

TRACTION BATTERY INTERNAL RELAYS : 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.



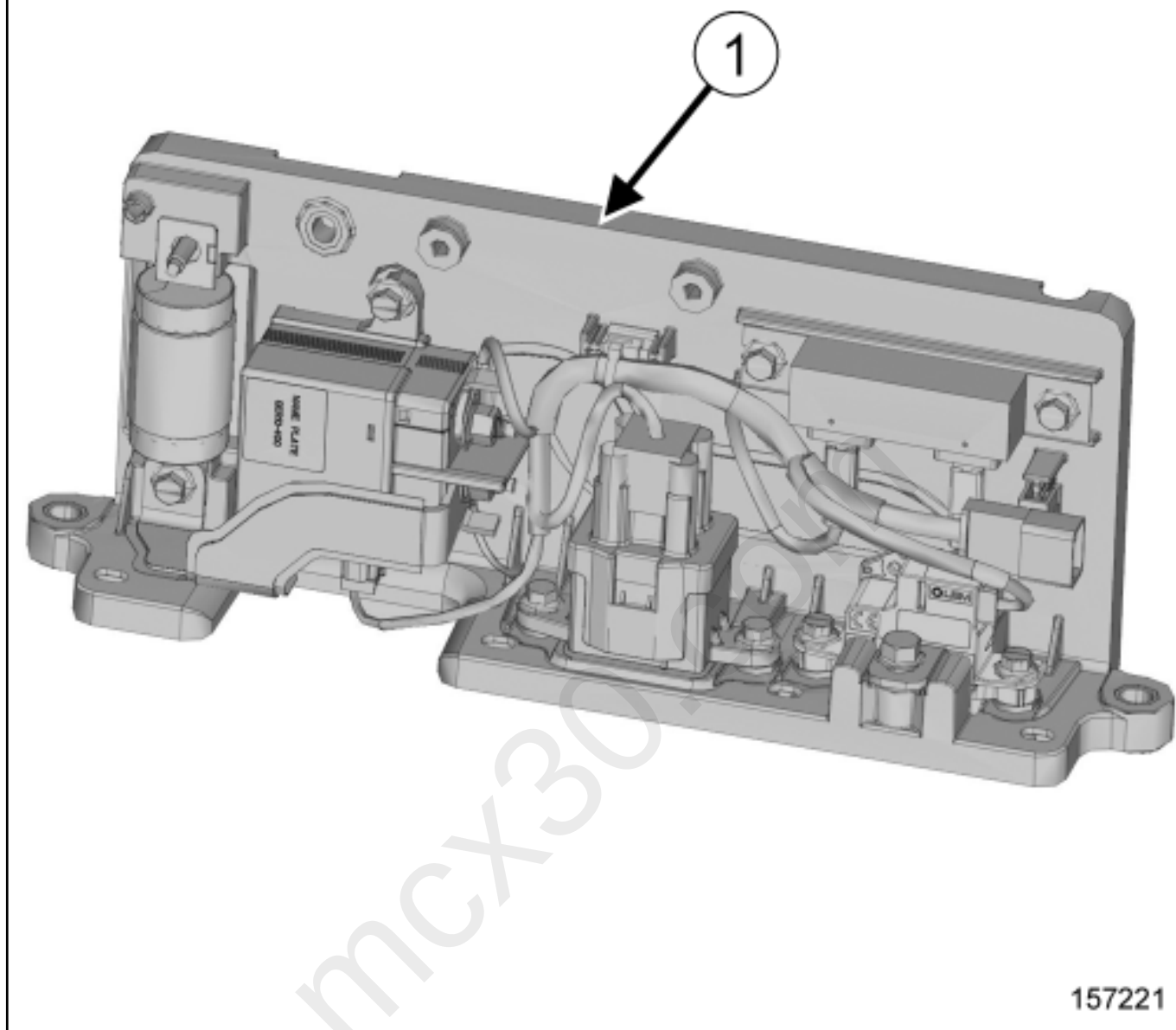
Risks of serious burns or electric shocks that may prove fatal.

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

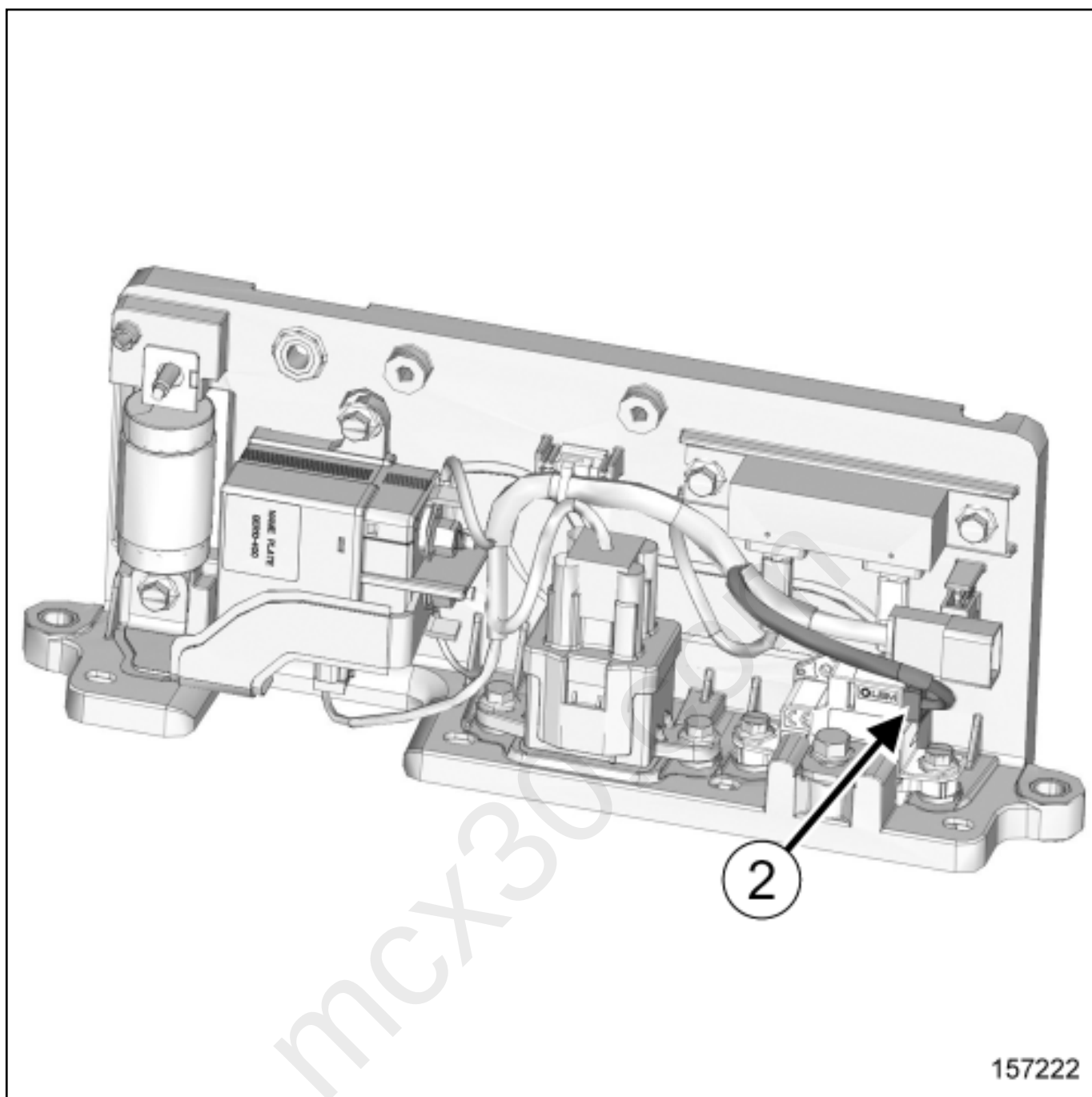
REMOVAL

1. REMOVAL PREPARATION OPERATION

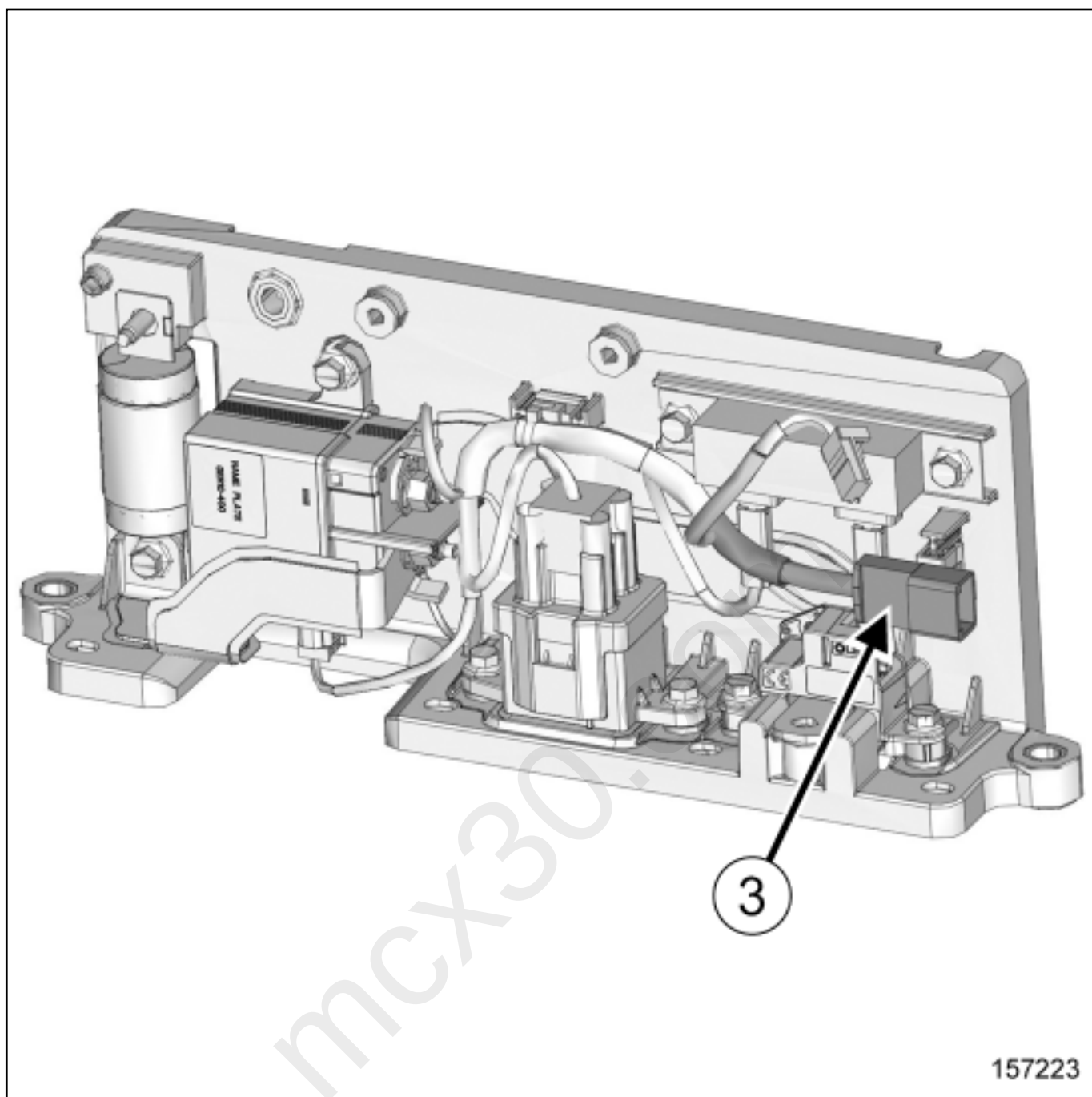
- ▣ Remove the traction battery upper cover ([see 19E, Traction battery, Traction battery housing assembly : Exploded view](#)) .



