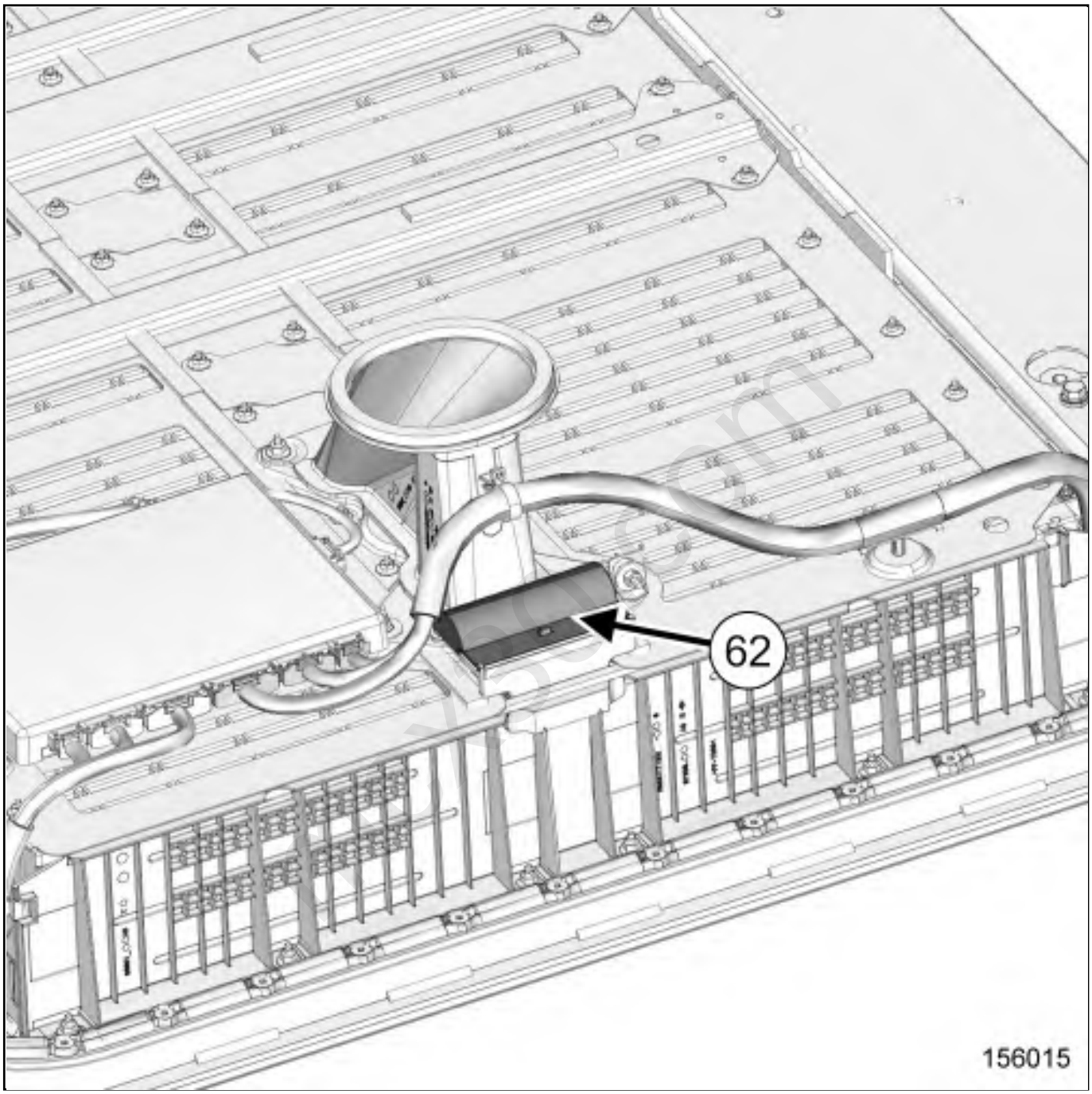
Refit manually(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) :

- the fuse between stacks mount(60) ,
- the fuse between stacks mount screws(61) on the rear modules terminals using a insulated magnetic socket.

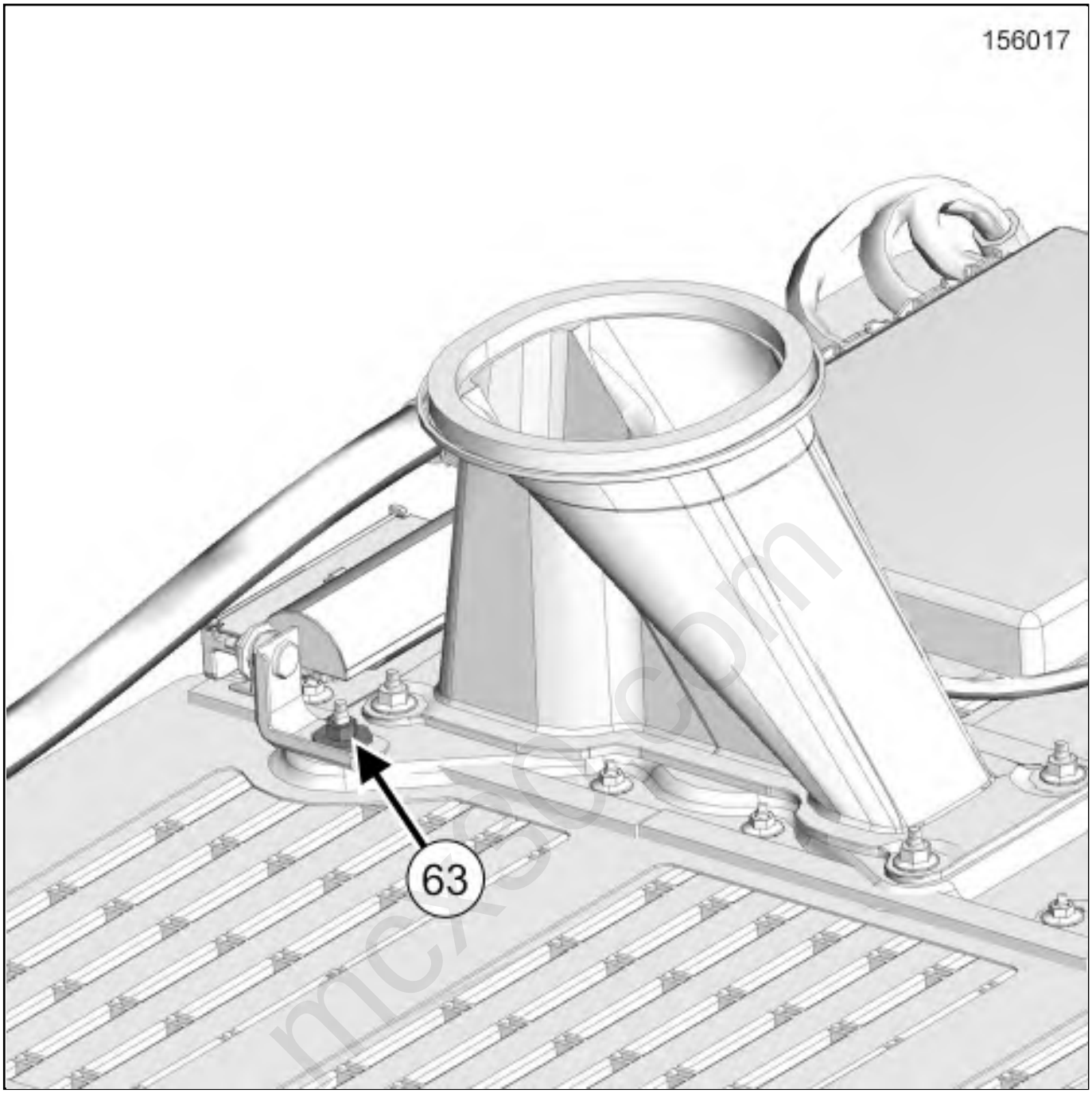
Torque tighten the fuse between stacks mount screws(see 19E, Traction battery, Traction battery

module stack assembly : Exploded view) on the rear modules terminals using a insulated magnetic socket.

Mark always the screws with paint markerof a color different from the original.



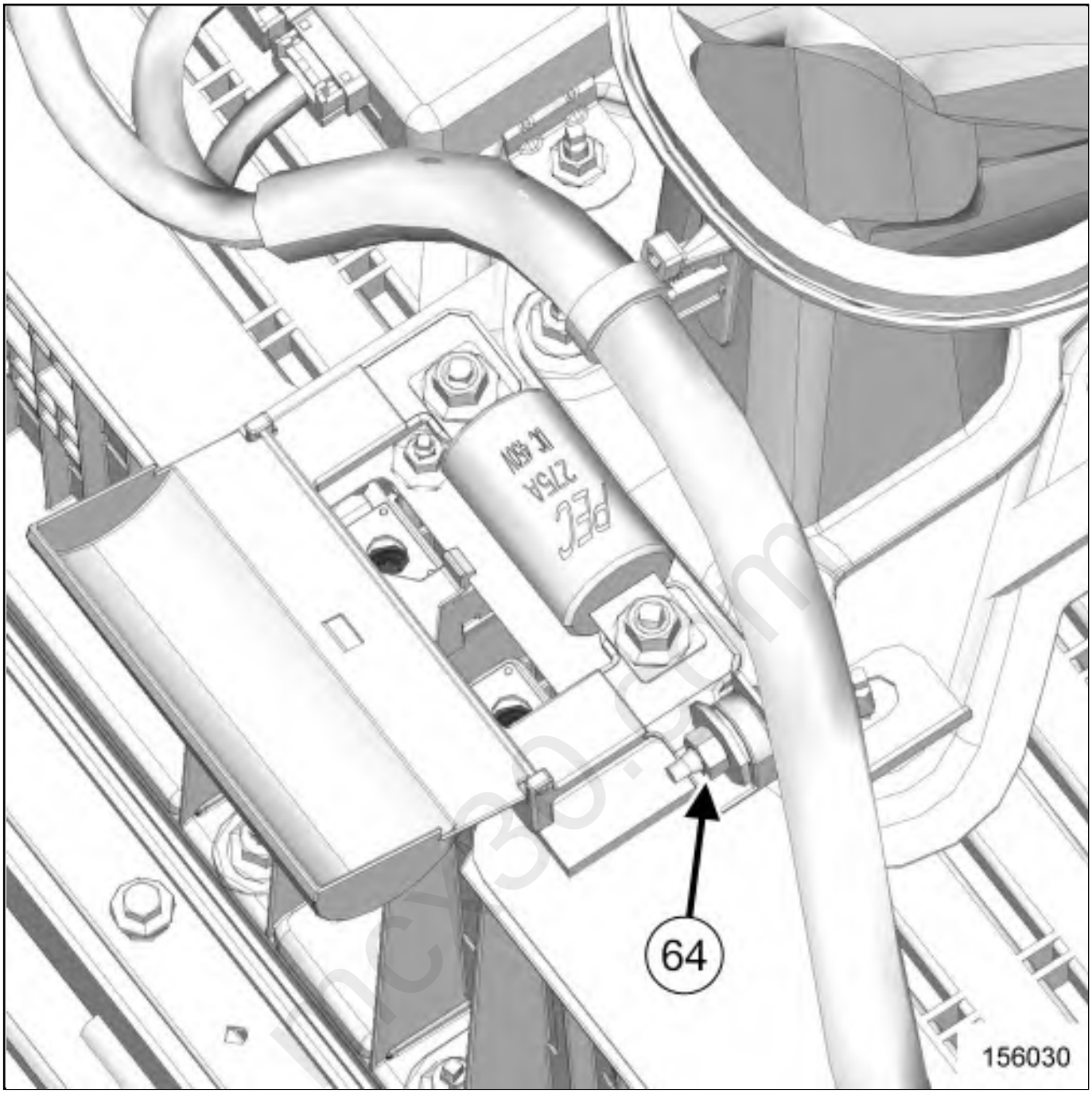
Clip the fuse between stacks mount cover(62) using insulated needle nose pliers.



Refit the fuse between stacks mount tab nut(63) (see 19E, Traction battery, Traction battery module stack assembly : Exploded view) using an insulated magnetic socket.

Torque tighten the fuse between stacks mount tab nut(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) using an insulated magnetic socket.

Mark always the nut with paint markerof a color different from the original.