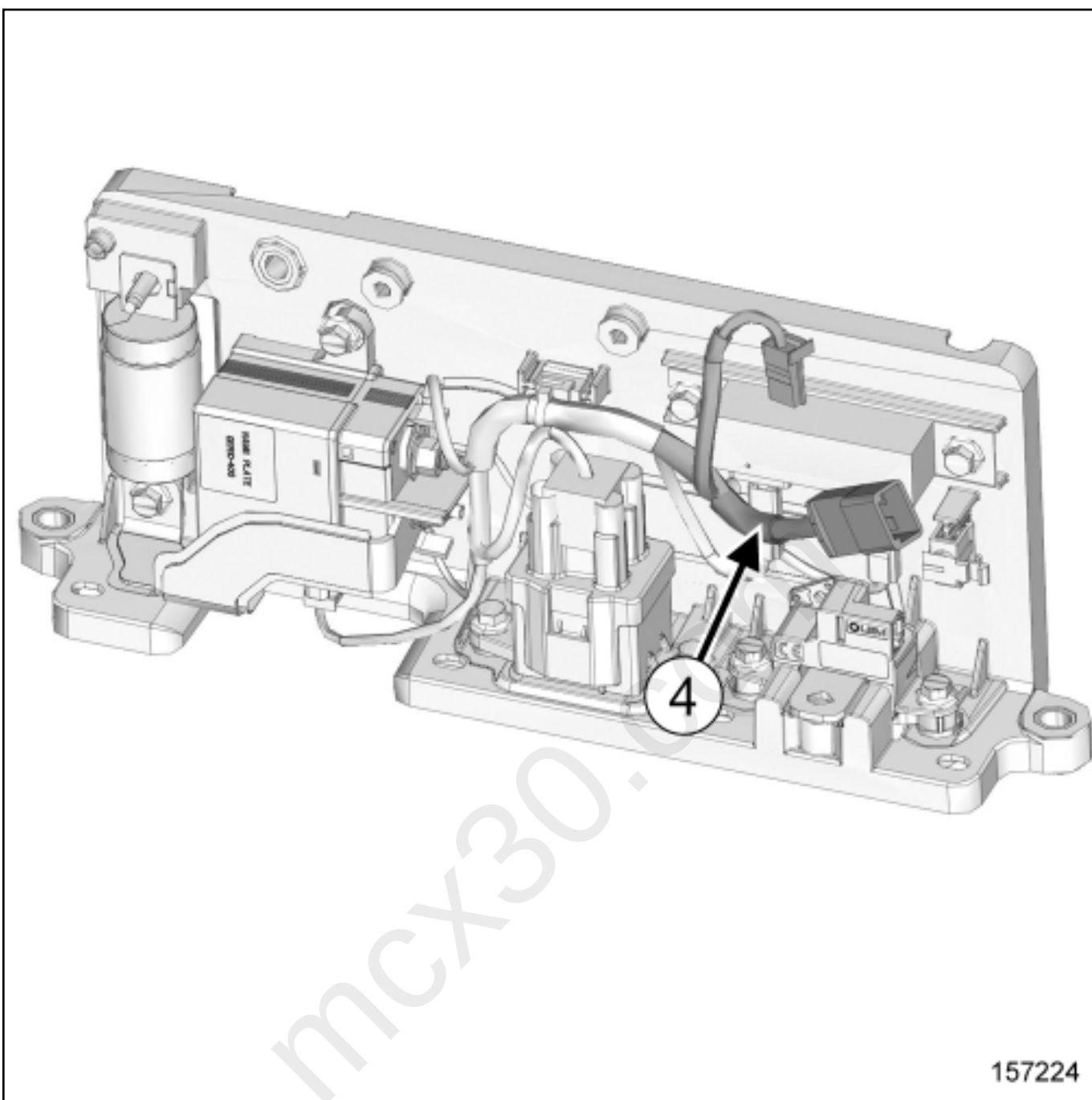
- Remove the traction battery internal junction box(1) ([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



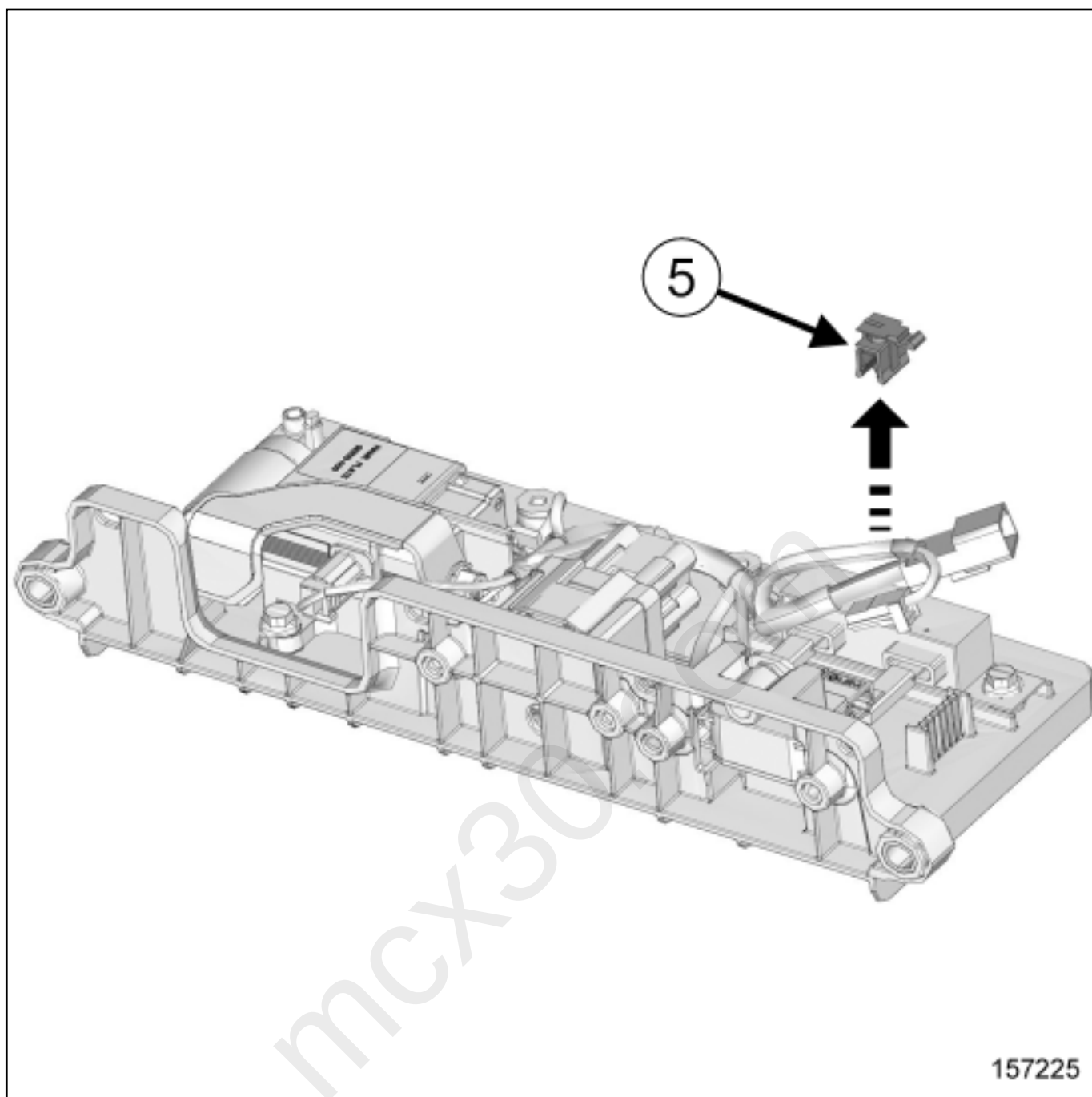
- Disconnect the current sensor plug(2) using the toolSet of trim removal levers.(Car. 1363) .
- Move the current sensor plug wire.



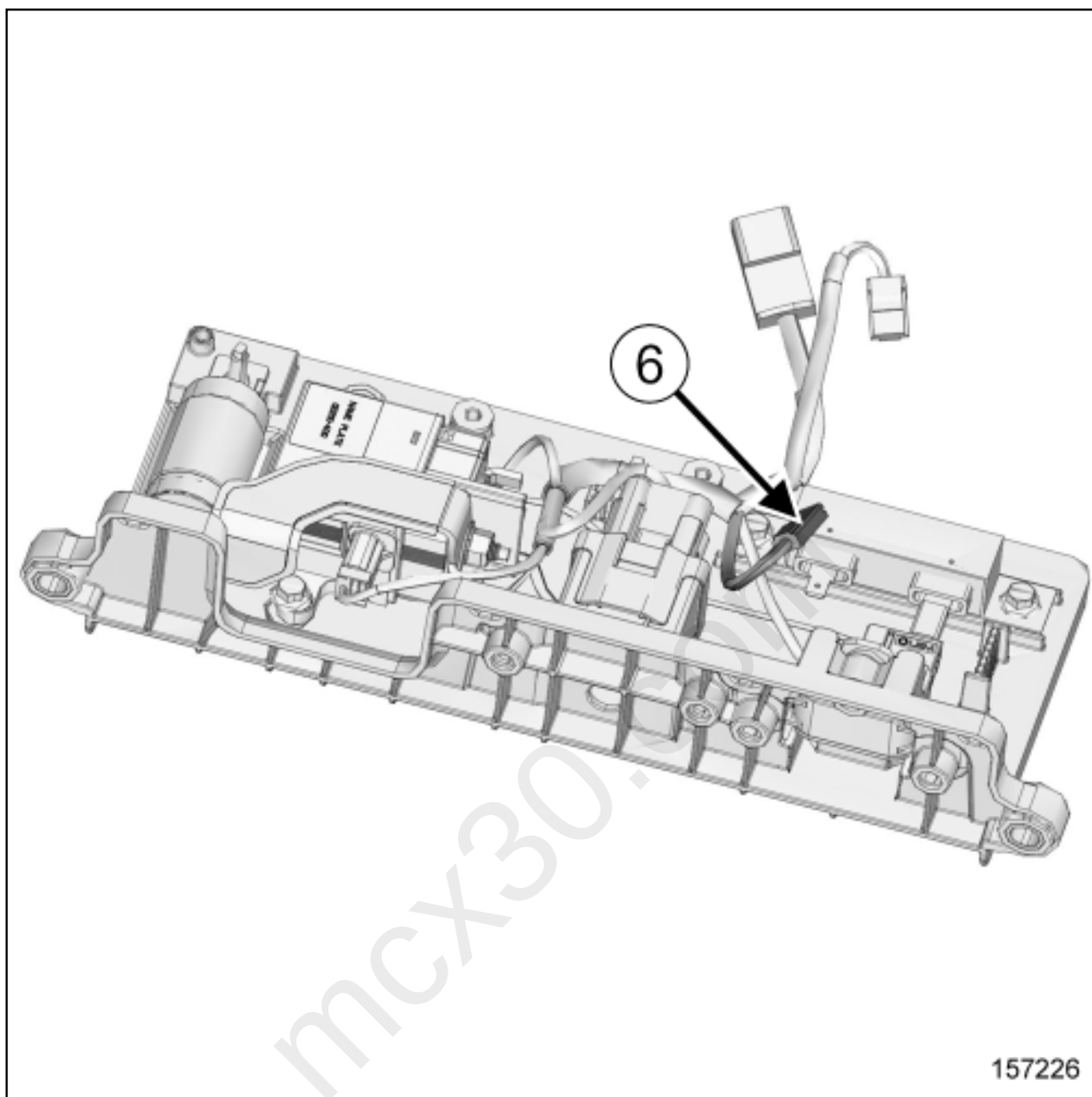
■ Unclip the internal junction box wiring socket(3) using the toolSet of trim removal levers.(Car. 1363) .



- Move the socket of the internal junction box wiring(4) .

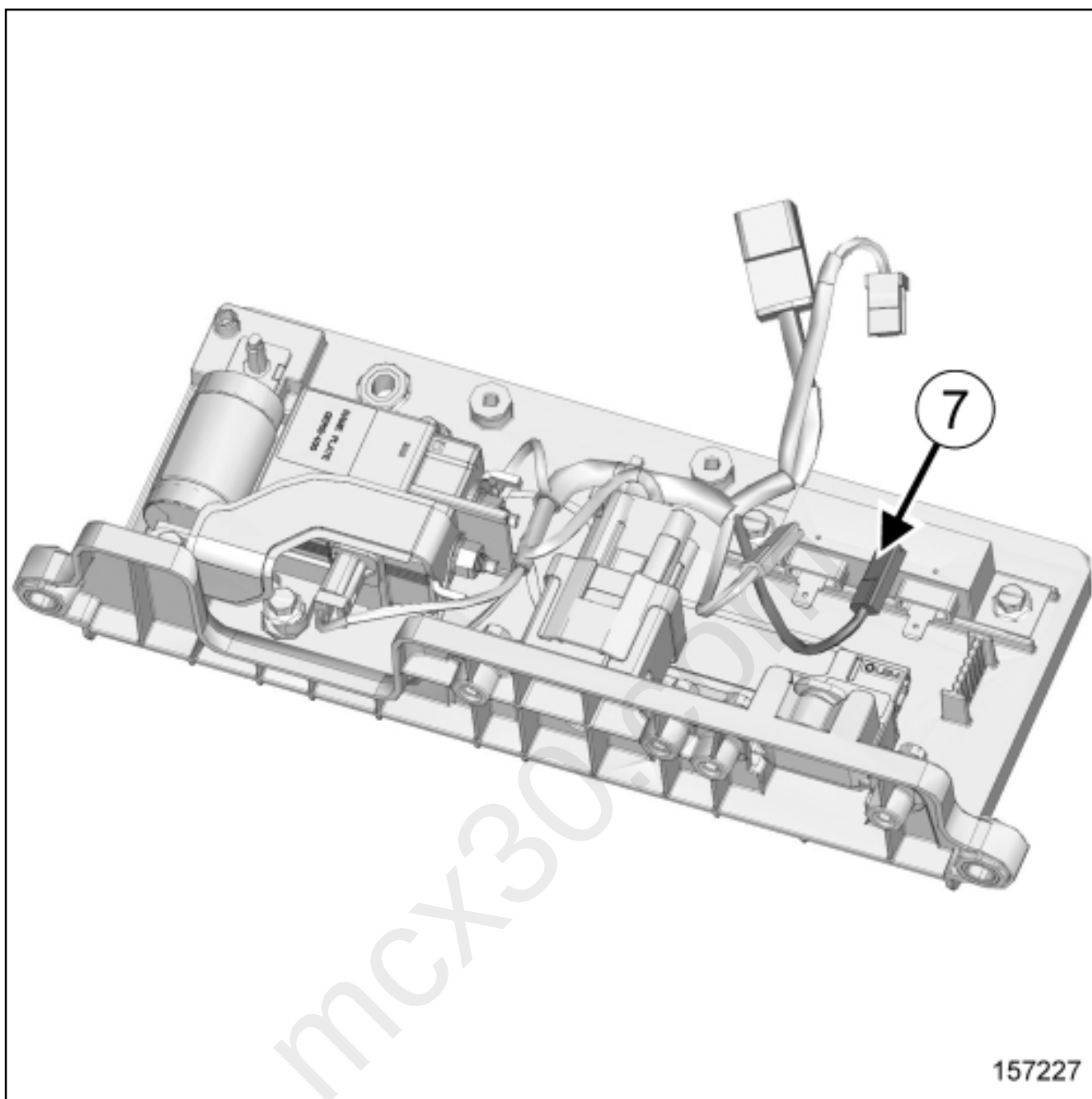


- Unclip the clip from the internal junction plate using the toolSet of trim removal levers.(Car. 1363) .