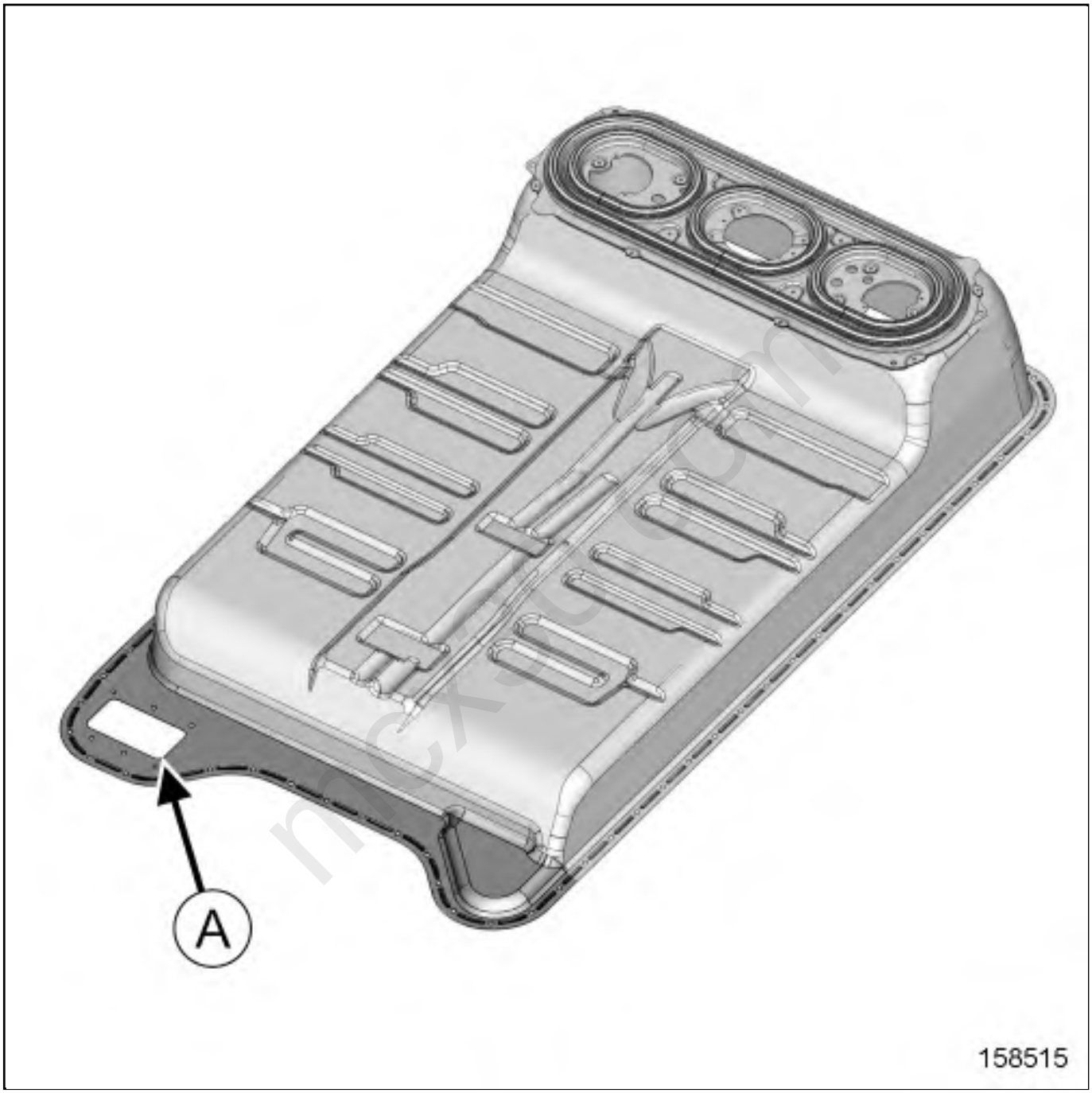


- Check the tightening torque of the nut(64) between the fuse and the mount(see 19E, Traction battery, Traction battery module stack assembly : Exploded view) .

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

Note:

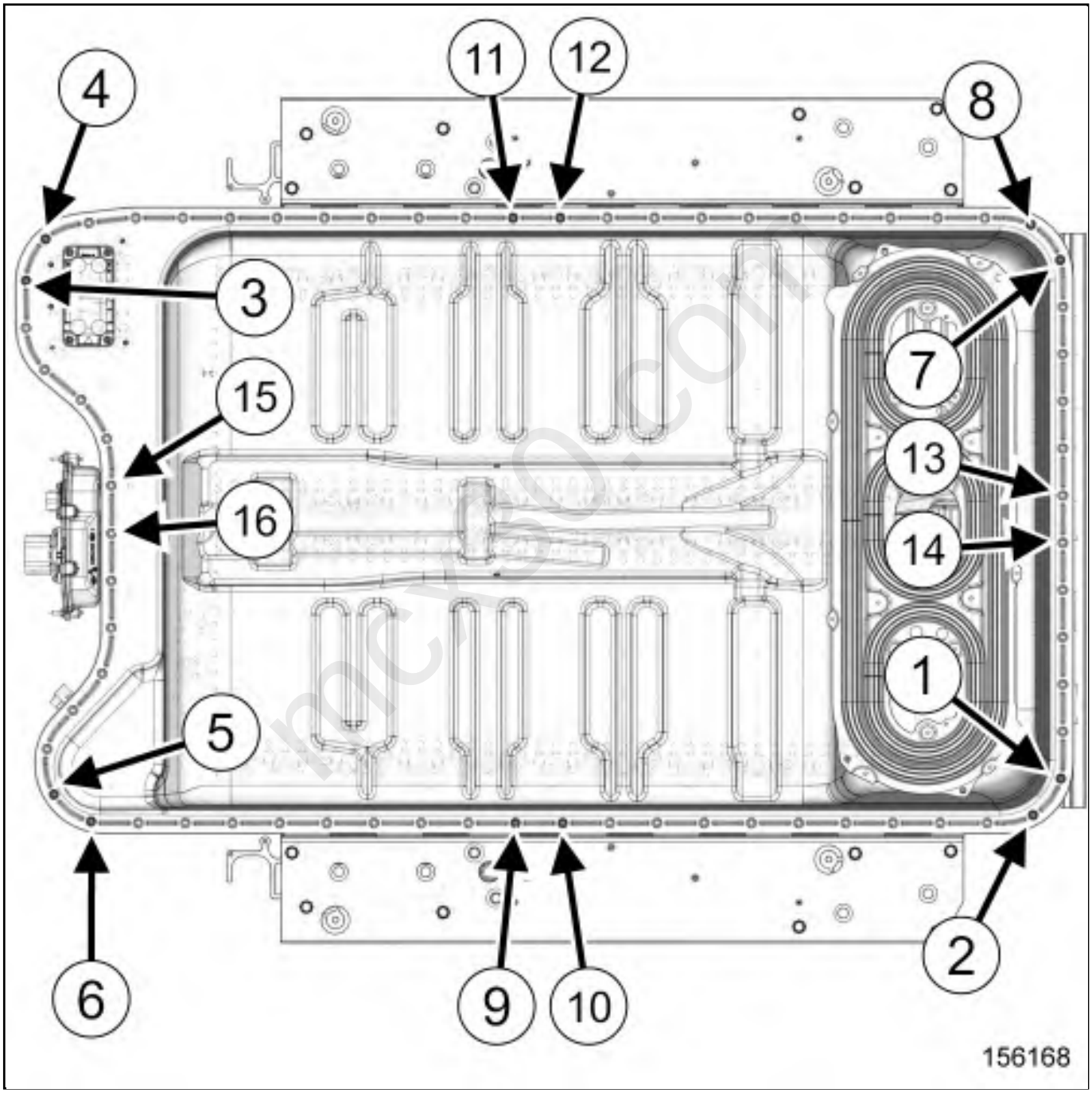
This operation requires two operators.



Do not randle the upper cover on the flat zone(A) .

Note:

Pay attention to mechanical damage of the wirings (no pinch, no crush). Be careful to reposition the wirings labels to the inside of the traction battery. Observe the path of the wirings.



Refit manually(see 19E, Traction battery, Traction battery housing assembly : Exploded view) :

two screws on each of the four corners then two screws on the length then two screws on the width of the upper cover with an insulated magnetic socket,

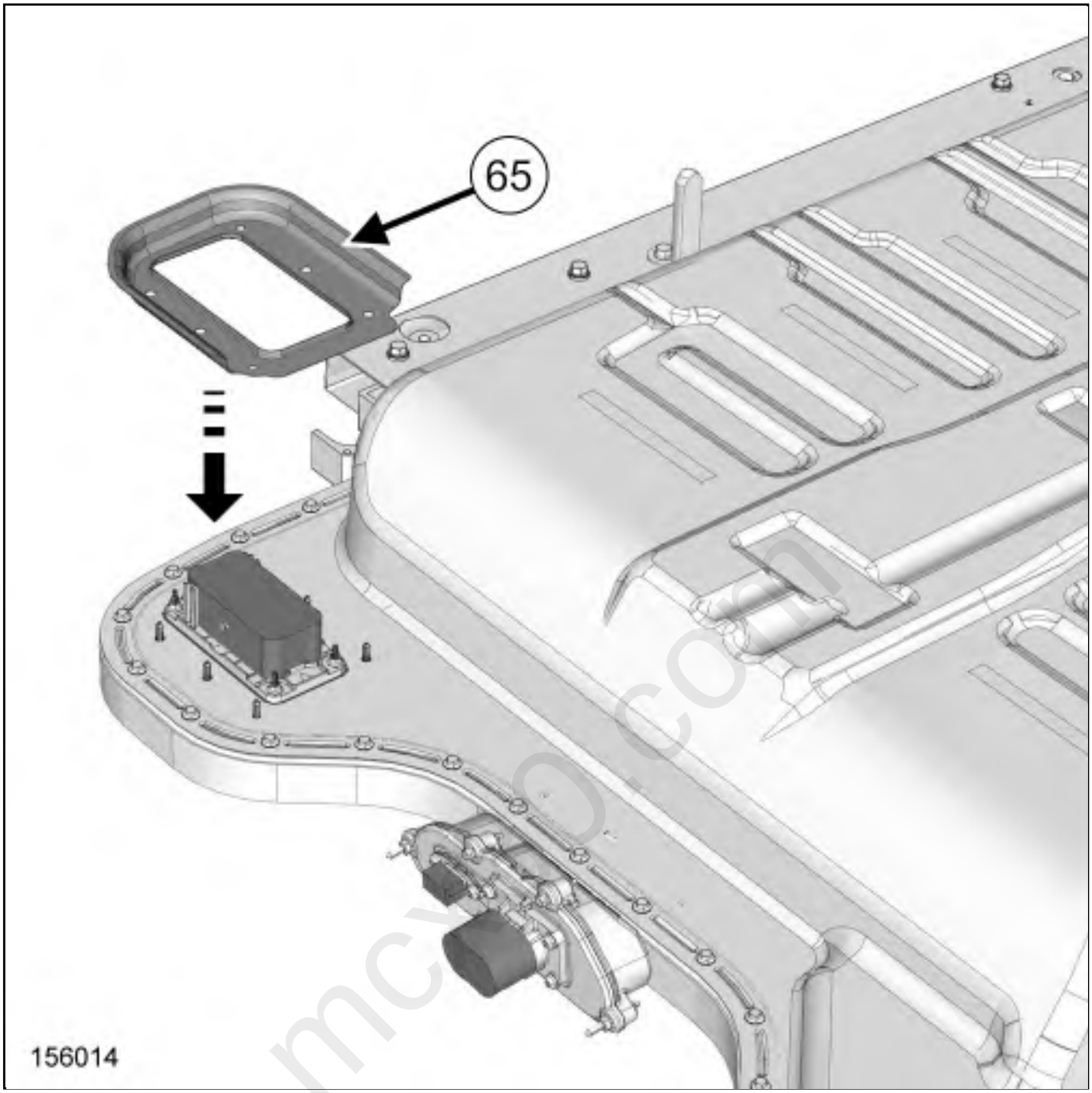
the remaining screws on the upper cover with an insulated magnetic socket.

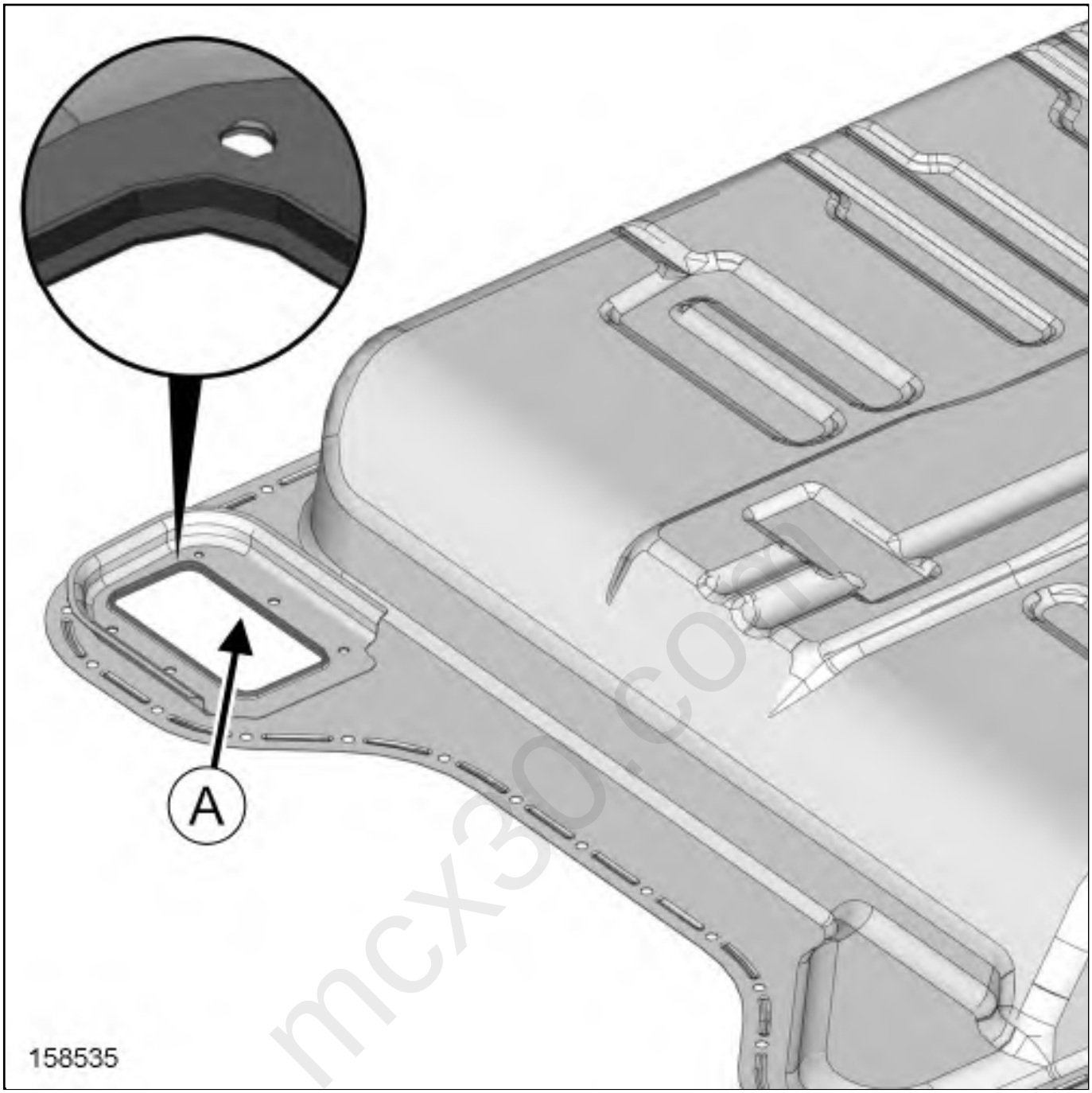
Torque tighten the remaining screws on the upper cover(see 19E, Traction battery, Traction battery housing assembly : Exploded view) .

Note:

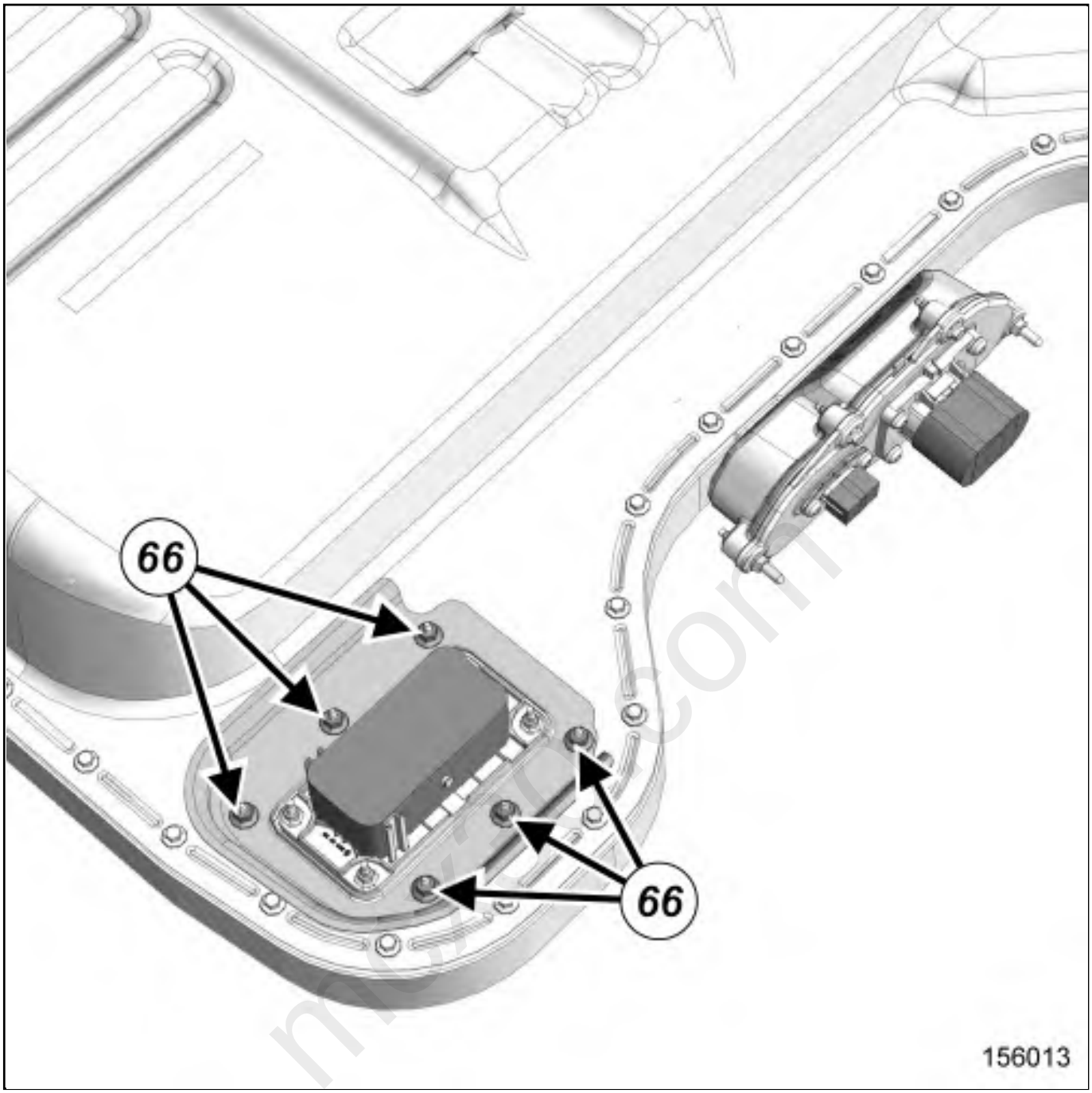
Tighten the screws in criss-cross pattern.

Mark always the screws with paint markerof a color different from the original.



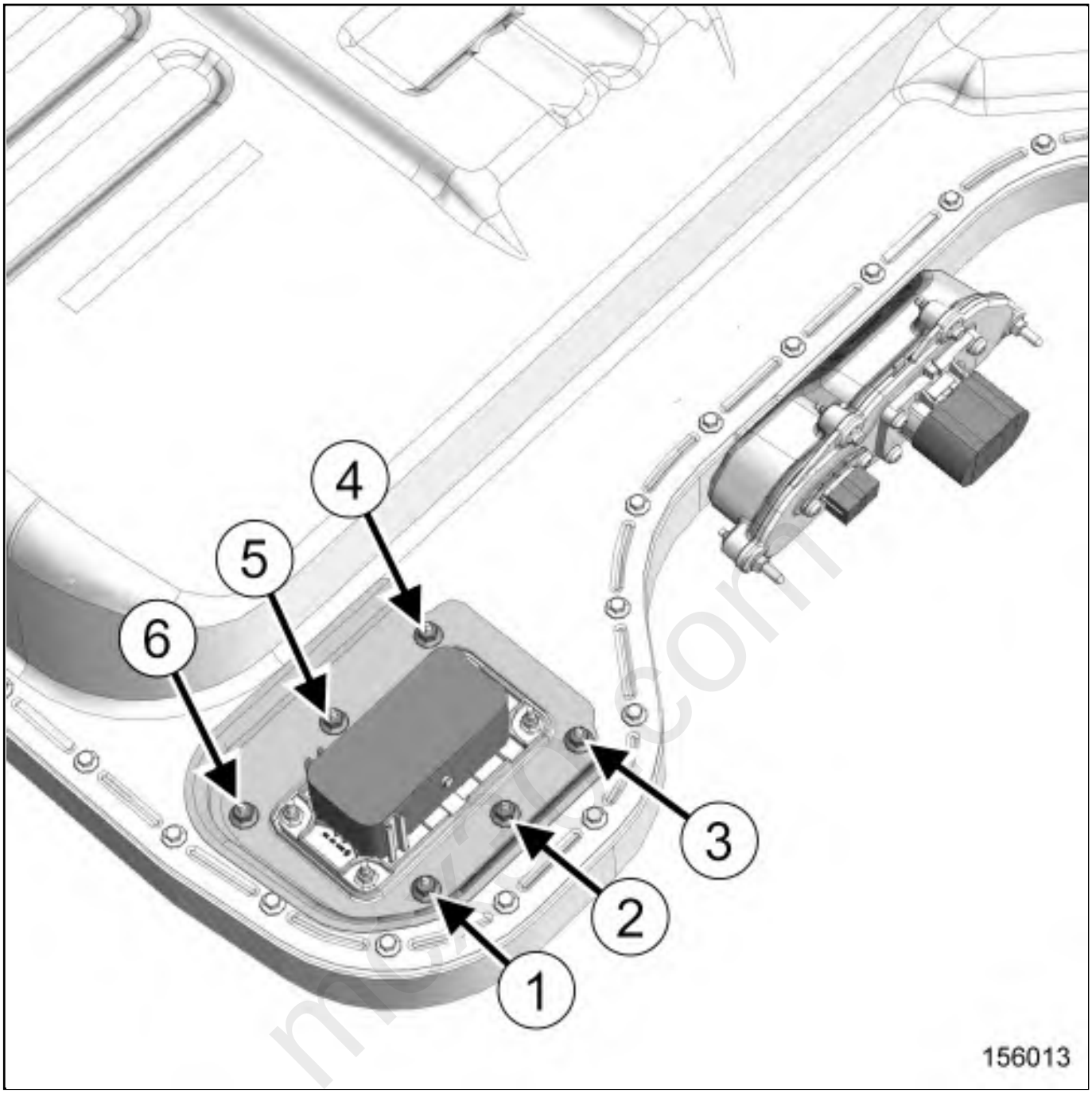


Check the absence of deformation of the upper cover around the safety device switch socket(A) .



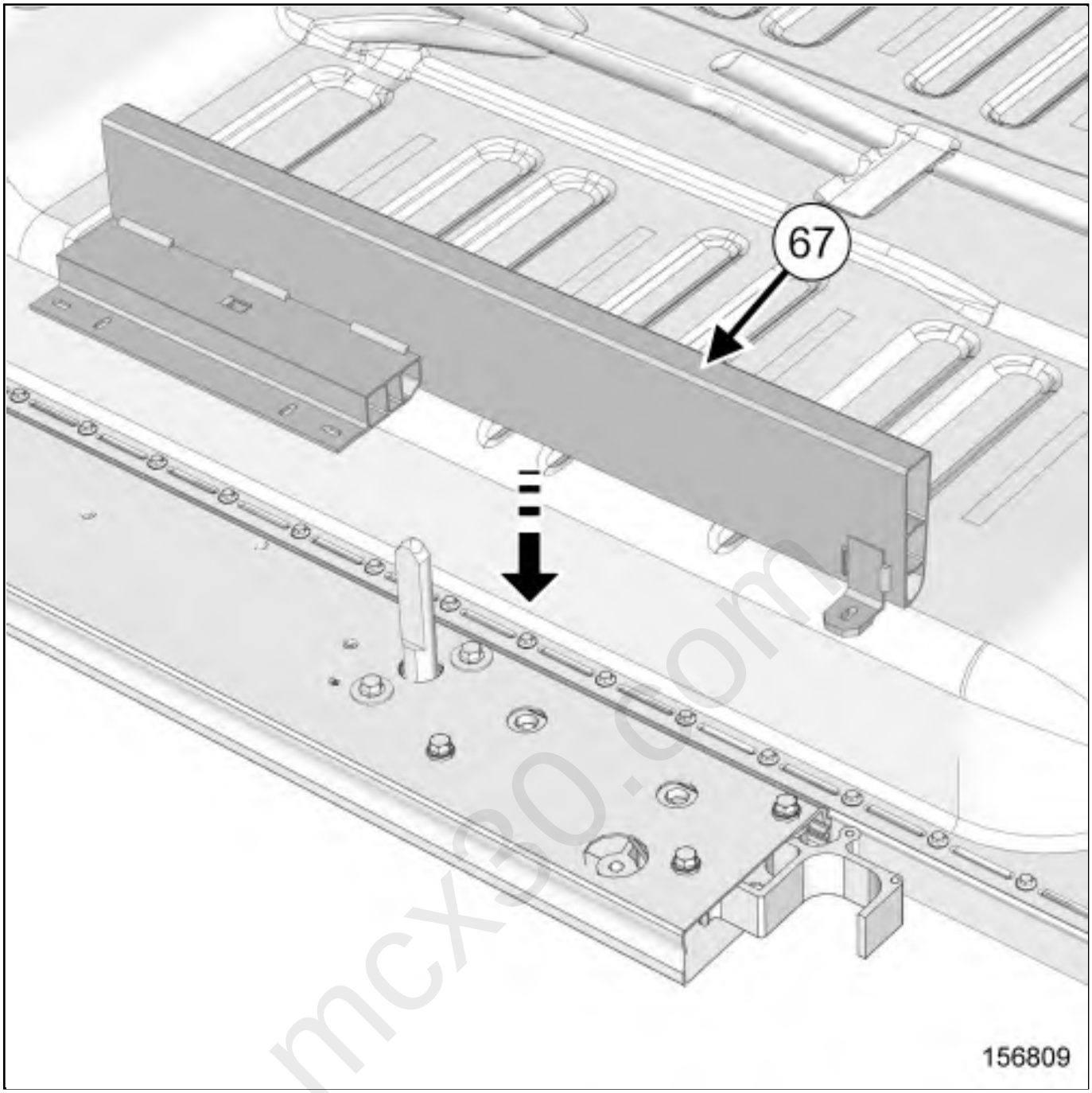
Refit:

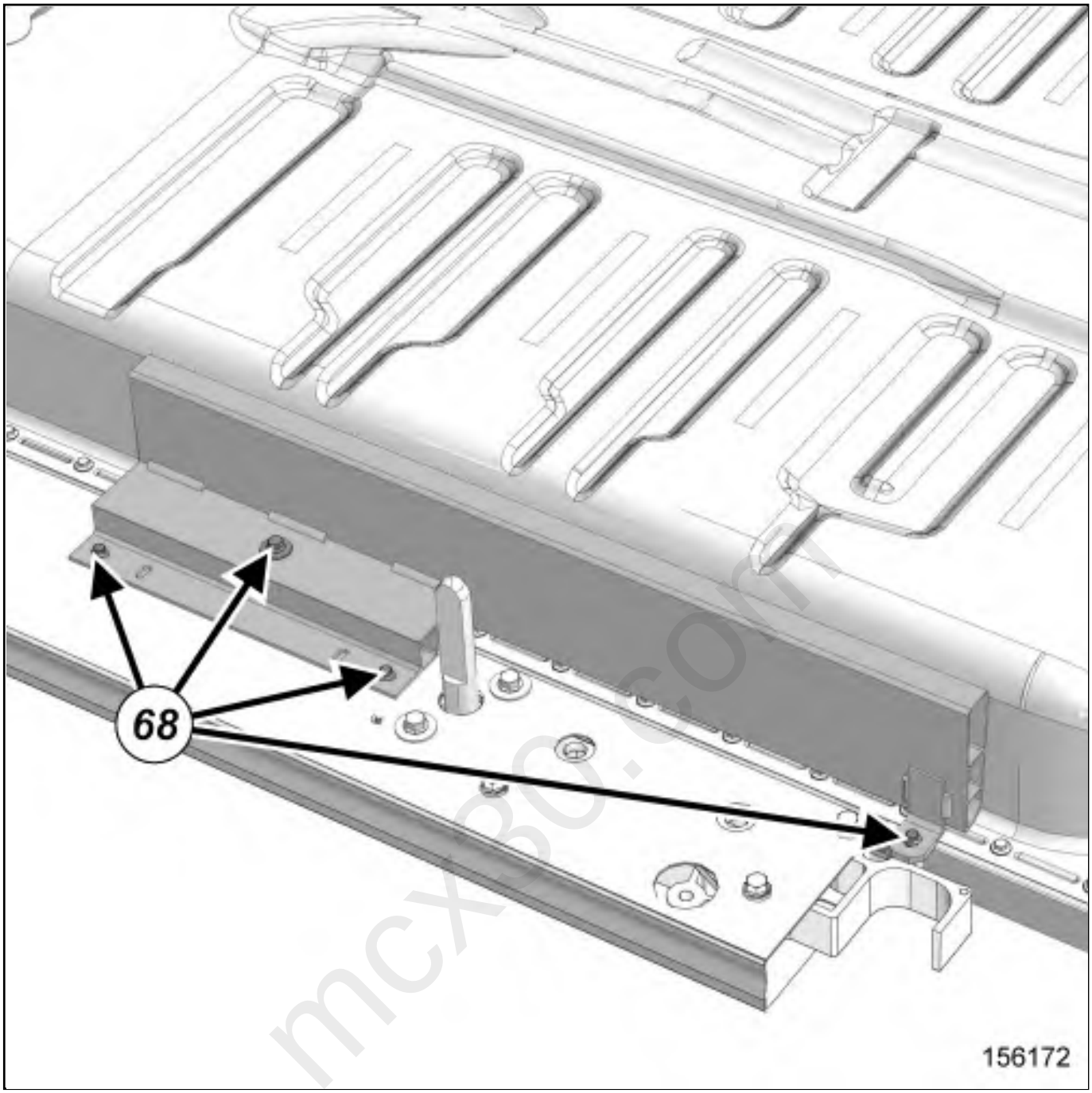
- the electro magnetic protector(65) (see 19E, Traction battery, Traction battery housing assembly : Exploded view) ,
- the electro magnetic protector nuts(66) using an insulated magnetic socket.



Torque tigthen in the order the electro magnetic protector nuts(see 19E, Traction battery, Traction battery housing assembly : Exploded view) using an insulated magnetic socket.

Mark always the nuts with paint markerof a color different from the original.





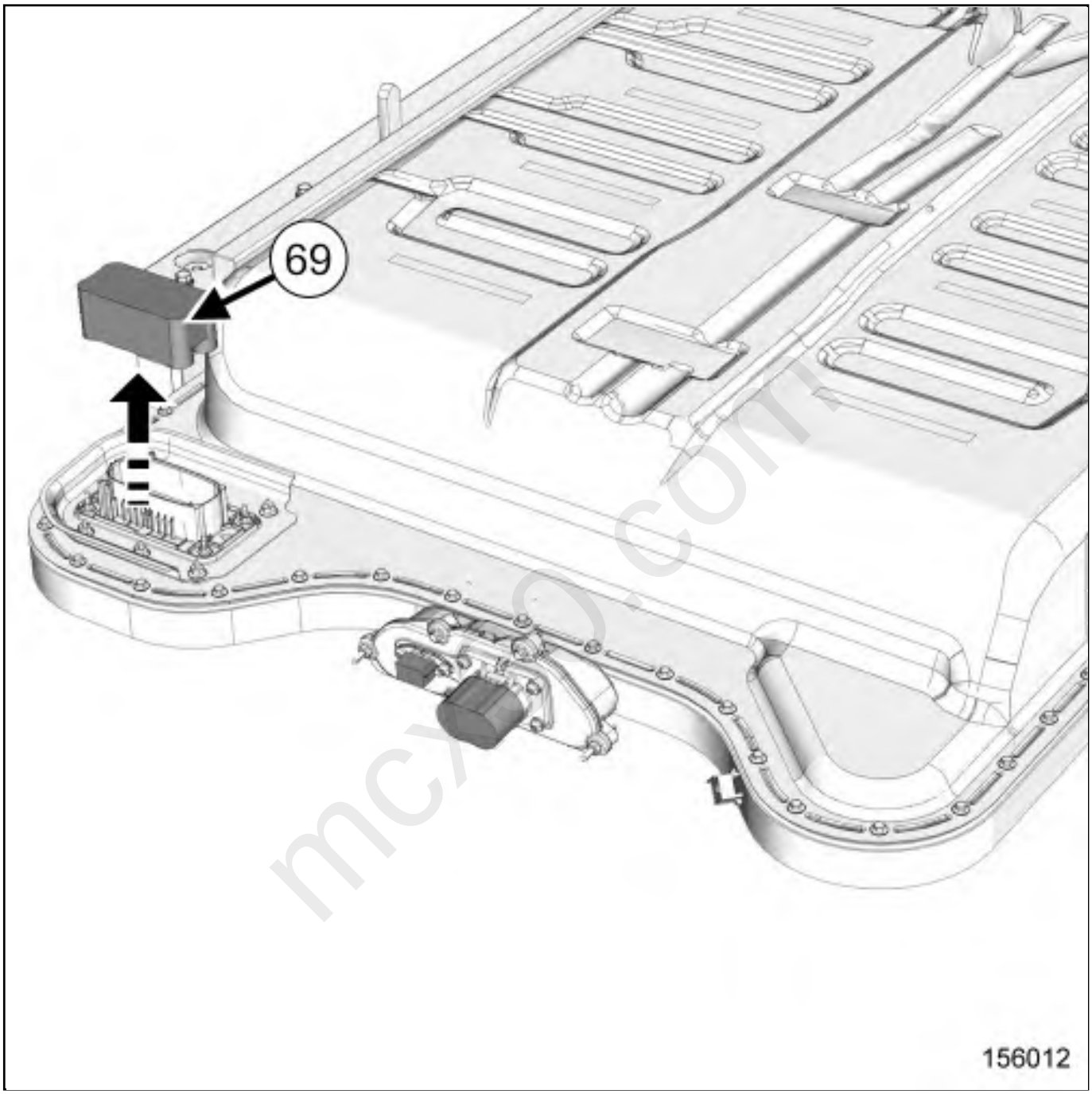
Refit (see 19E, Traction battery, Traction battery housing assembly : Exploded view) :

- the retaining shock pillars(67) ,
- the retaining shock pillars screws(68) using an insulated magnetic socket.

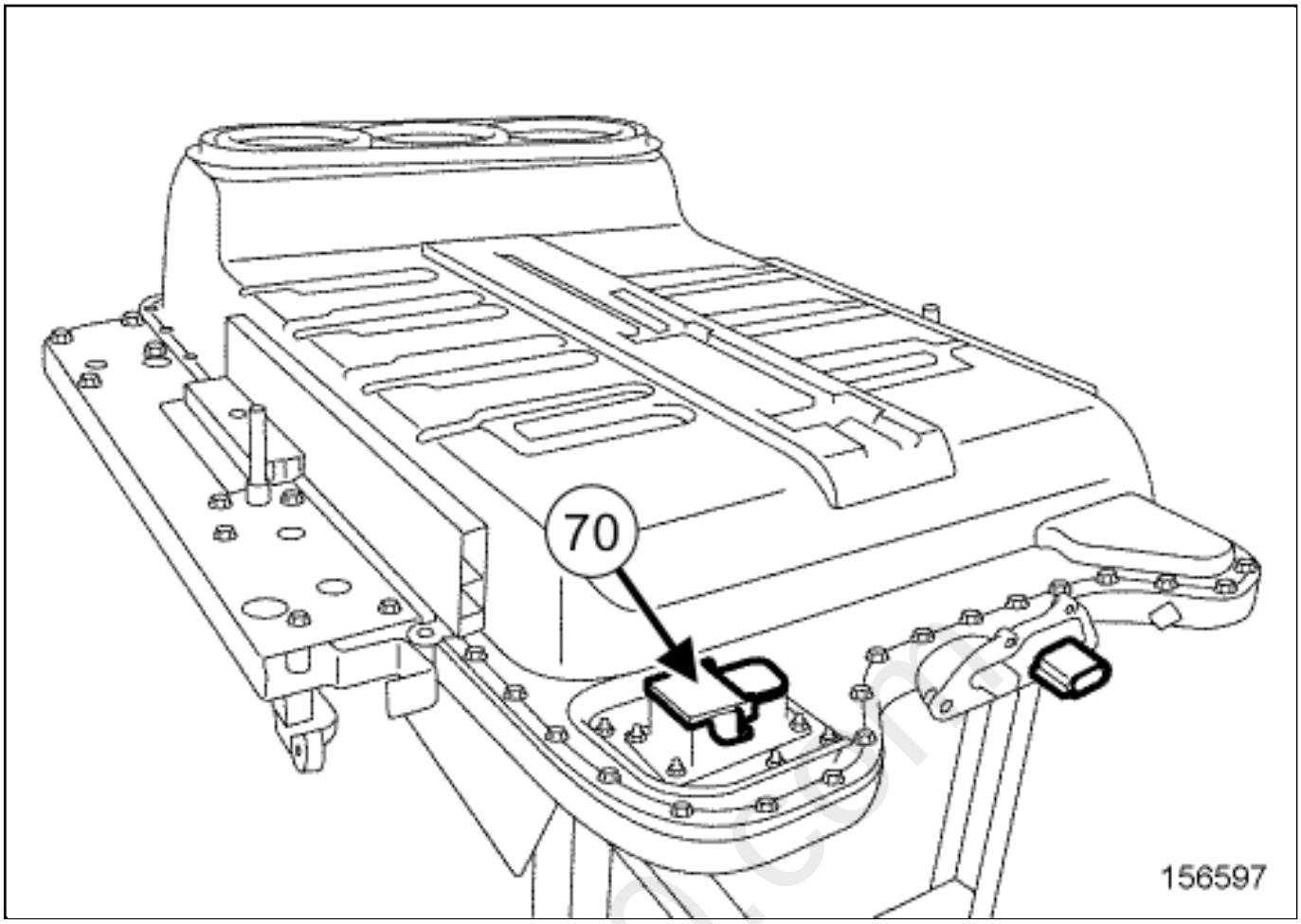
Torque tighten the retaining shock pillars screws(see 19E, Traction battery, Traction battery housing

assembly : Exploded view) using an insulated magnetic socket.