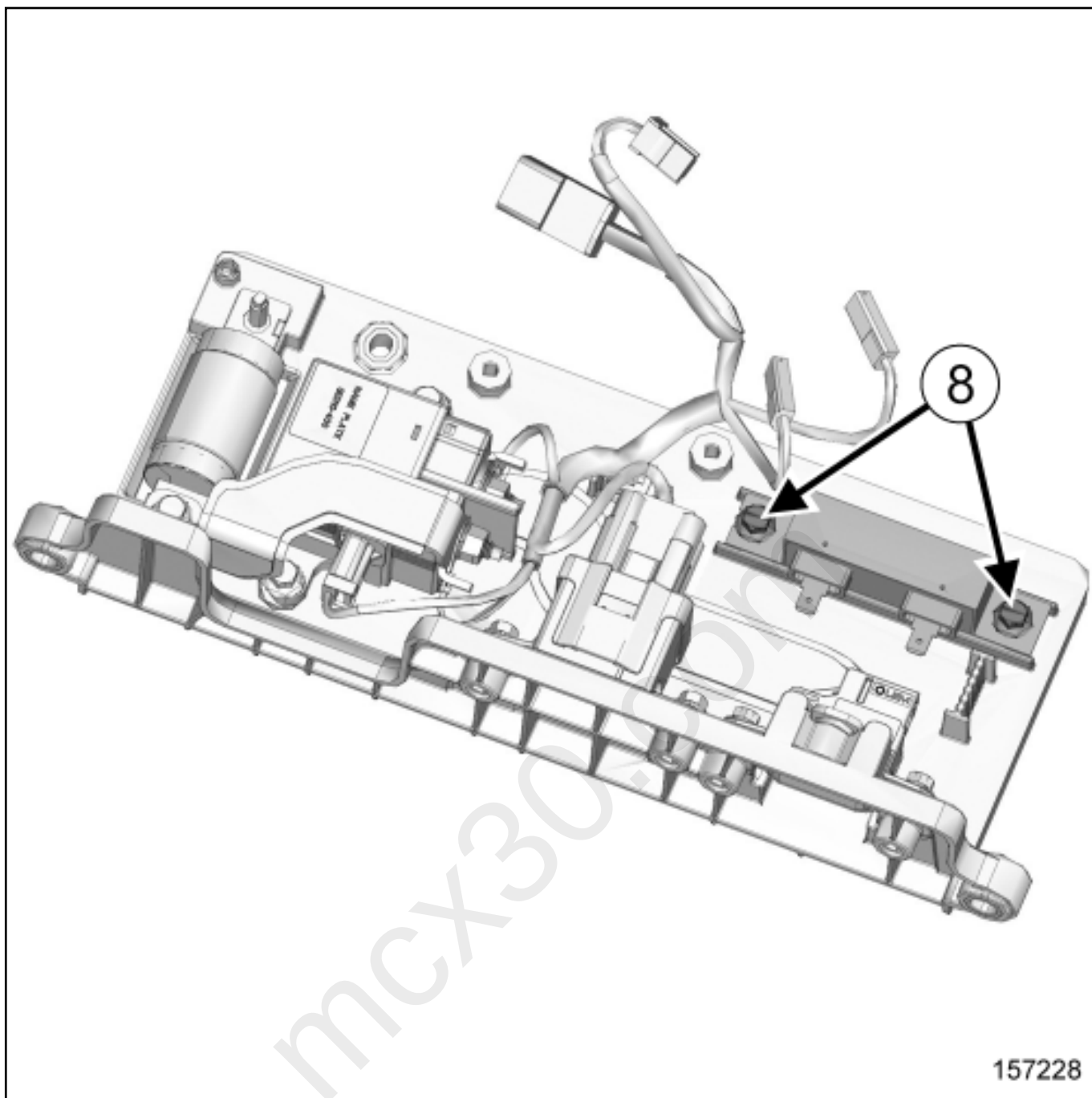
■ Disconnect the left side terminal(6) from the precharge resistor using the toolSet of trim removal levers. (Car. 1363) .

■ Move the left terminal plug wire.

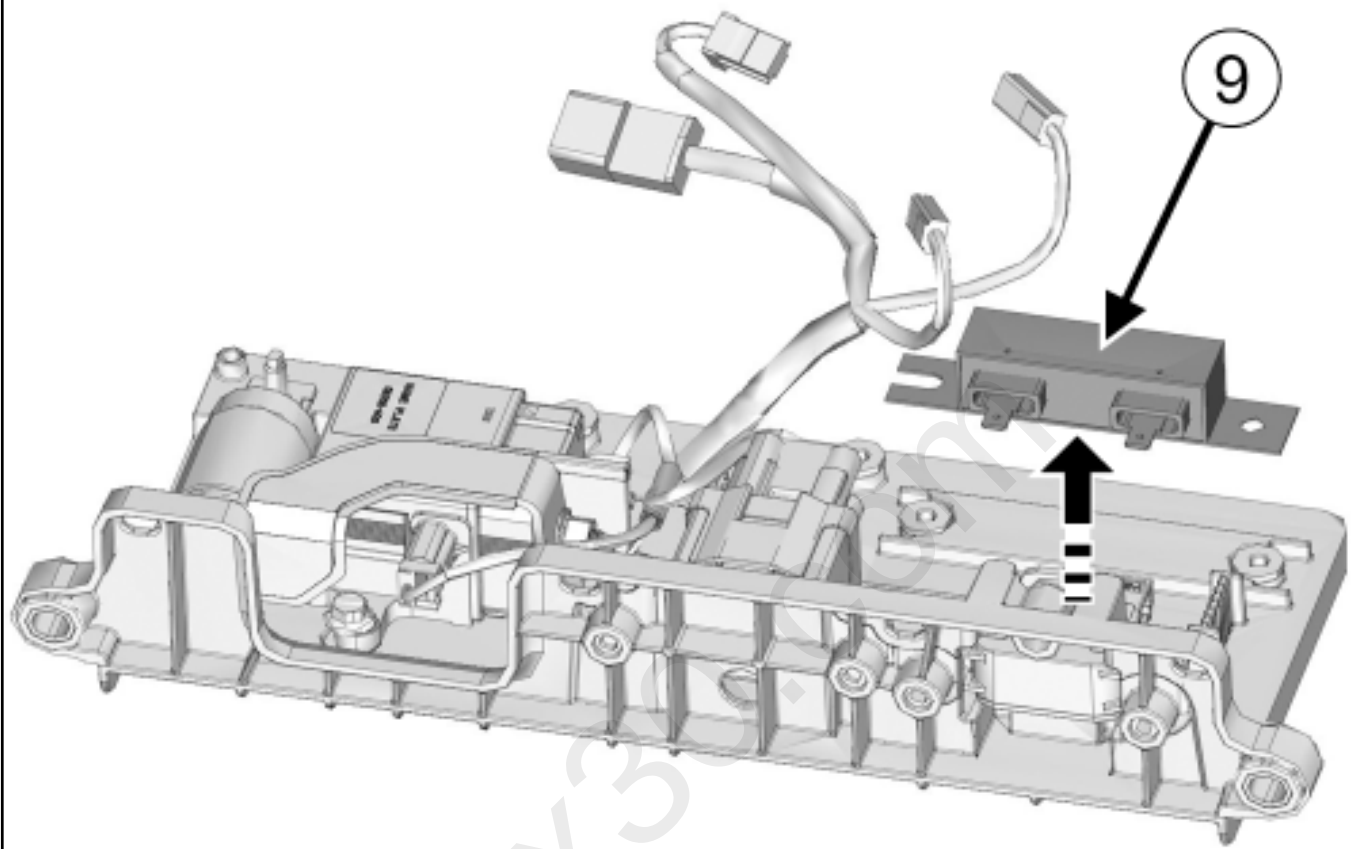


■ Disconnect the right side terminal from the precharge resistor(7) using the toolSet of trim removal levers. (Car. 1363) .

■ Move the right side terminal wire.

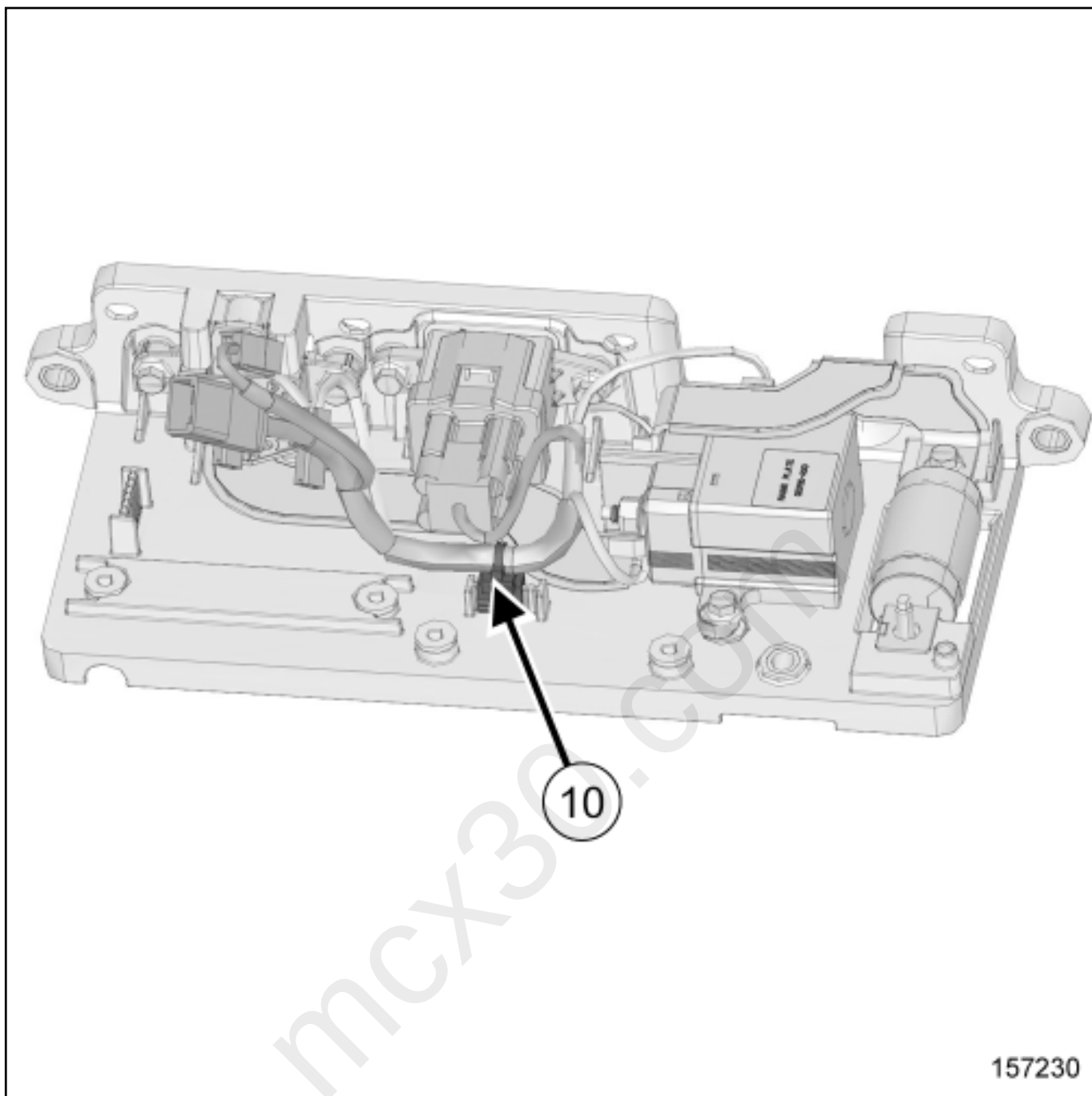


■ Remove the precharge resistor screws(8) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .