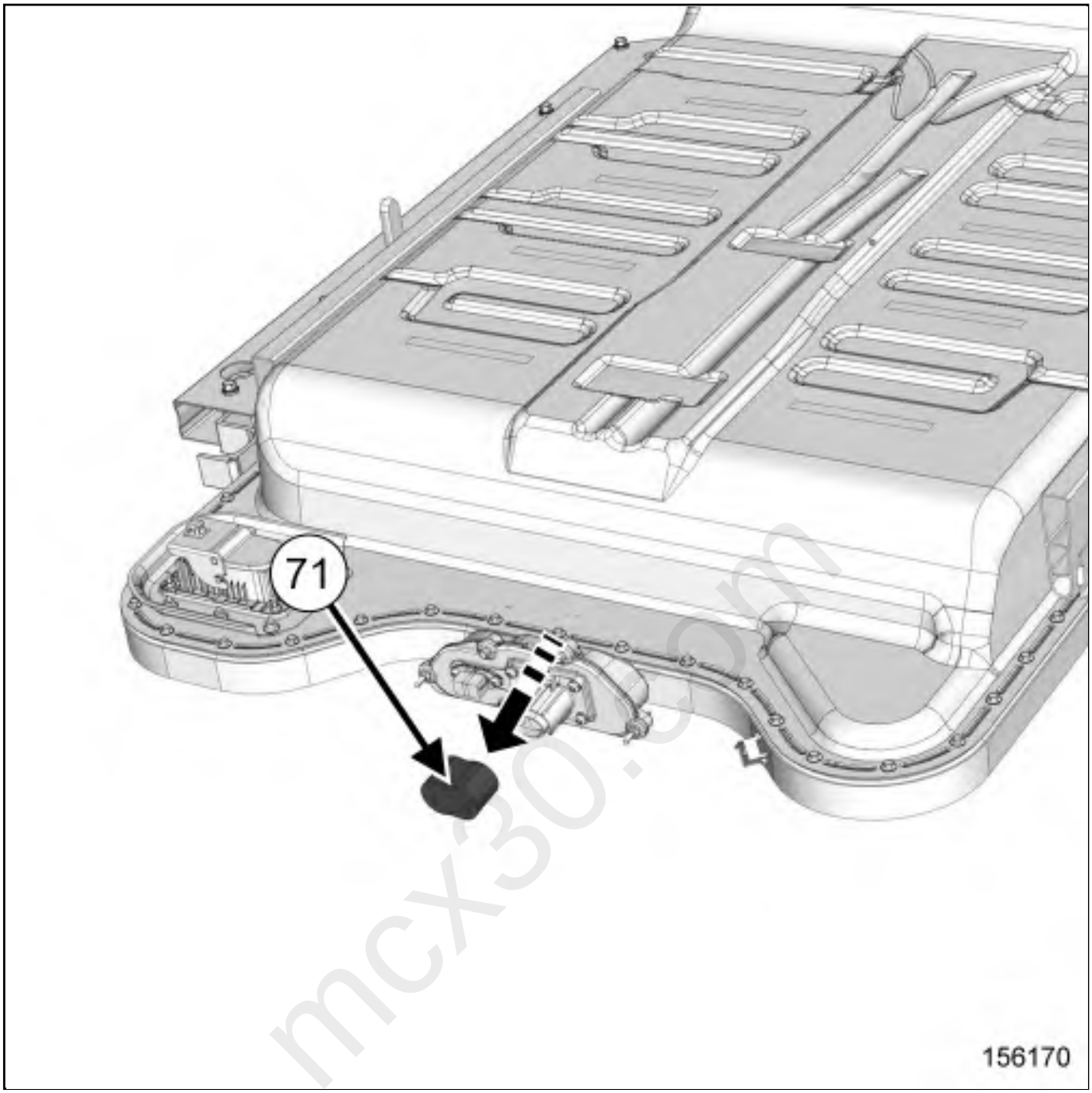
Mark always the screws with paint markerof a color different from the original.



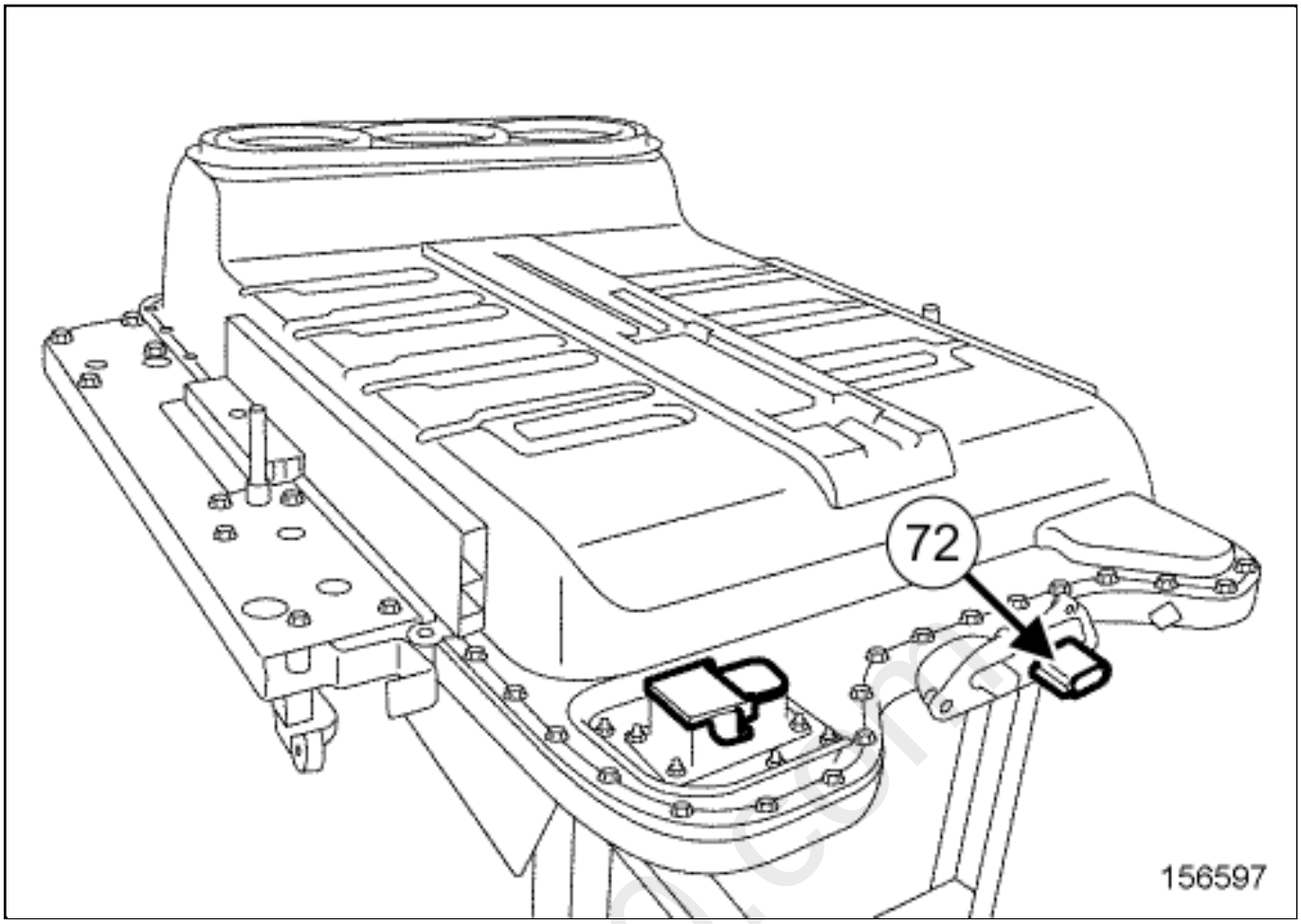
Remove the protection cover(69) to the safety device switch socket.



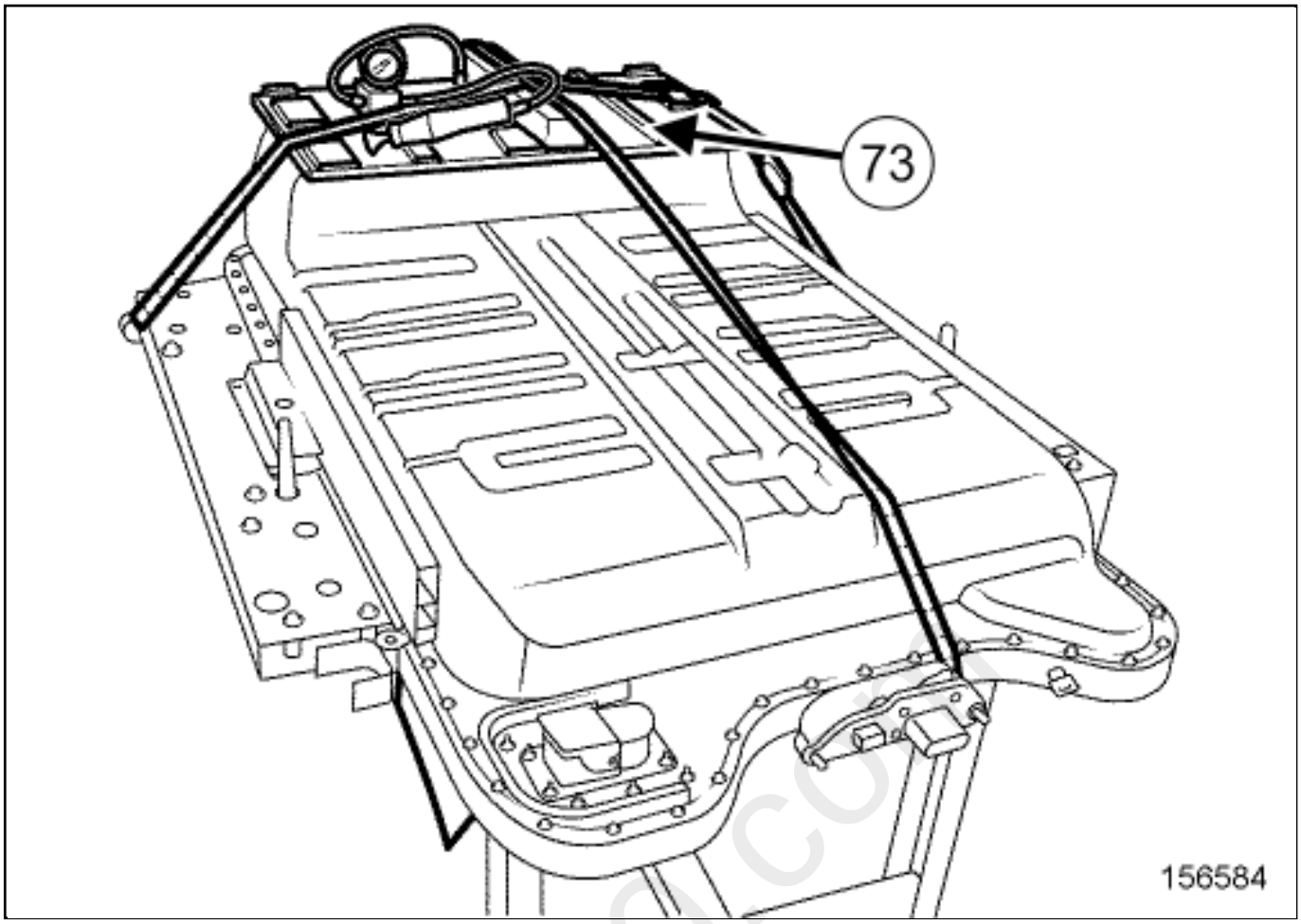
Fit the tration battery lockout toolSafety lockout plug of the traction battery(Ele. 2005) (70) on the safety device switch socket.

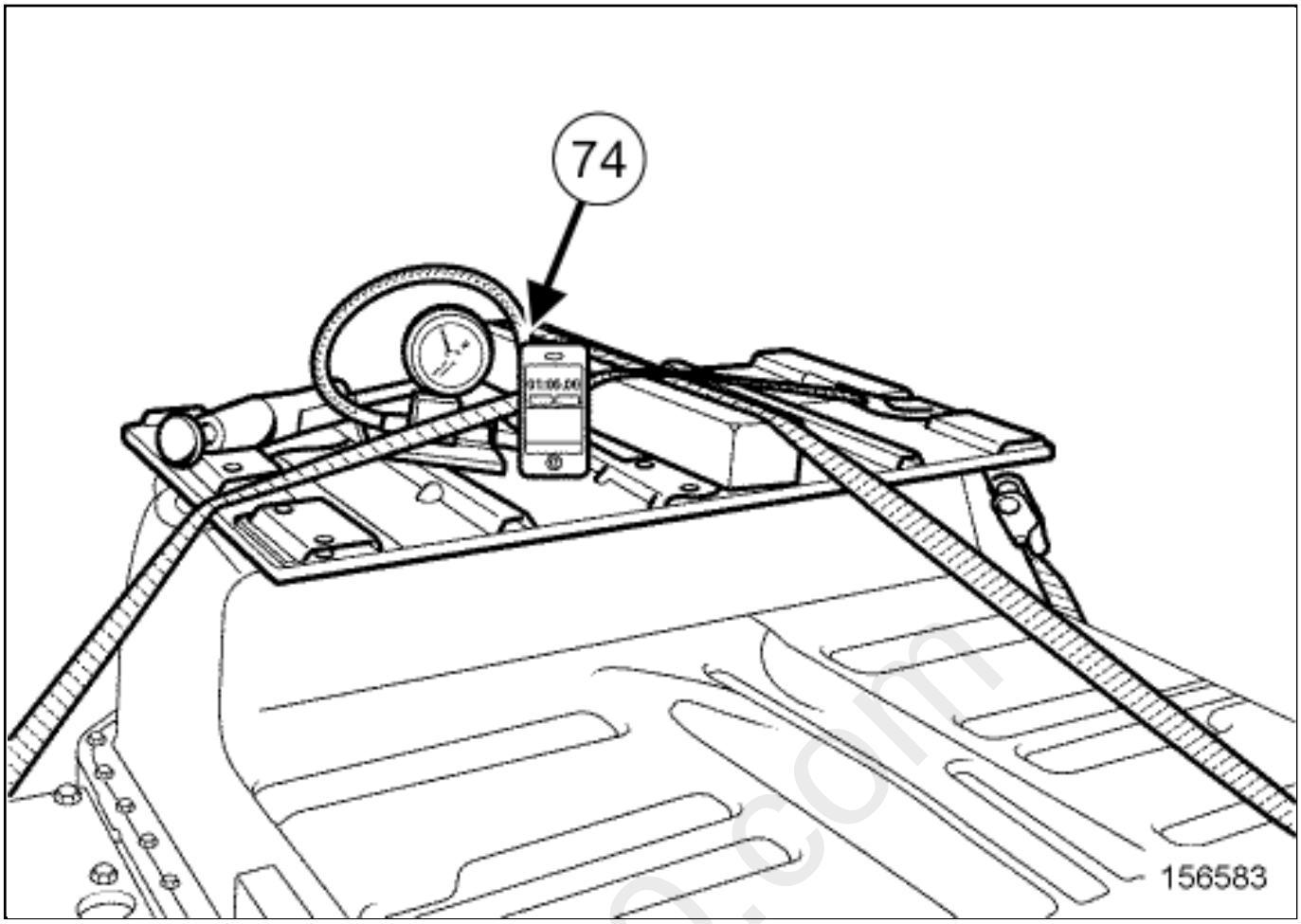


Remove the protective cover(71) from high voltage connector.