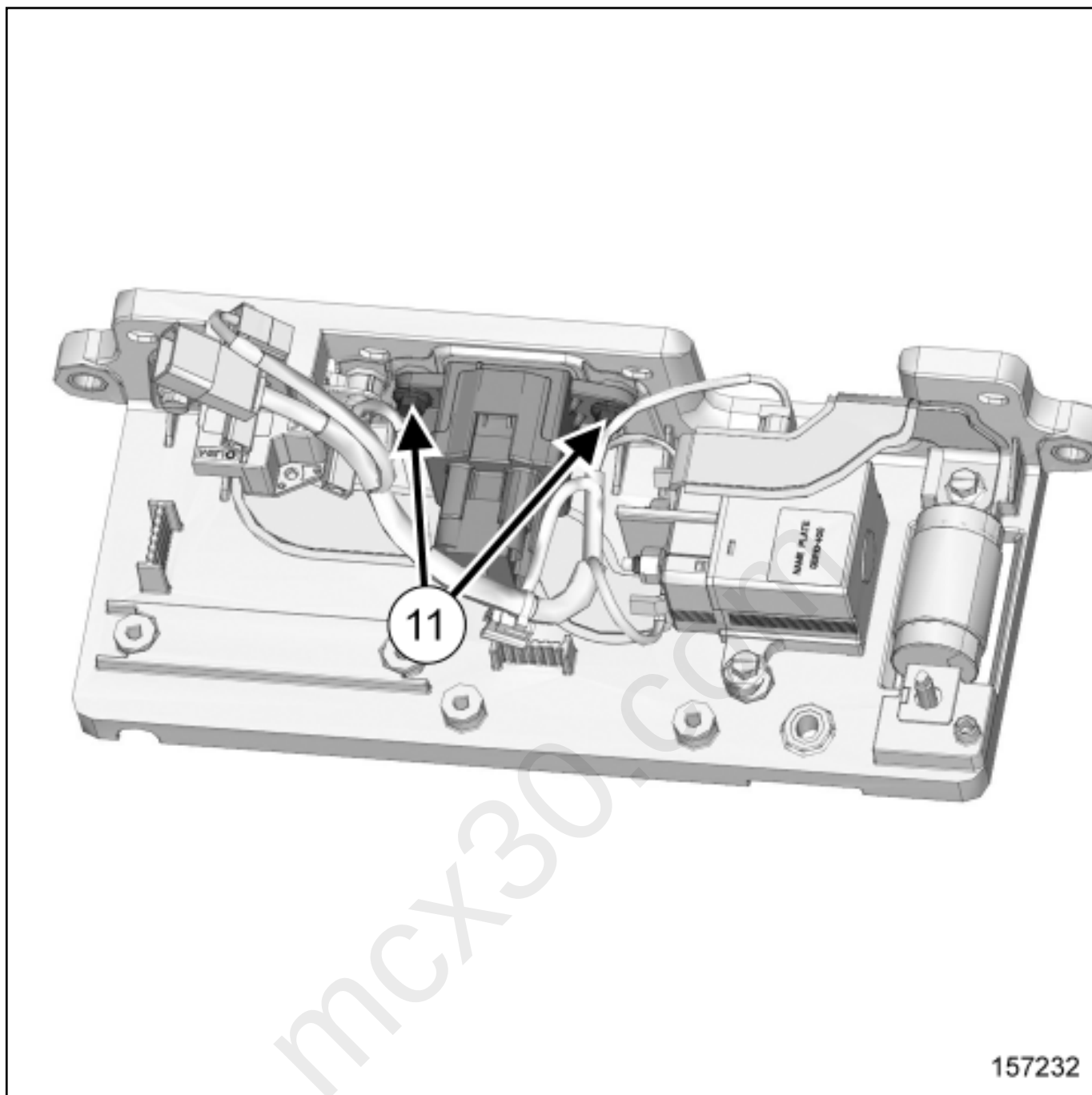


157229

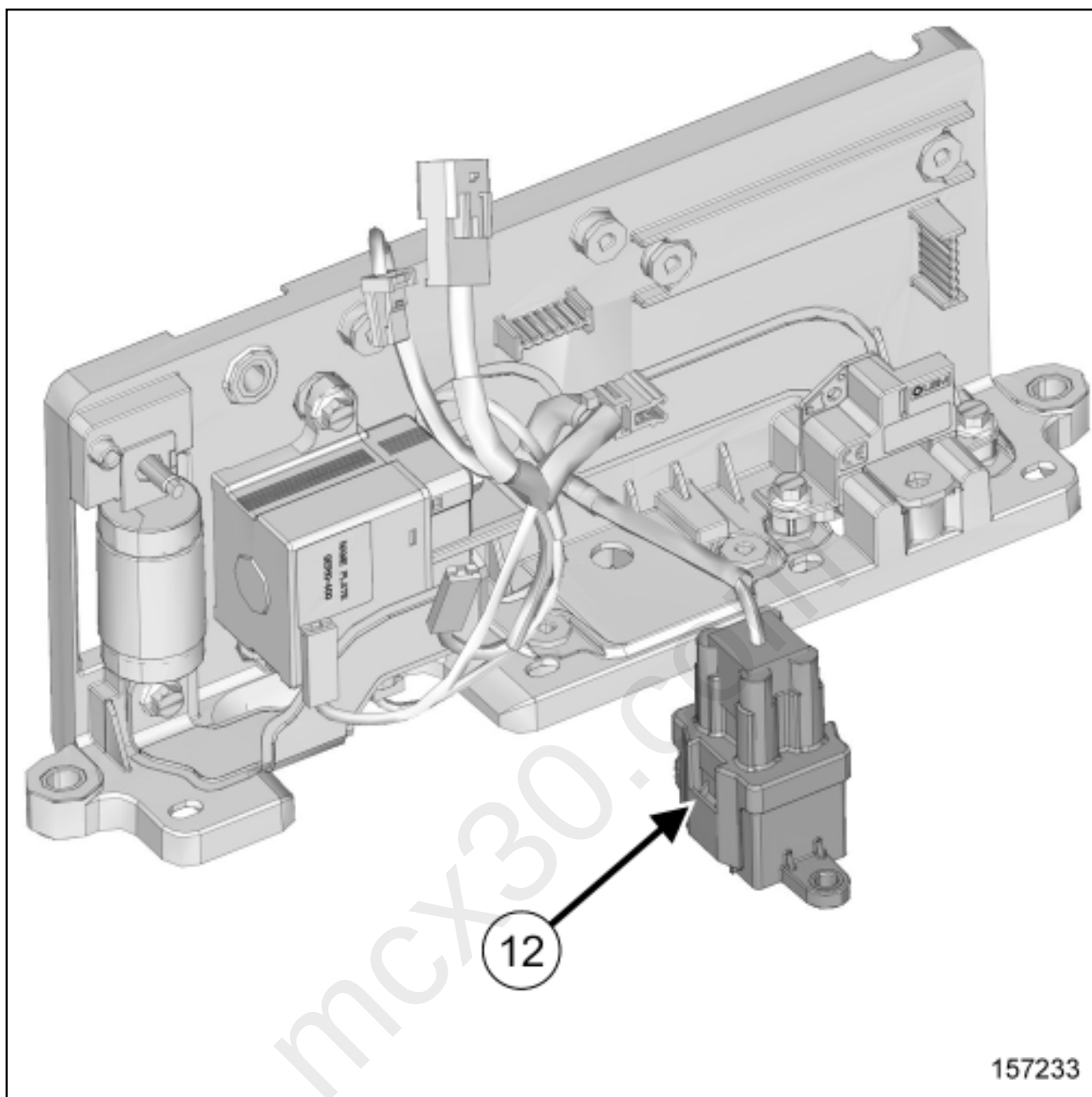
- Remove the precharge resistor(9) .



- Mark the location of the clamp clip(10) on the low voltage wiring using a PAINT MARKER.
- Cut the clamp clip on the low voltage wiring using insulated cutting pliers.
- Move the low voltage wiring.



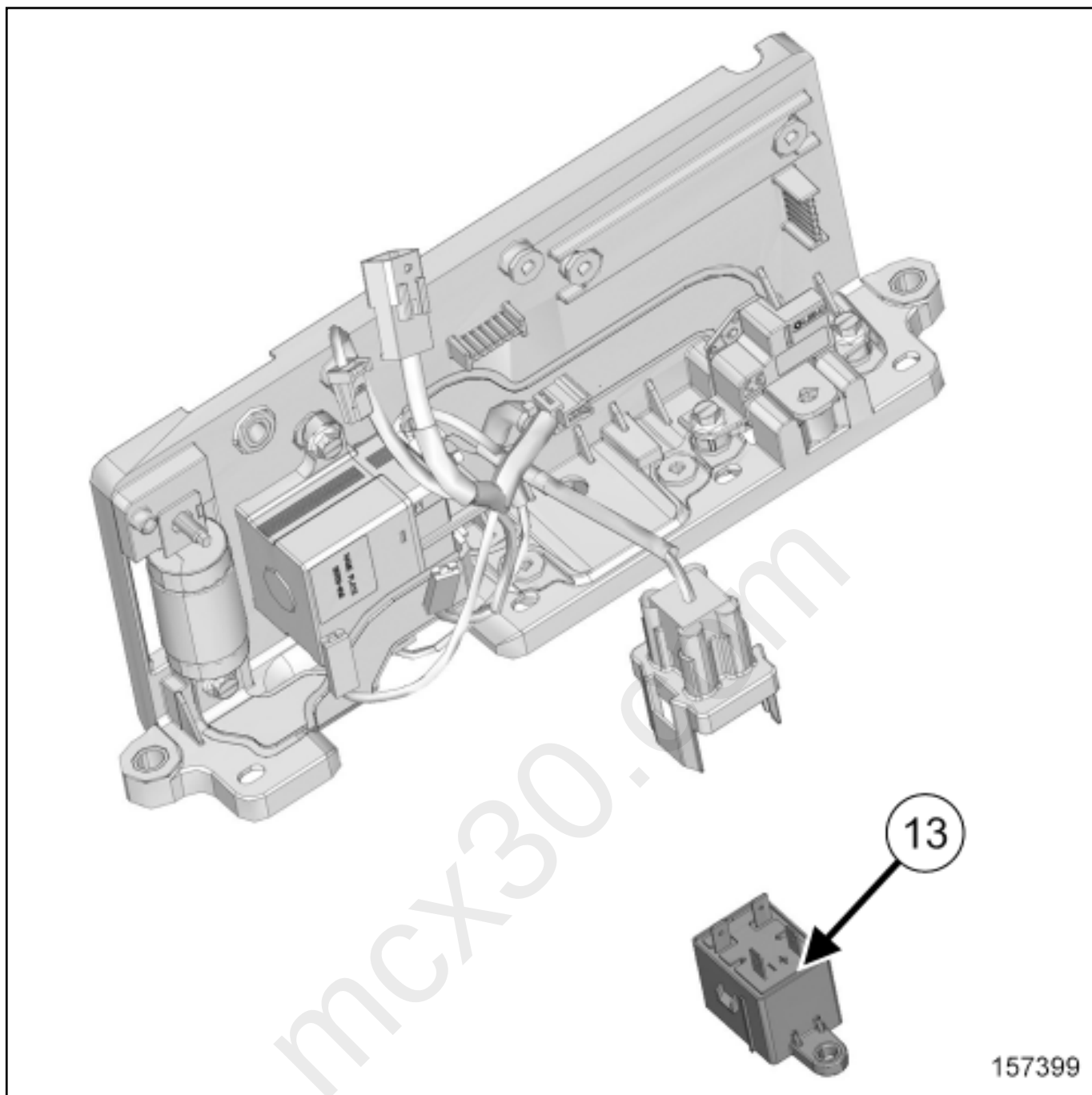
- Remove the precharge relay screws(11) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



- Move the wiring with the precharge relay(12) .

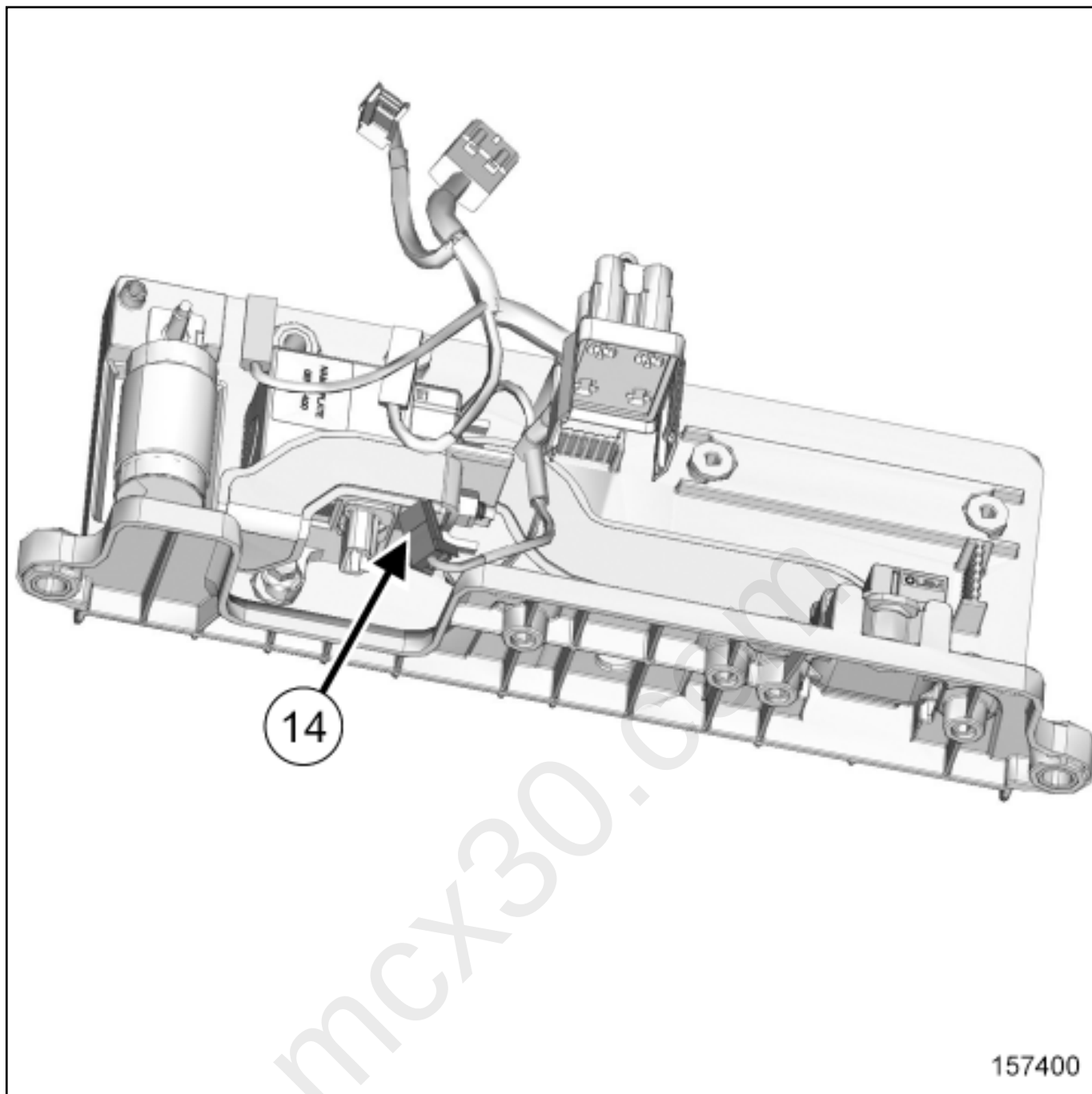
2. REMOVE THE TRACTION BATTERY PRECHARGE RELAY

- Disconnect the precharge relay plug using the toolSet of trim removal levers.(Car. 1363) .



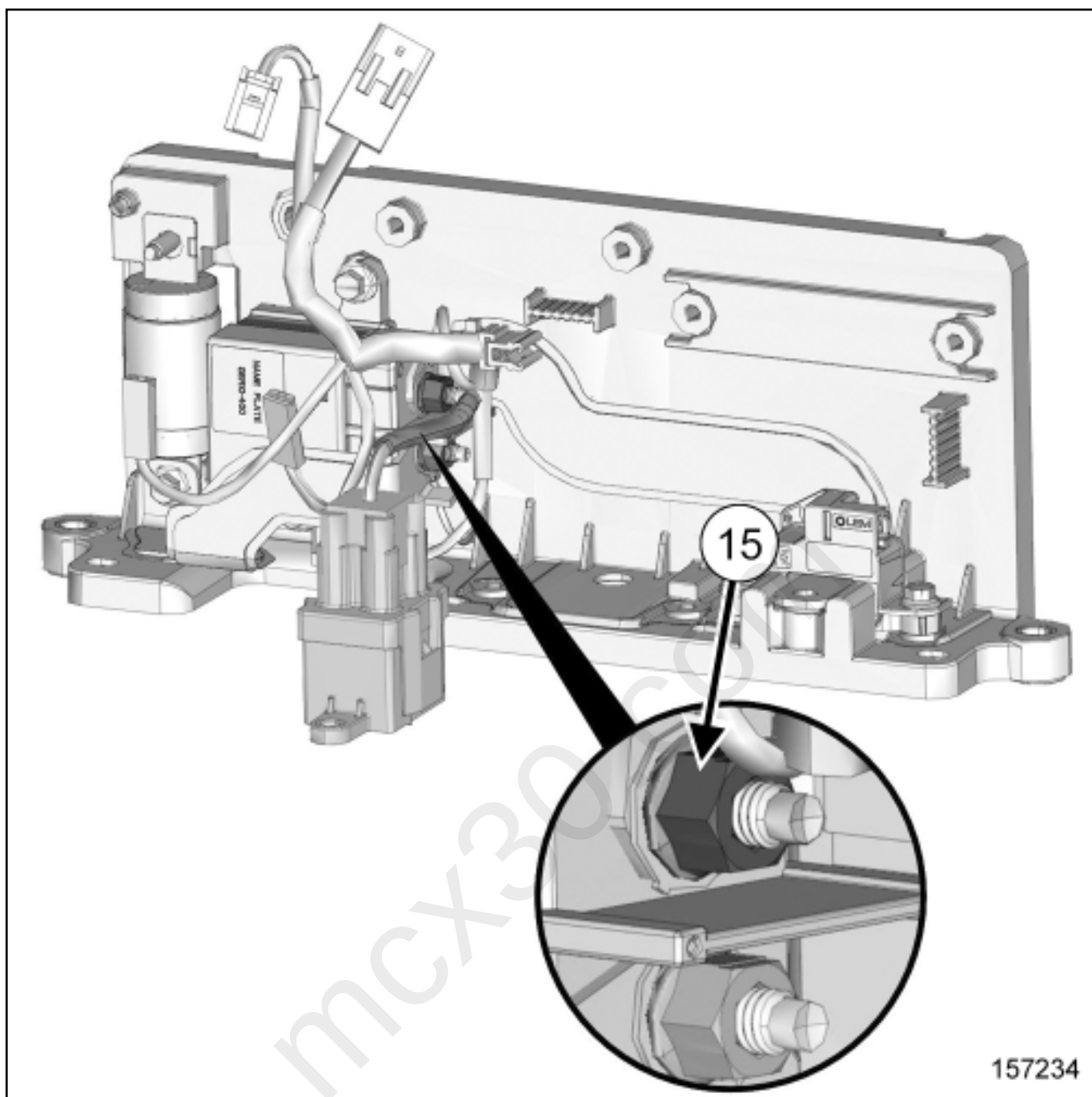
Remove the precharge relay(13) .

3. REMOVE THE TRACTION BATTERY MAIN RELAY

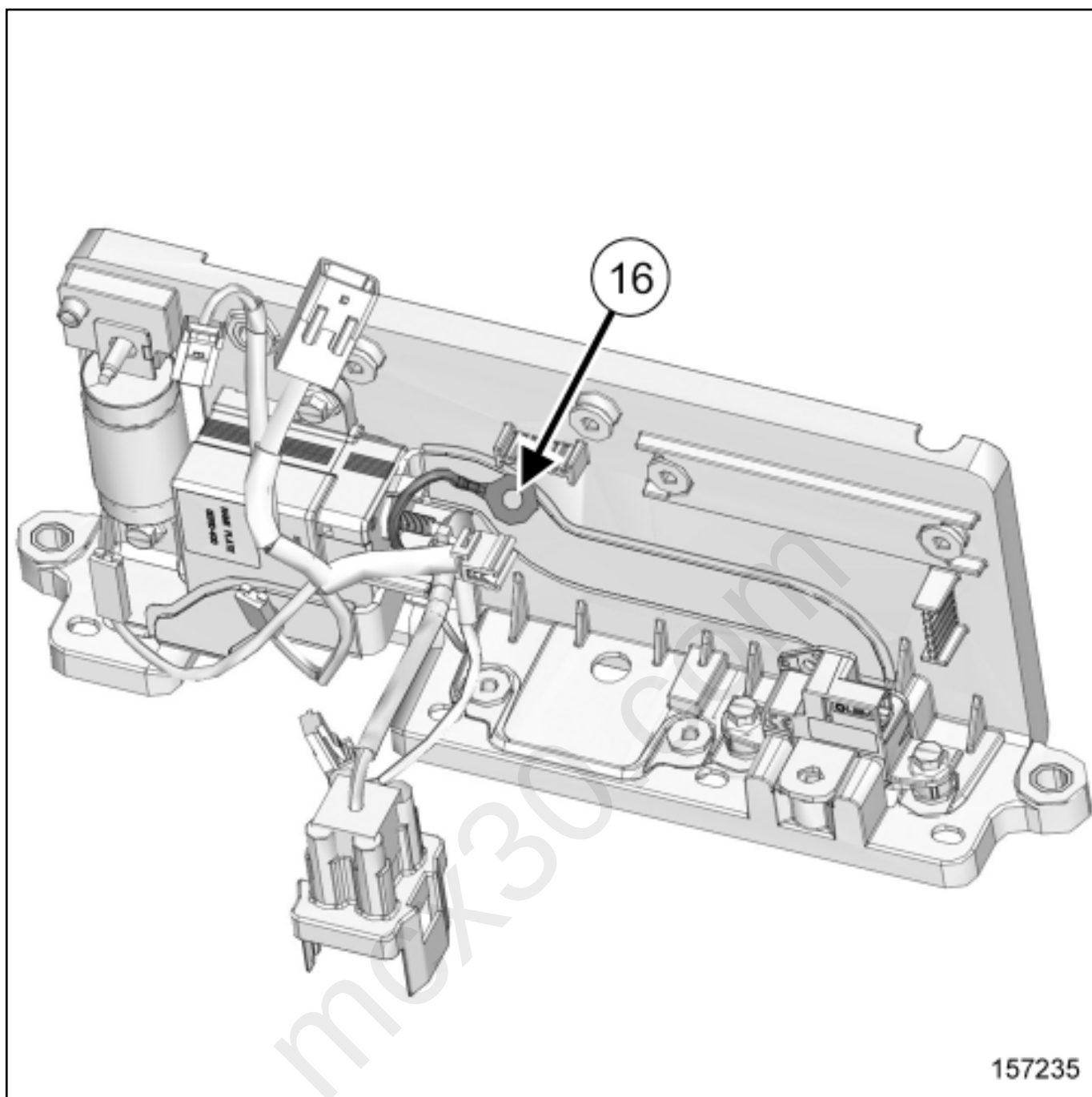


157400

Disconnect the main relay plug(14) using the toolSet of trim removal levers.(Car. 1363) .



Remove the main relay electric connection upper nut(15) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



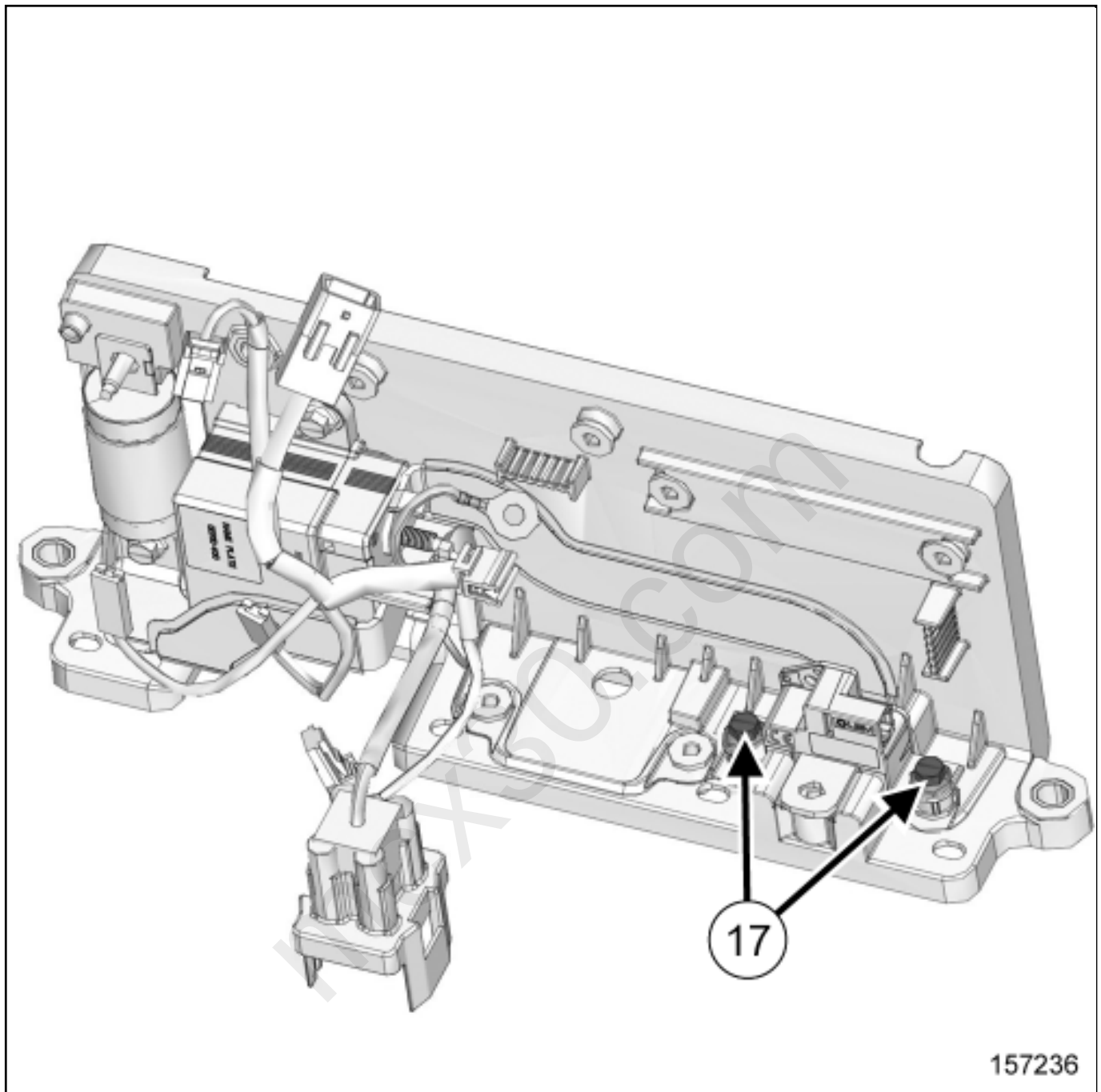
Remove the upper lug(16) using the toolSet of trim removal levers.(Car. 1363) .