Set the plastic tape(72) to seal the high voltage connector.

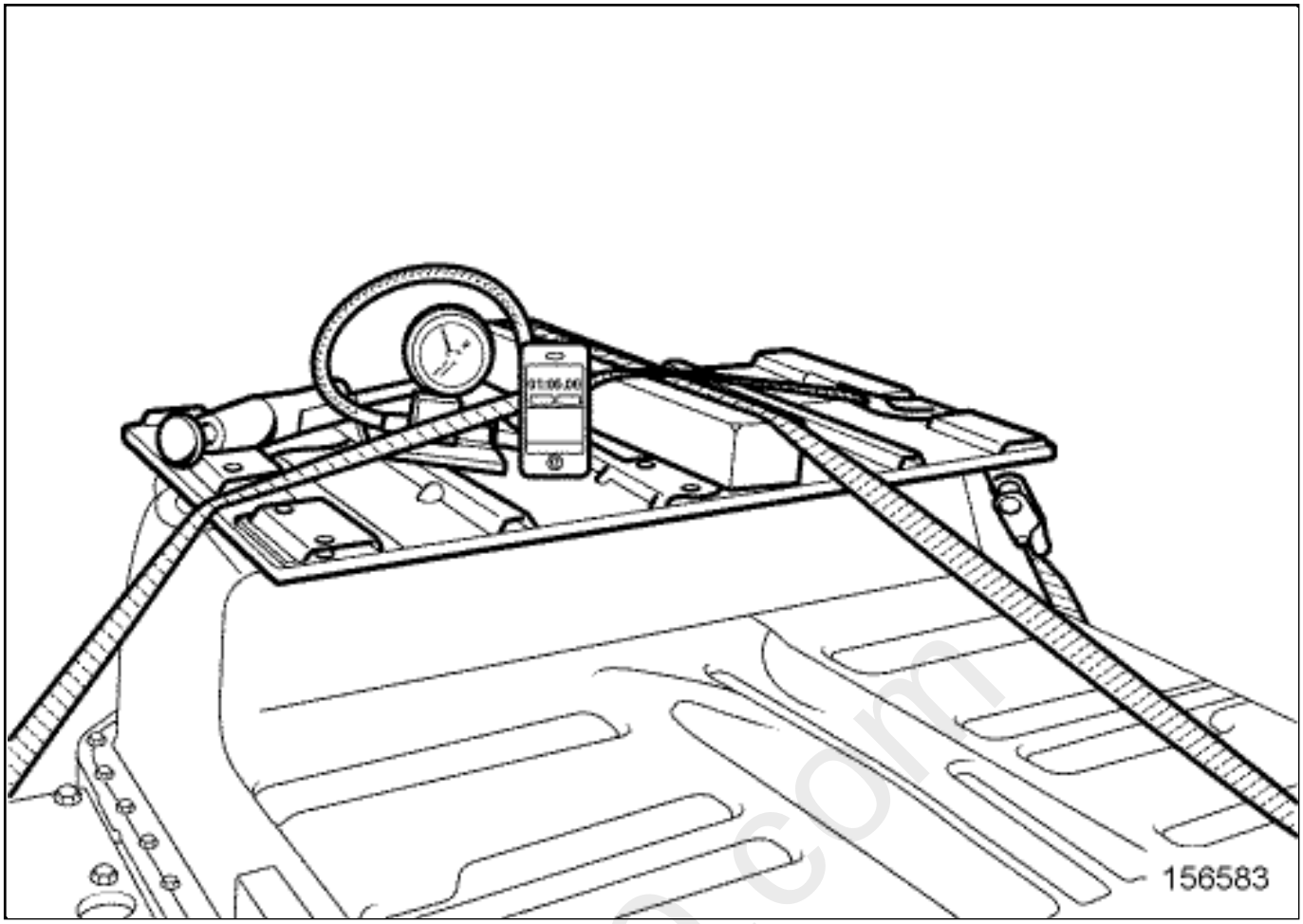




- Put the air leak test tool(73) .

- Fit the plug of the air leak test tool(74) .

- Check the airtightness of the traction battery using air leak test tool and applying a maximum pressure of 10 mbar.



After one minute the pressure should not be less than 9 mBar.

If the pressure is less than 9 mBar:

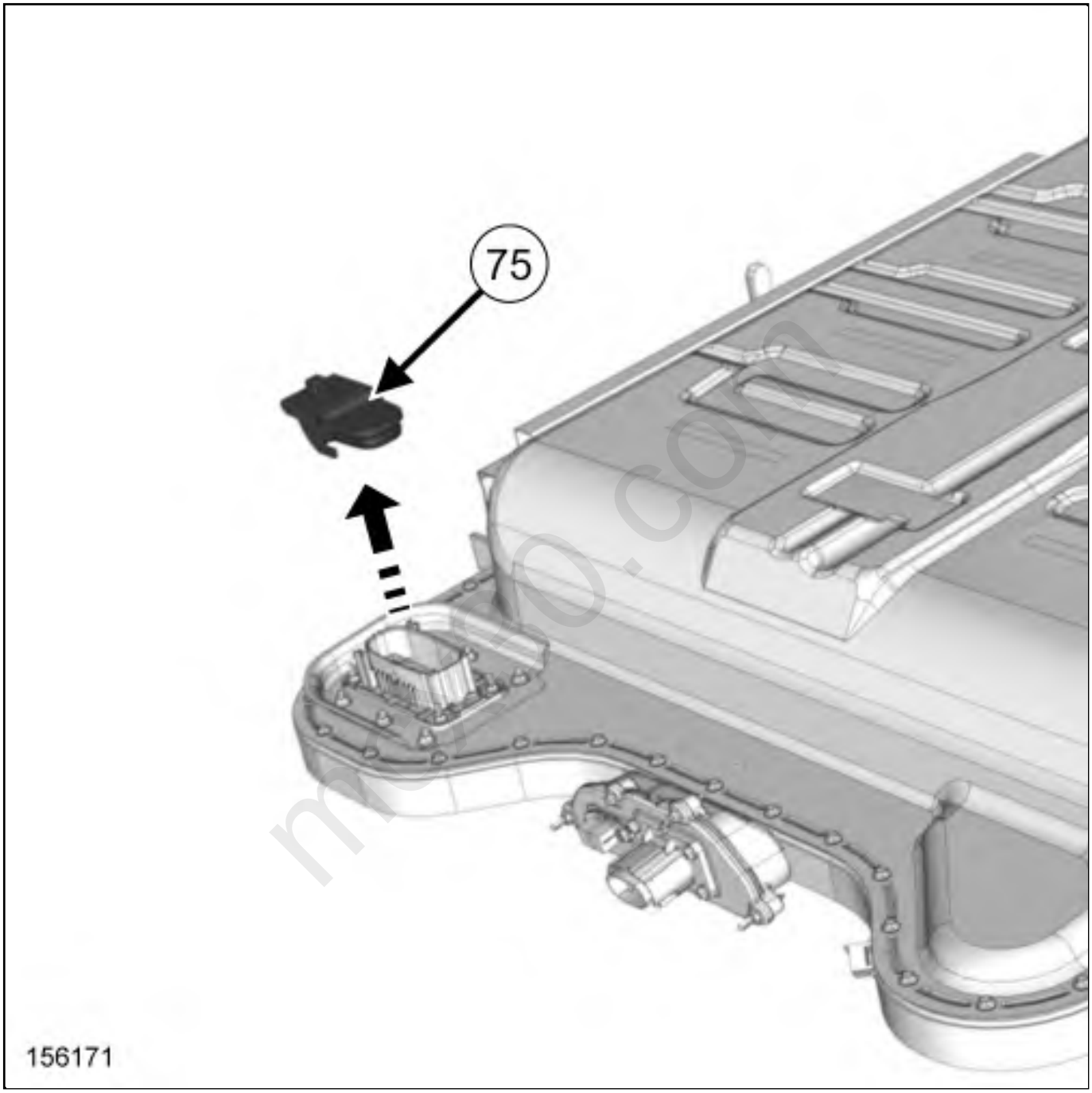
Identify the leakage zone using soapy water.

Check the sealing of :

- the safety device switch socket,
- the high voltage connector.

Note:

If leakage, change the affected part.



Remove:

- the air leak test tool,

- the plastic tape from the high voltage connector,

- the traction battery lockout toolSafety lockout plug of the traction battery(**Ele. 2005**) (**75**) from the safety device switch socket.

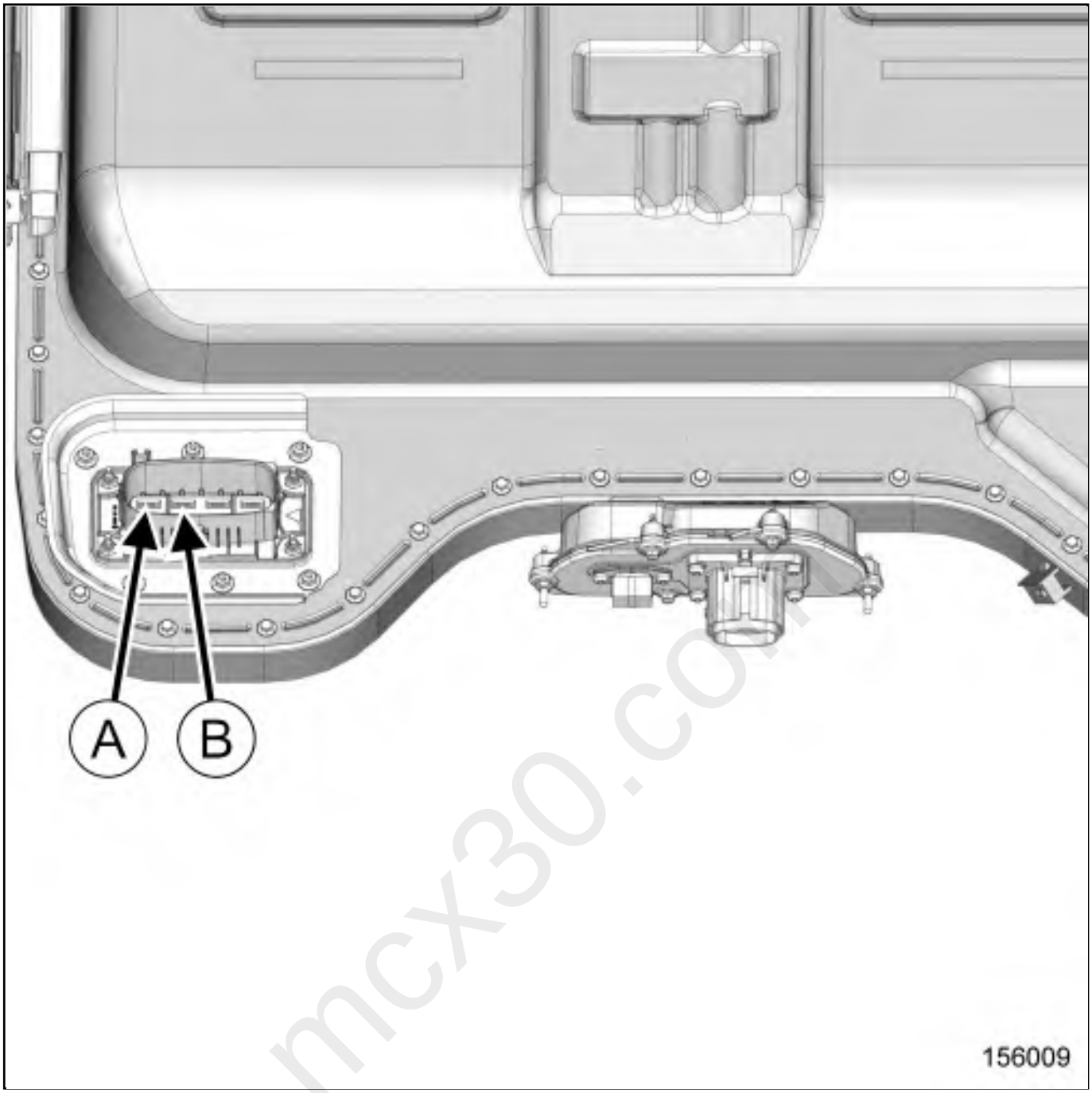
Make sure that voltage detectorVoltage detector(**Ele. 1993**) is working correctly before measuring.