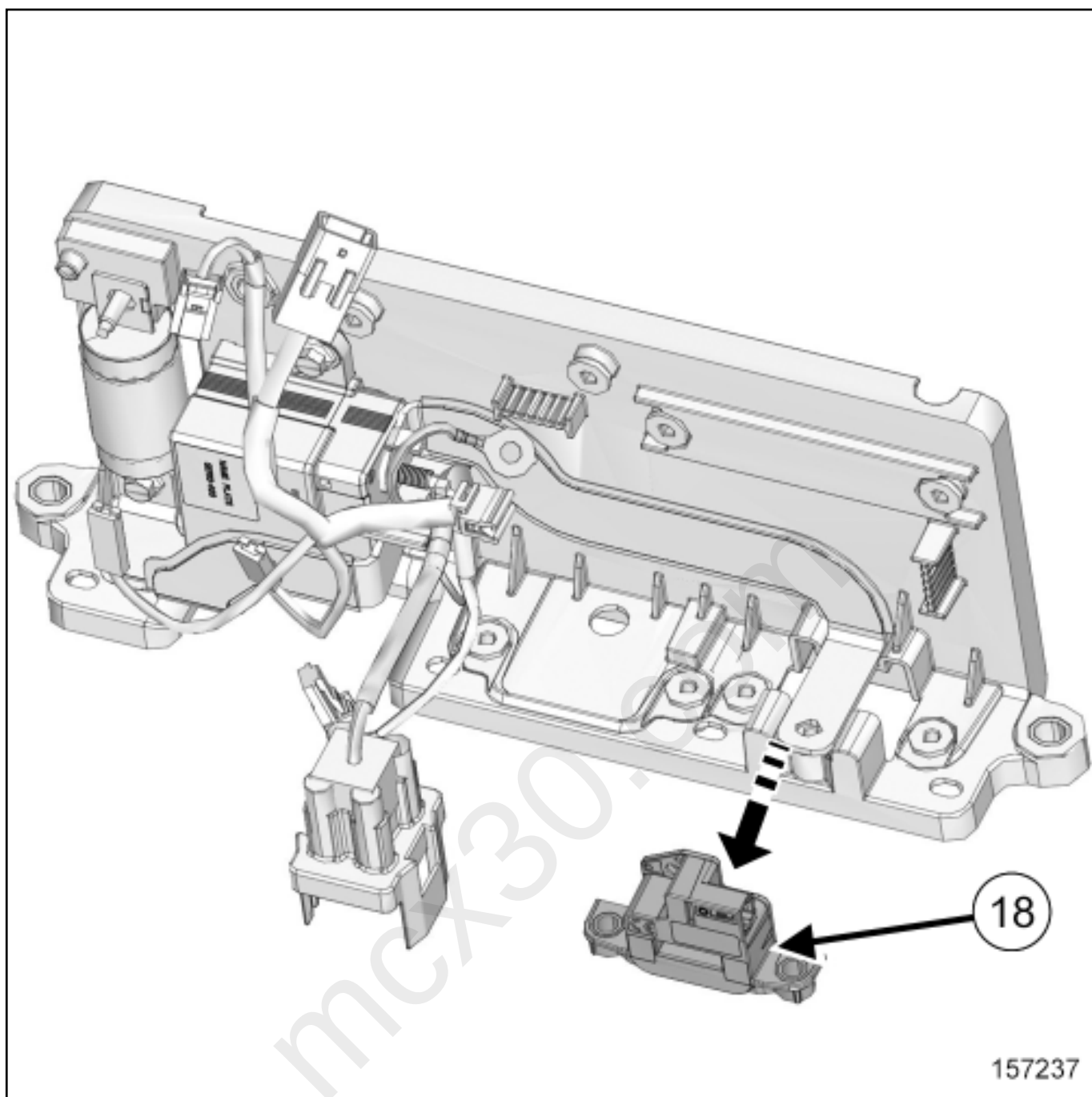
Note:

Black lug.

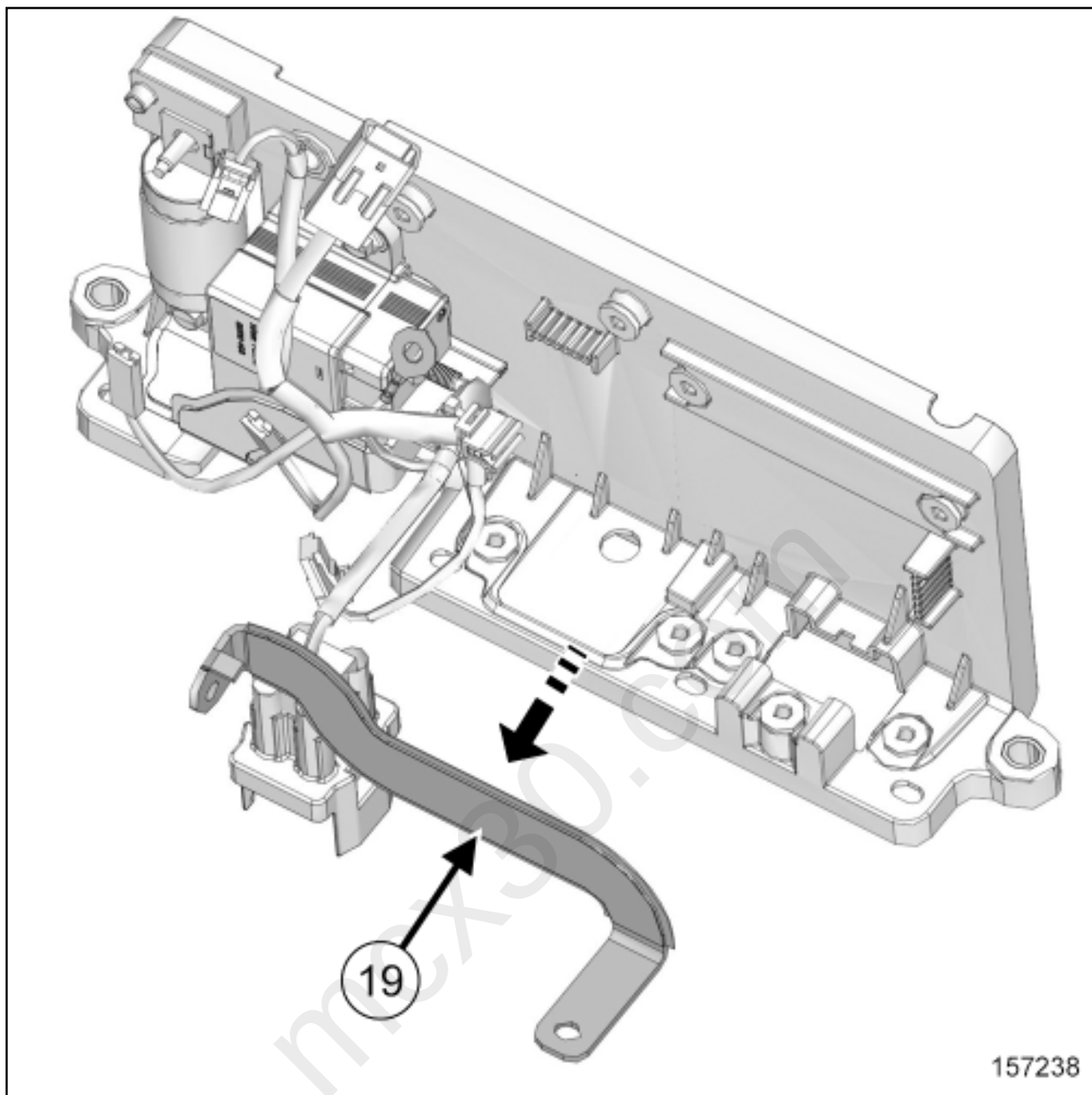
Move the wiring.



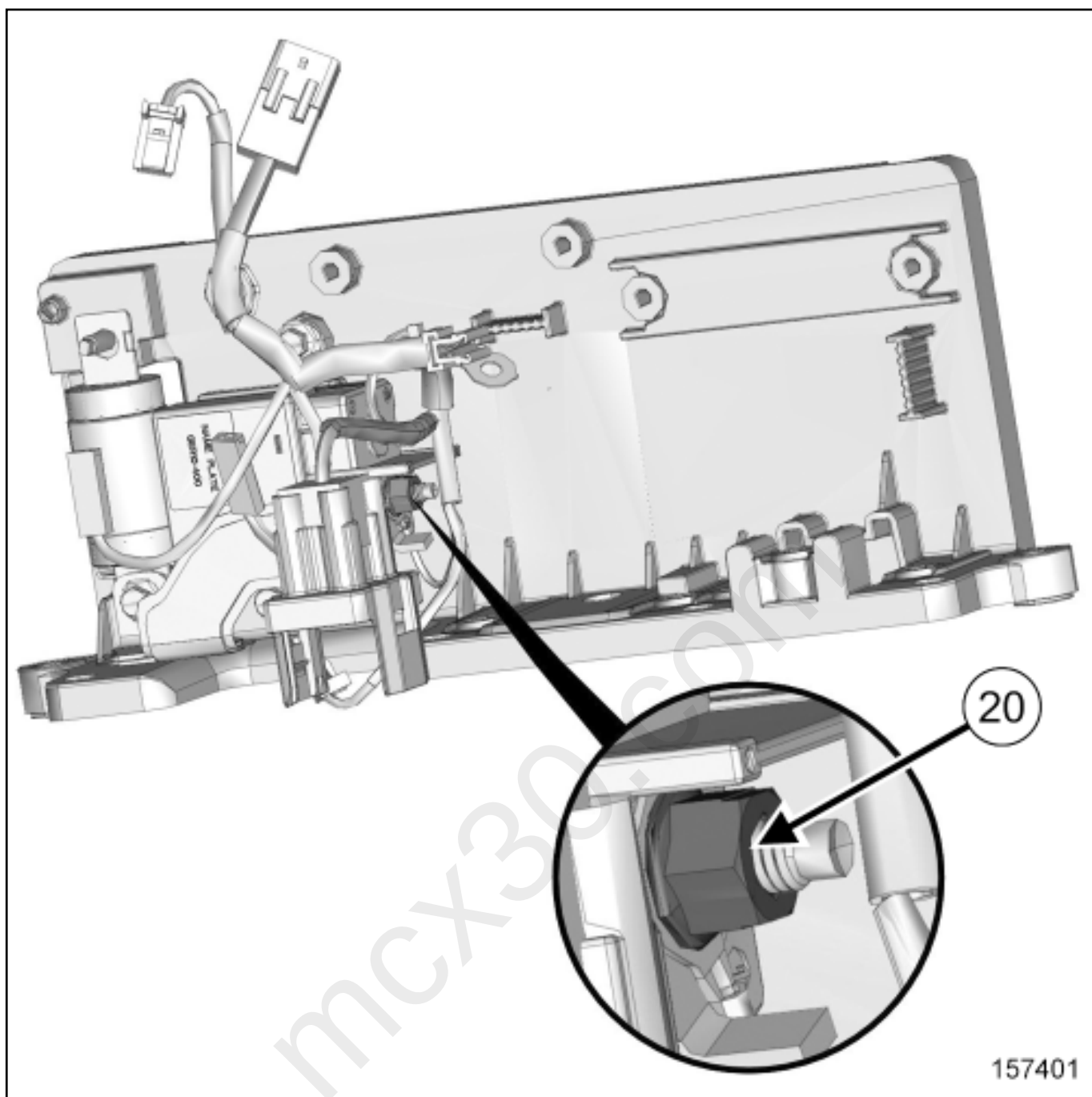
Remove the current sensor screws(17) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



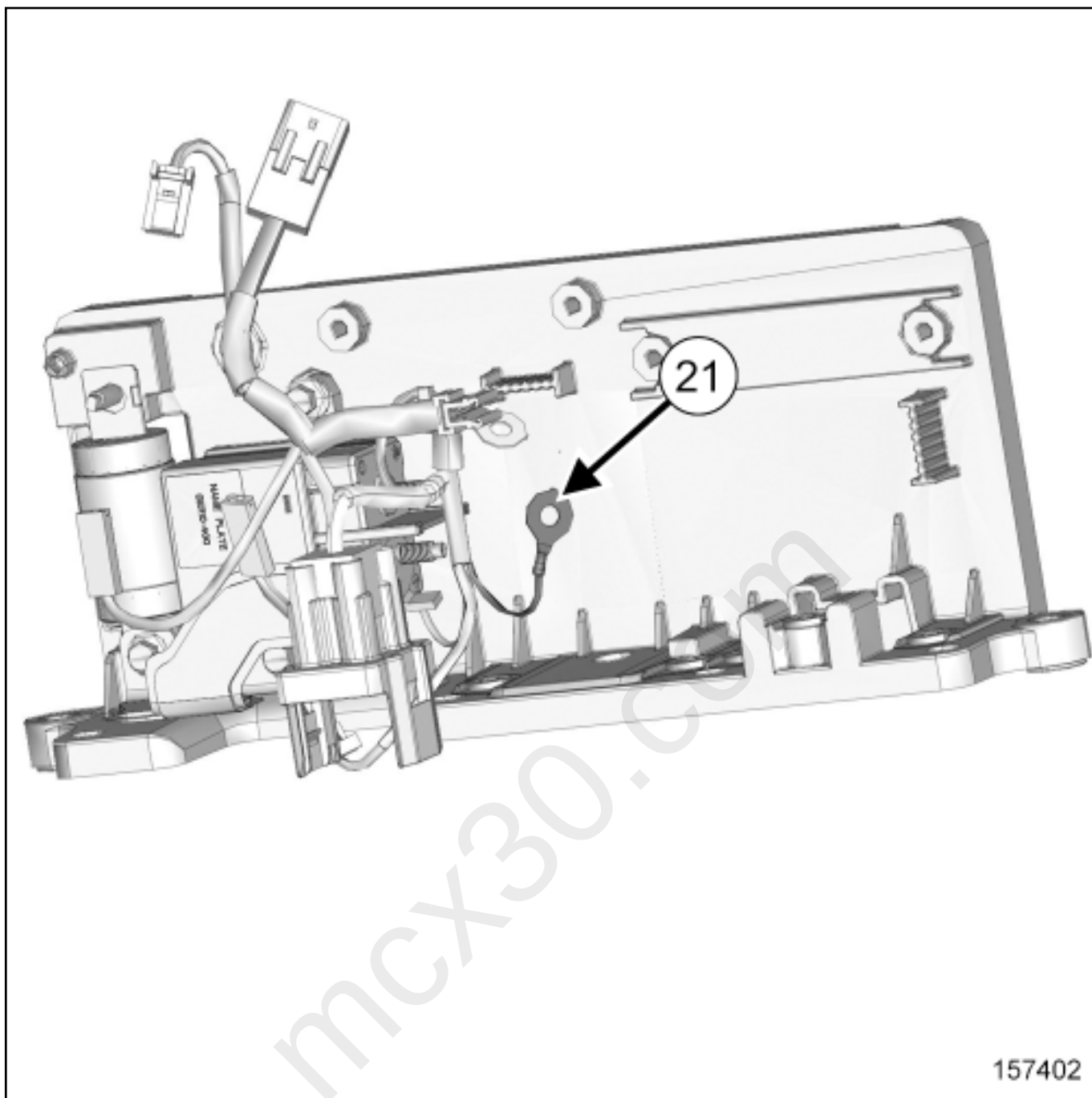
Remove the current sensor(18) .