WARNING

Never use a voltage detector if its self-test is incorrect as it could provide erroneous data that could place you in danger.

CAUTION

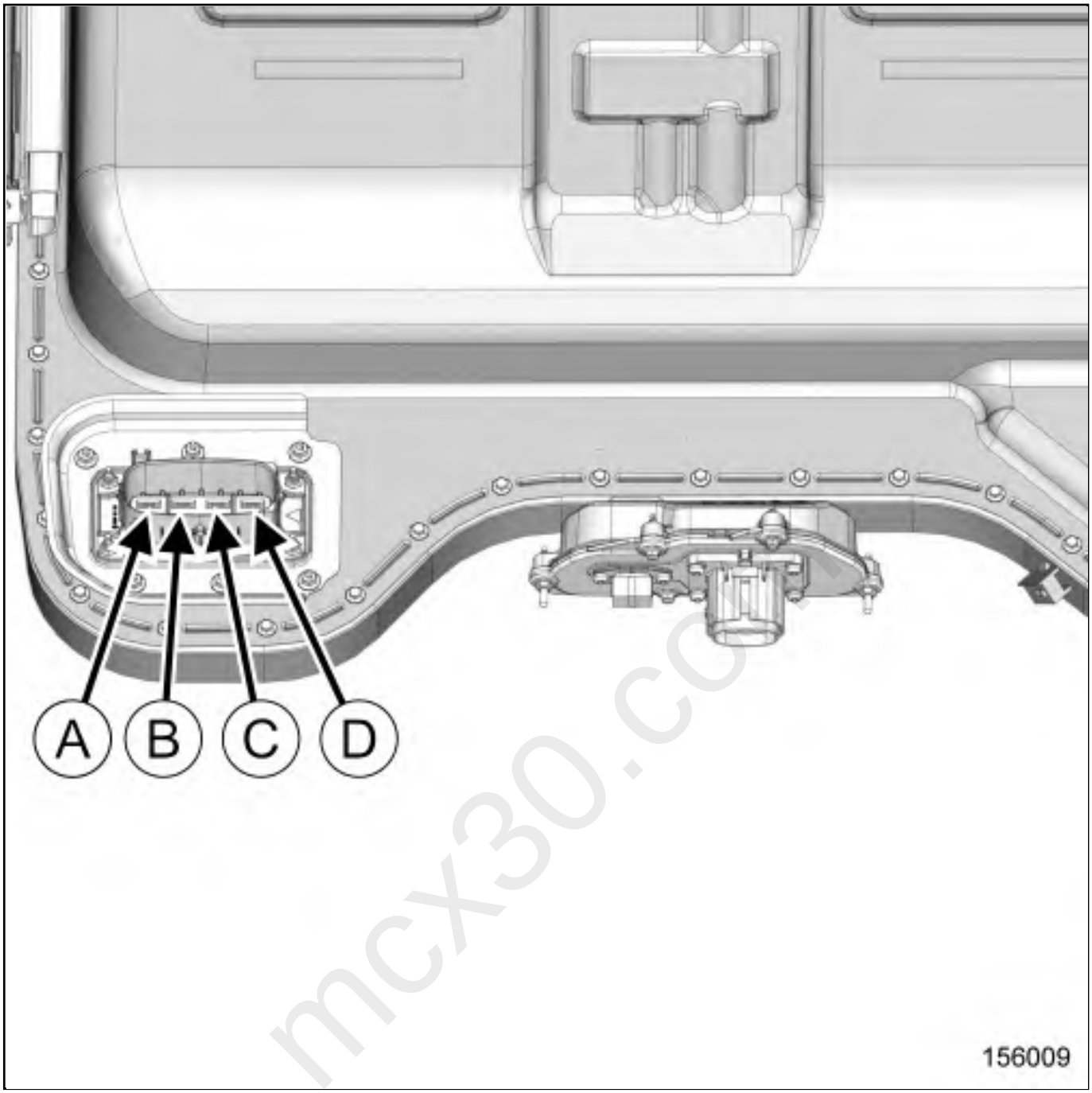
If there is any permanent voltage remaining during measurements, there is an electrical default on the traction battery. It could be an insulation defaut or defaut on one the relays inside the junction box. It is mandatory to determine the root cause of the failure and then to fix it.



Check the presence of voltage using a voltage detectorVoltage detector(Ele. 1993) between the terminal 1 (A) and 2 (B) of the traction battery safety device switch socket (1 measurement).

Note:

Measure between the terminals 1(A) and 2 (B) , the voltage could reach 408V.

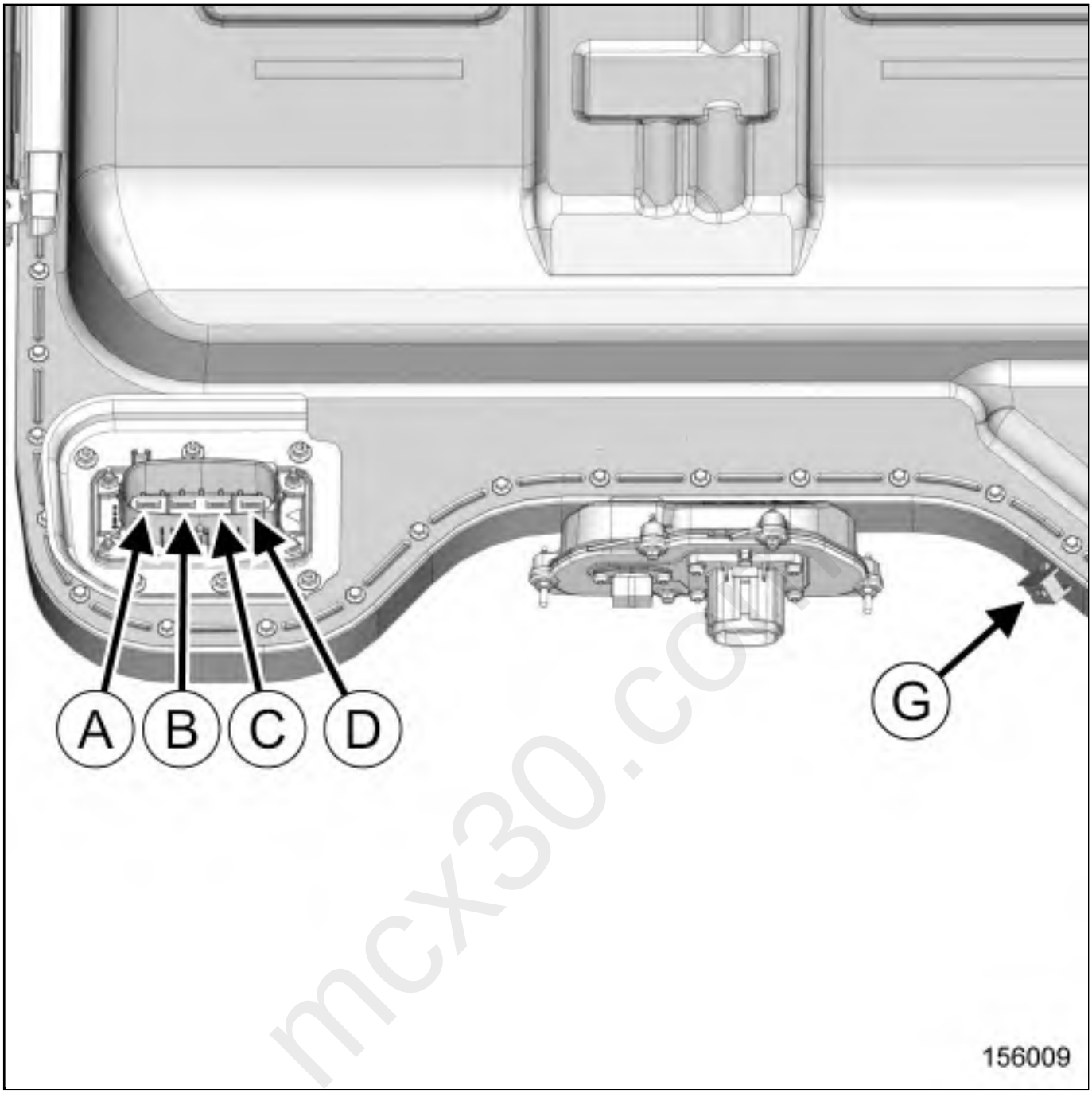


Check that there is no voltage using a voltage detectorVoltage detector(Ele. 1993) between the 4 terminals of the traction battery safety device switch socket (5 measurements).

Note:

- measure between the terminals:
  - 1 (A) and 3 (C) ,
  - 1 (A) and 4 (D) ,
  - 2 (B) and 3 (C) ,
  - 2 (B) and 4 (D) ,
  - 3 (C) and 4 (D) .

These 5 measurements must provide zero-voltage values or capacitive values (non-permanent voltage).

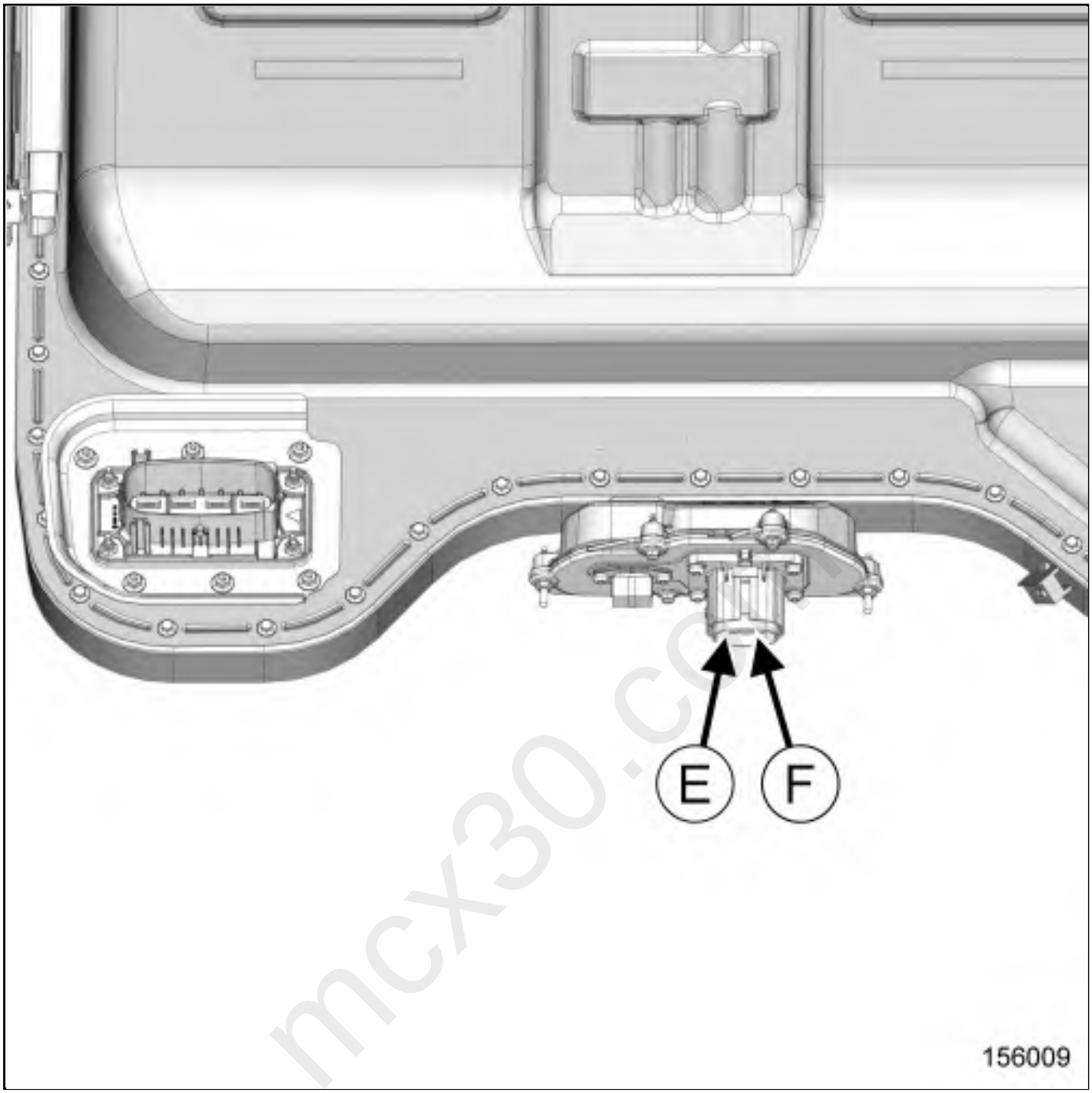


Check that there is no voltage detectorVoltage detector(Ele. 1993) between the 4 terminals of the traction battery safety device switch socket and the traction battery lower cover earth (4 measurements).

Note:

- Measure between the terminals:
  - 1 (**A**) and 7 (**G**) ,
  - 2 (**B**) and 7 (**G**) ,
  - 3 (**C**) and 7 (**G**) ,
  - 4 (**D**) and 7 (**G**) .

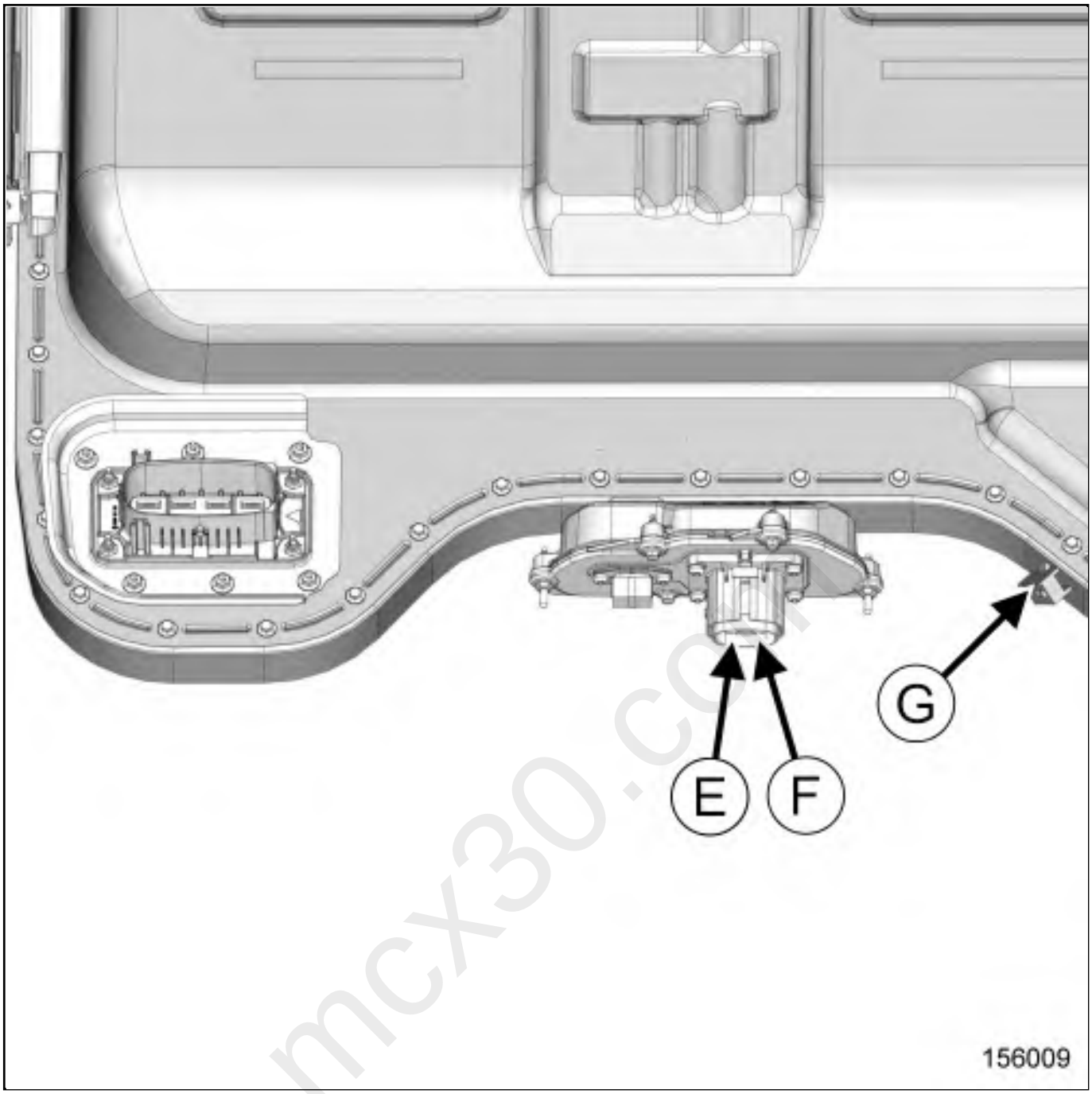
These 4 measurements must provide zero-voltage values or capacitive values (non-permanent voltage).



Check that there is no voltage using a voltage detectorVoltage detector(Ele. 1993) between the 2 terminals of the traction battery high voltage connector (1 measurement).

Note:

Measure between the terminals 5(E) and 6 (F) . This measure must provide zero-voltage values or capacitive values (non-permanent voltage).



Check that there is no voltage detectorVoltage detector(Ele. 1993) between the 2 terminals of the traction battery high voltage connector and the traction battery lower cover earth (2 measurements)

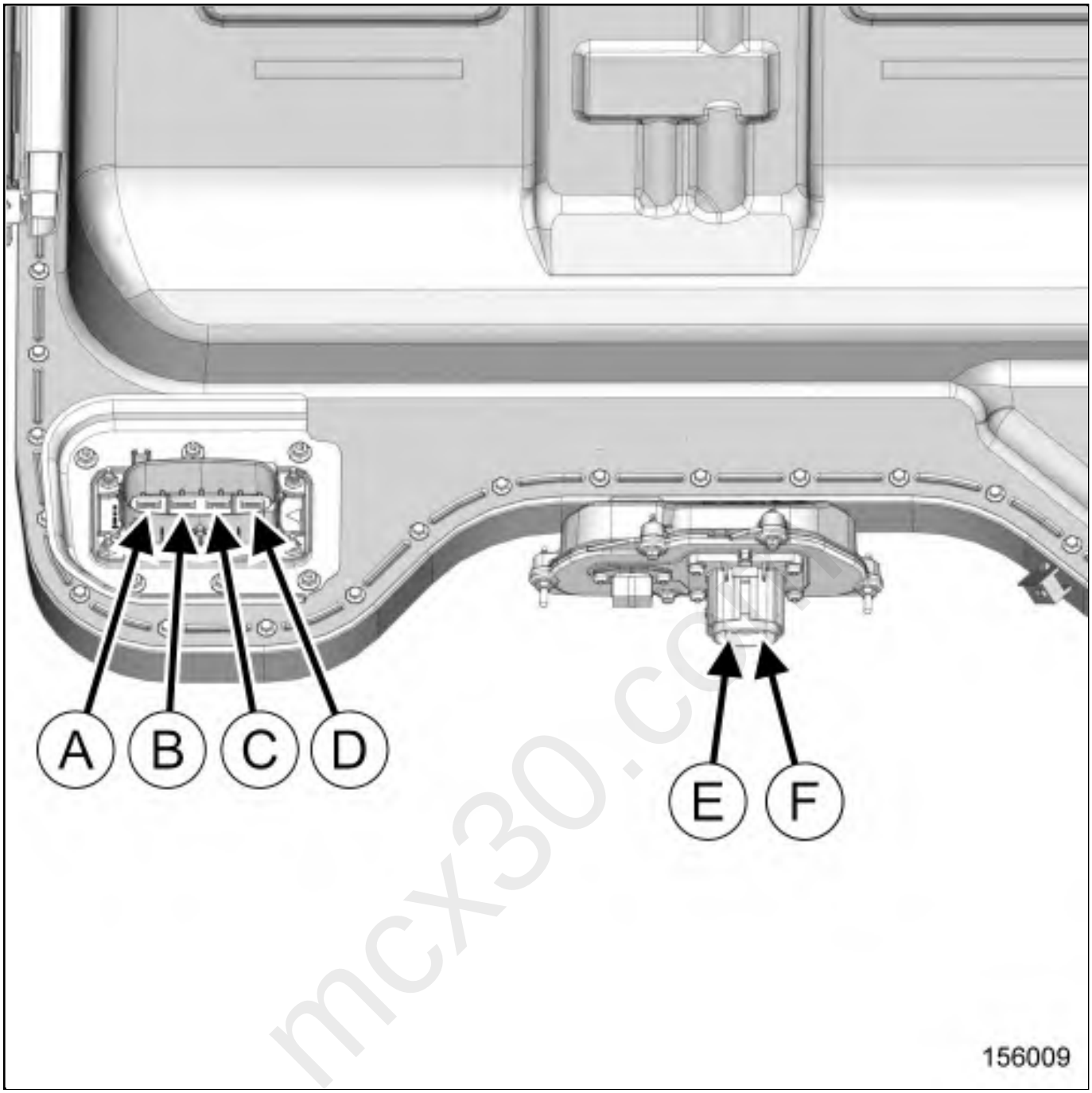
Note:

- Measure between the terminals:
  - 5 (**E**) and 7 (**G**) ,
  - 6 (**F**) and 7 (**G**) .

These 2 measurements must provide zero-voltage values or capacitive values (non-permanent voltage).

Note:

Scratch the material to be measured with the tip of the voltmeter to ensure good electrical contact.



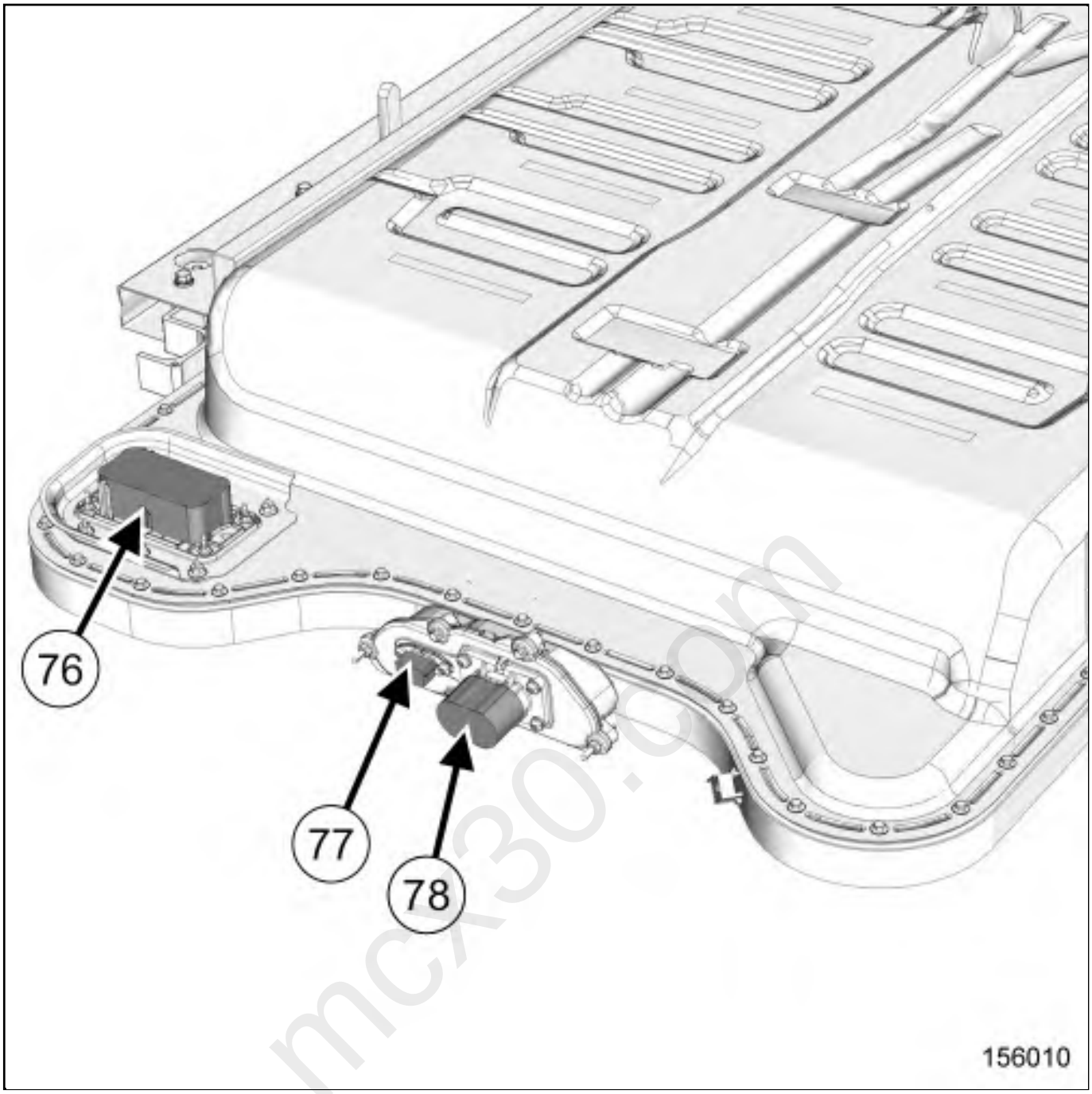
Check that there is no voltage using a voltage detectorVoltage detector(Ele. 1993) between the 4 terminals of the traction battery safety device switch socket and the 2 terminals of the traction battery high voltage connectors (8 measurements).

Note:

- Measure between the terminals:
  - 1 (A) and 5 (E) ,
  - 2 (B) and 5 (E) ,
  - 3 (C) and 5 (E) ,
  - 4 (D) and 5 (E) ,
  - 1 (A) and 6 (F) ,
  - 2 (B) and 6 (F) ,
  - 3 (C) and 6 (F) ,
  - 4 (D) and 6 (F) .

These 8 measurements must provide zero-voltage values or capacitive values (non-permanent voltage).

- Make sure that the voltage detectorVoltage detector(Ele. 1993) is working correctly after measurement.



Refit:

- the protective cover on the safety device switch socket(**76**) ,
- the protective cover on the low voltage connector(**77**) ,
- the protective cover on the high voltage connectors(**78**) .

Check the presence of protection on the air inlets using the toolInsulating blanket (Ms. 1978) .

3. FINAL OPERATION

Proceed in the reverse order to removal.