Remove the bus bar(19) .



Remove the main relay electric connection lower nut(20) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



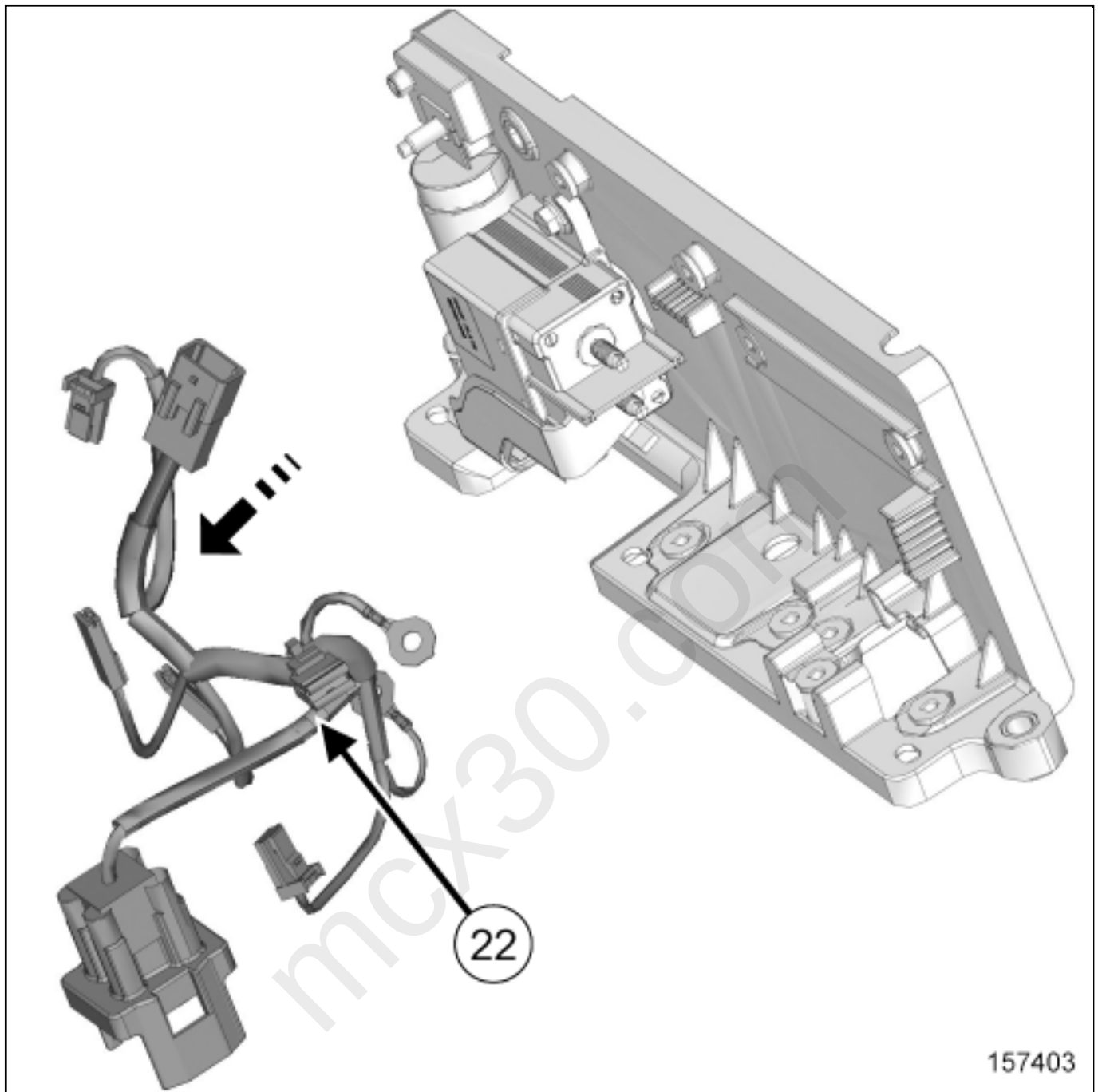
Remove the lower lug(21) using the toolSet of trim removal levers.(Car. 1363) .



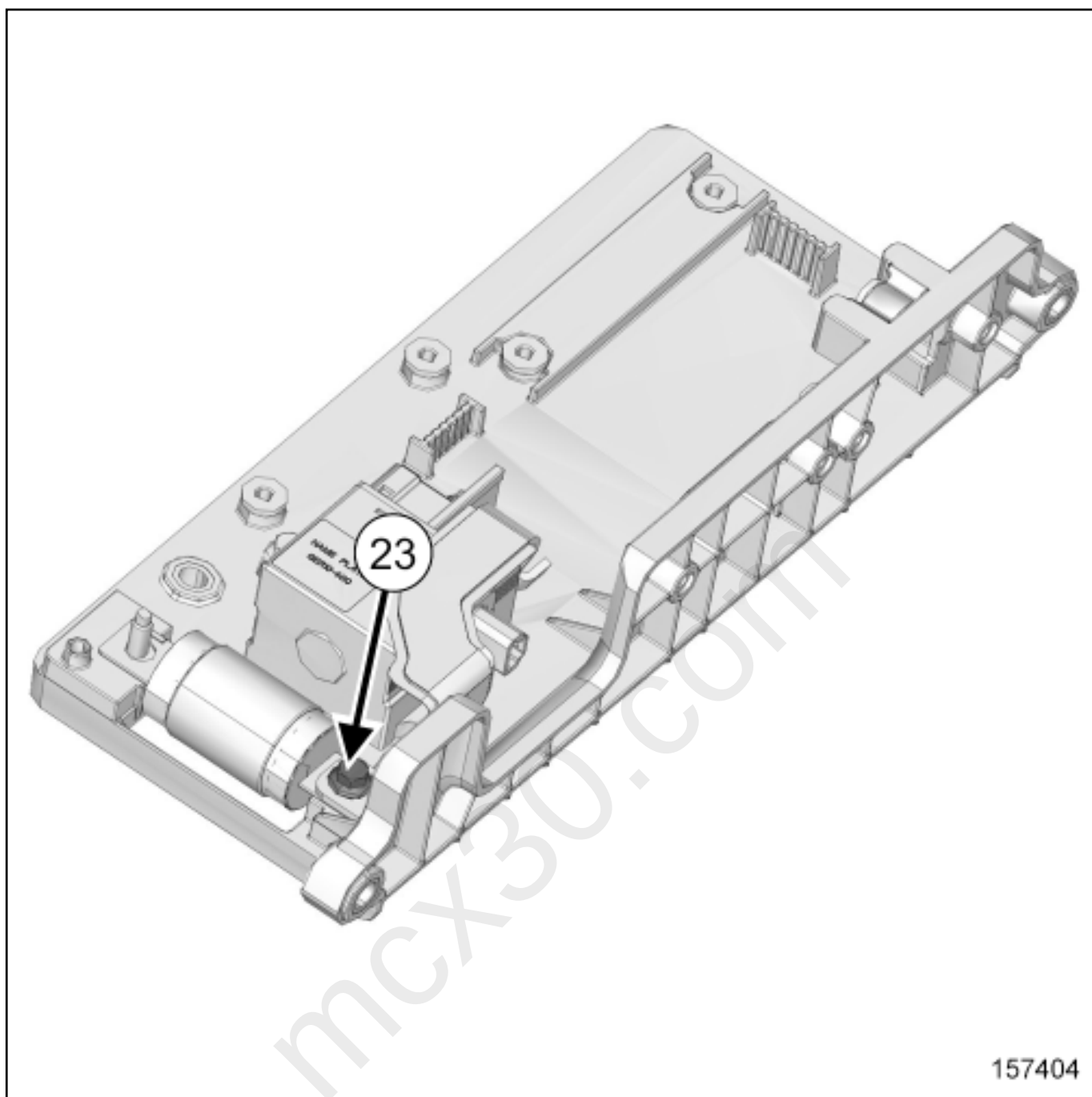
Note:

Red lug.

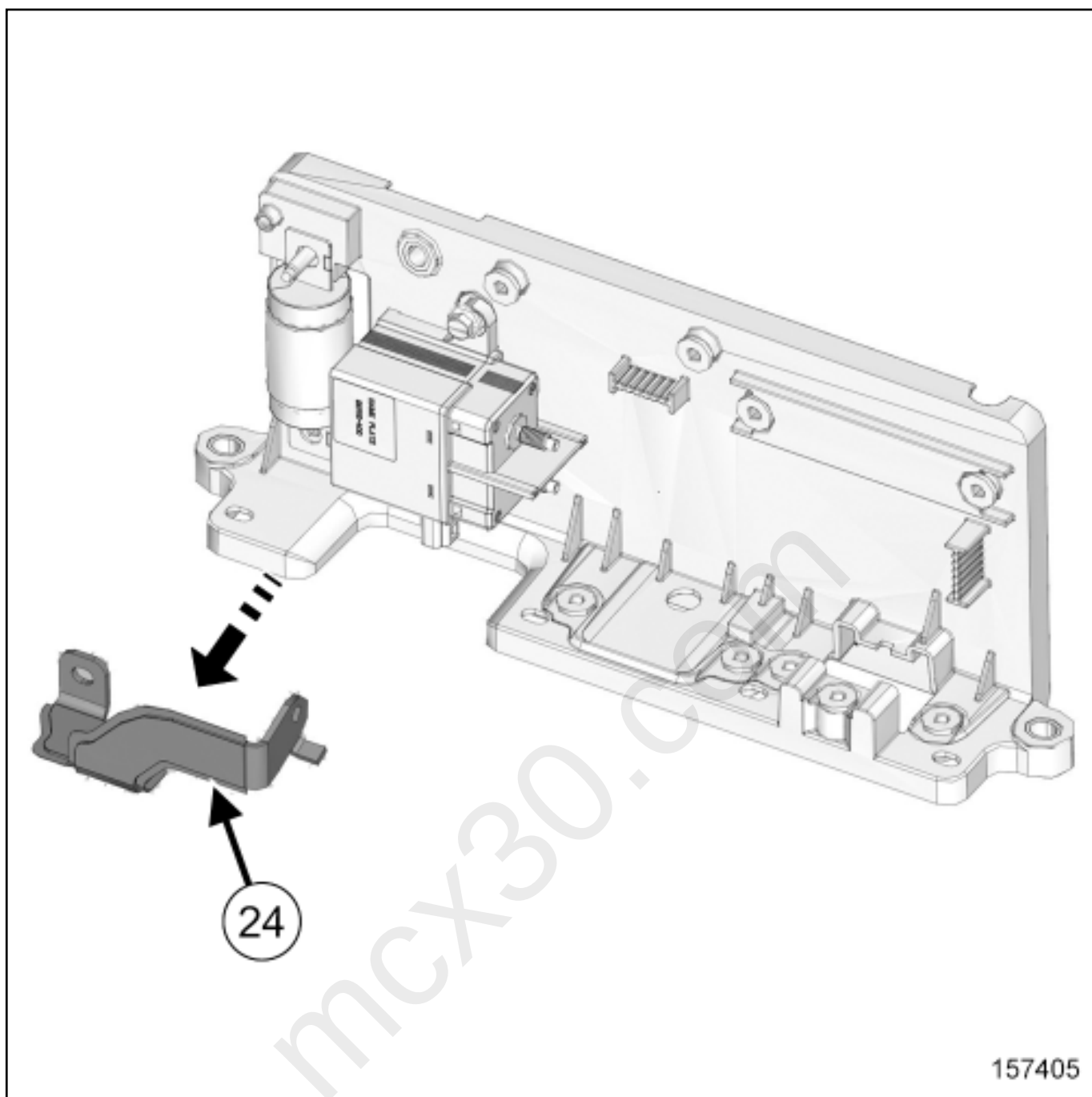
Move the wiring.



Remove the internal junction box wiring(22) .

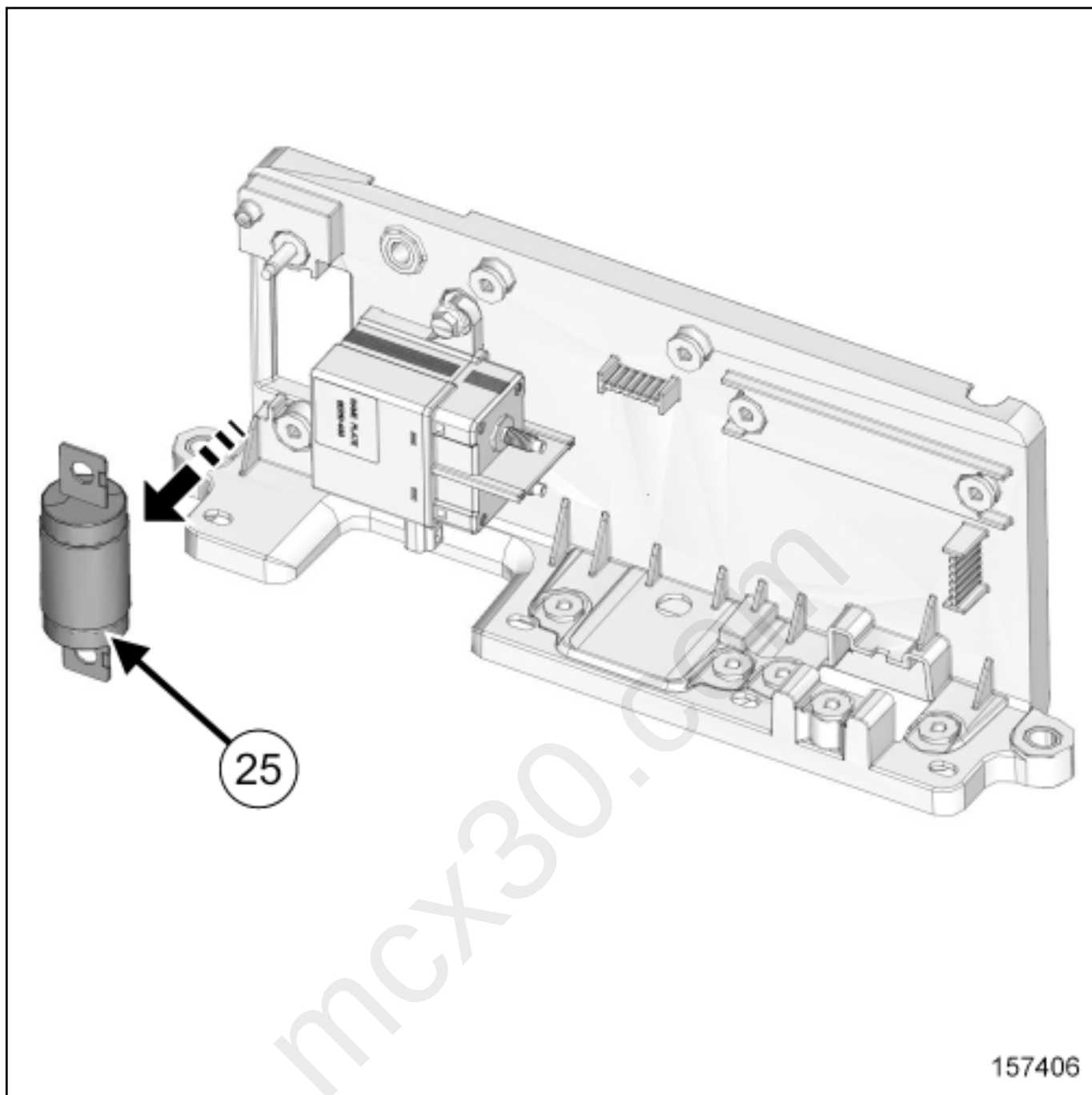


Remove the fuse electric connection screw(23) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



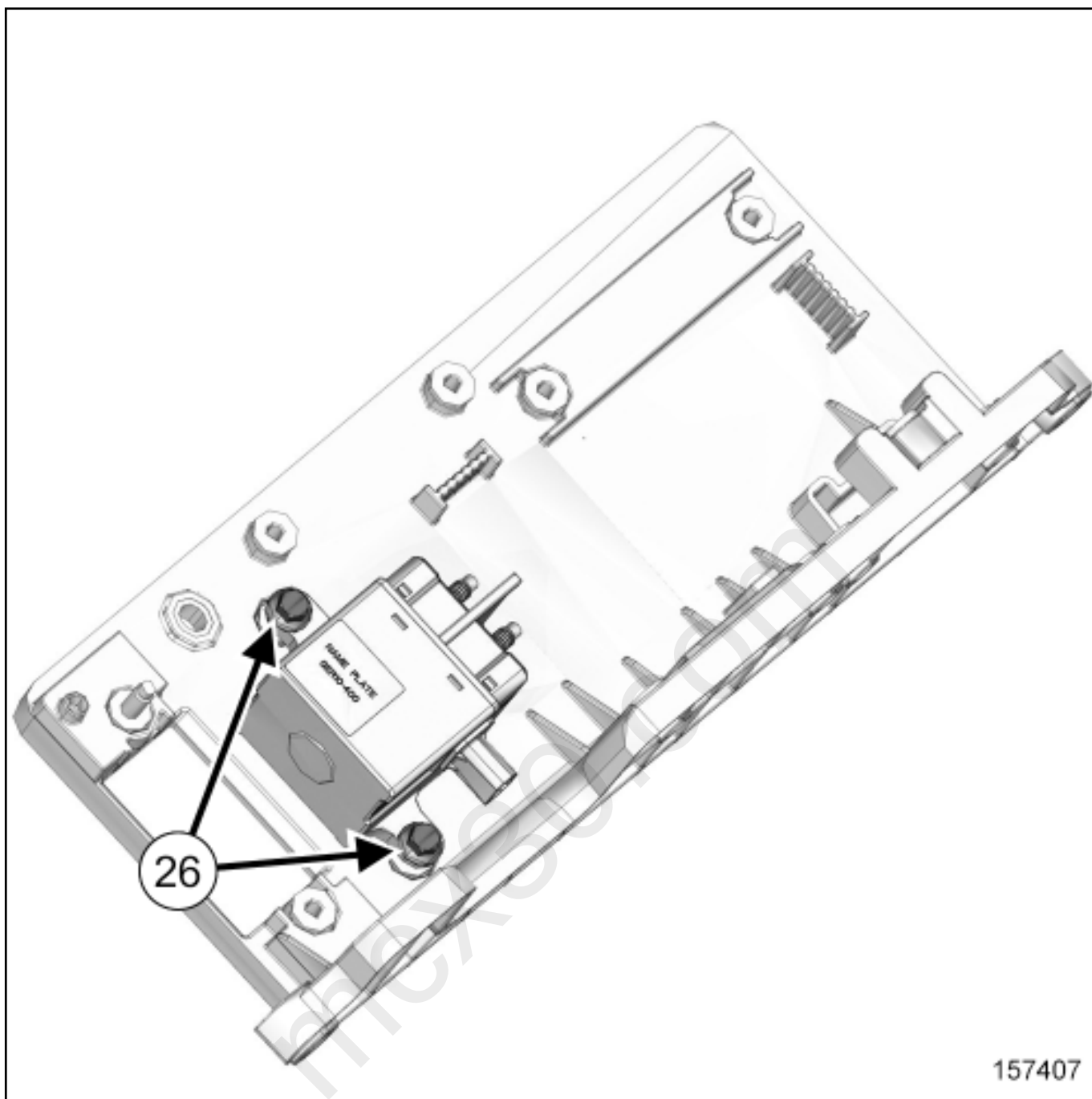
157405

Remove the bus bar(24) .

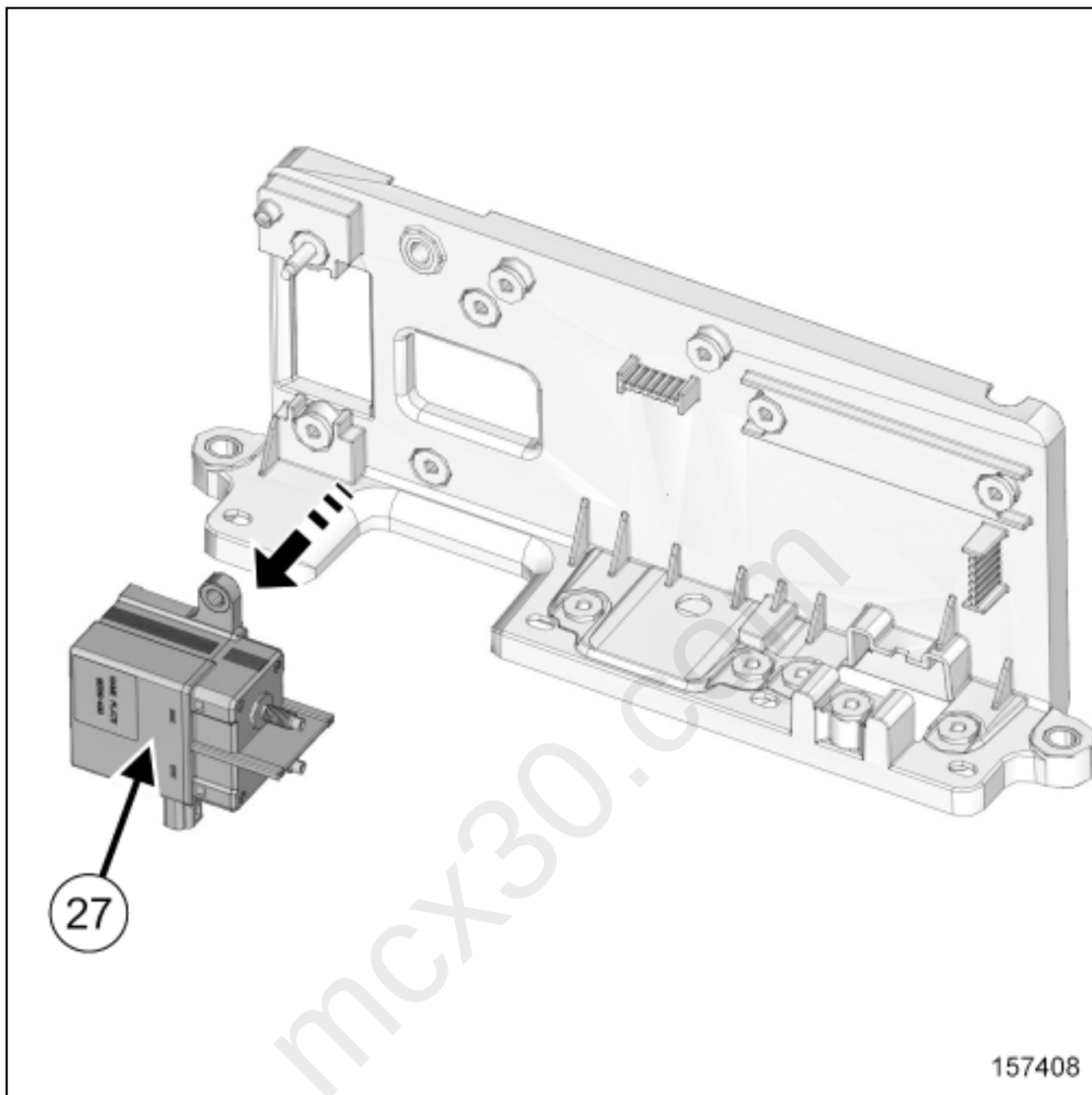


157406

Remove the fuse.



Remove the main relay screws(26) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



Remove the main relay(27) .

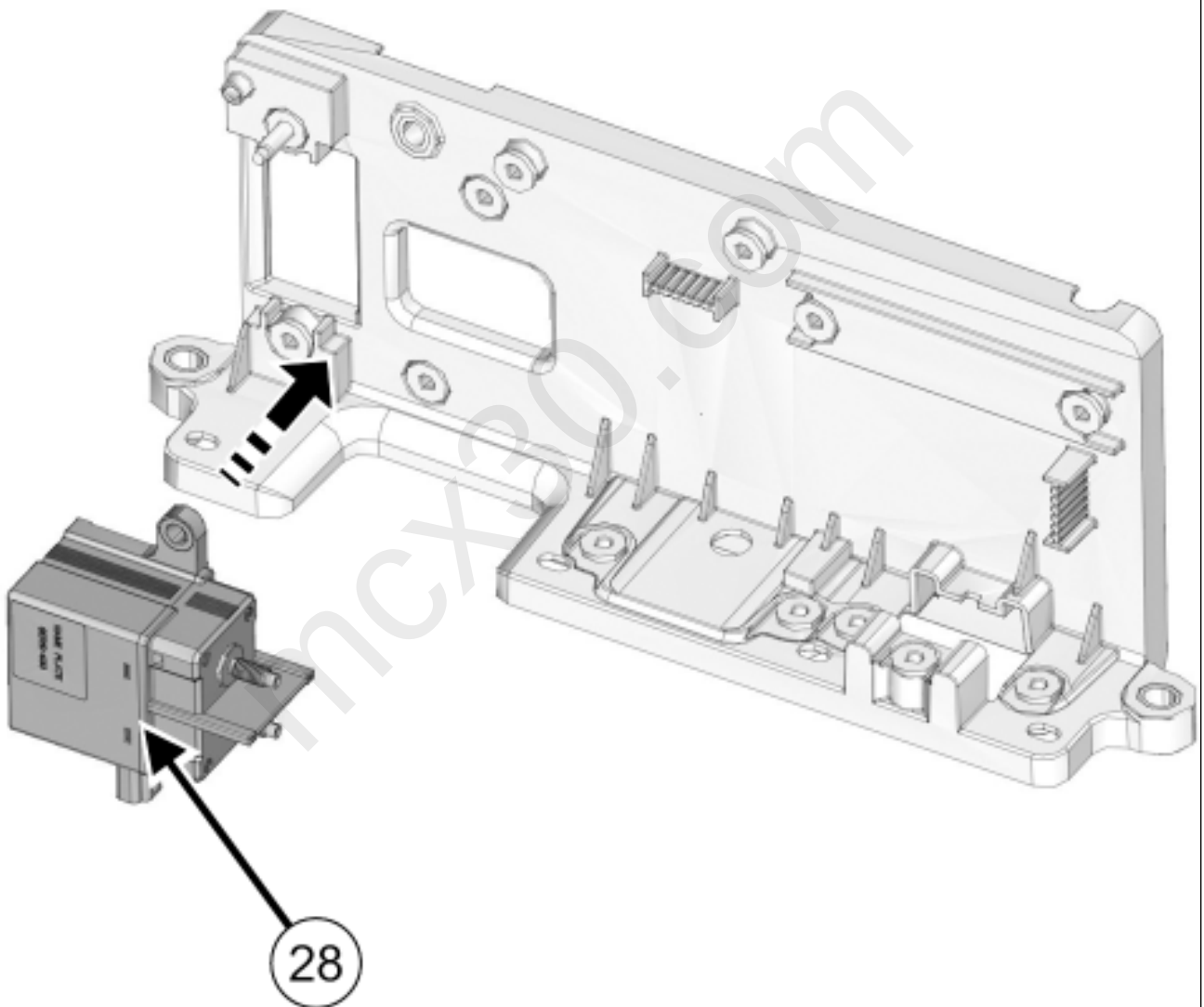
REFITTING

1. REFIT THE TRACTION BATTERY MAIN RELAY

Note:

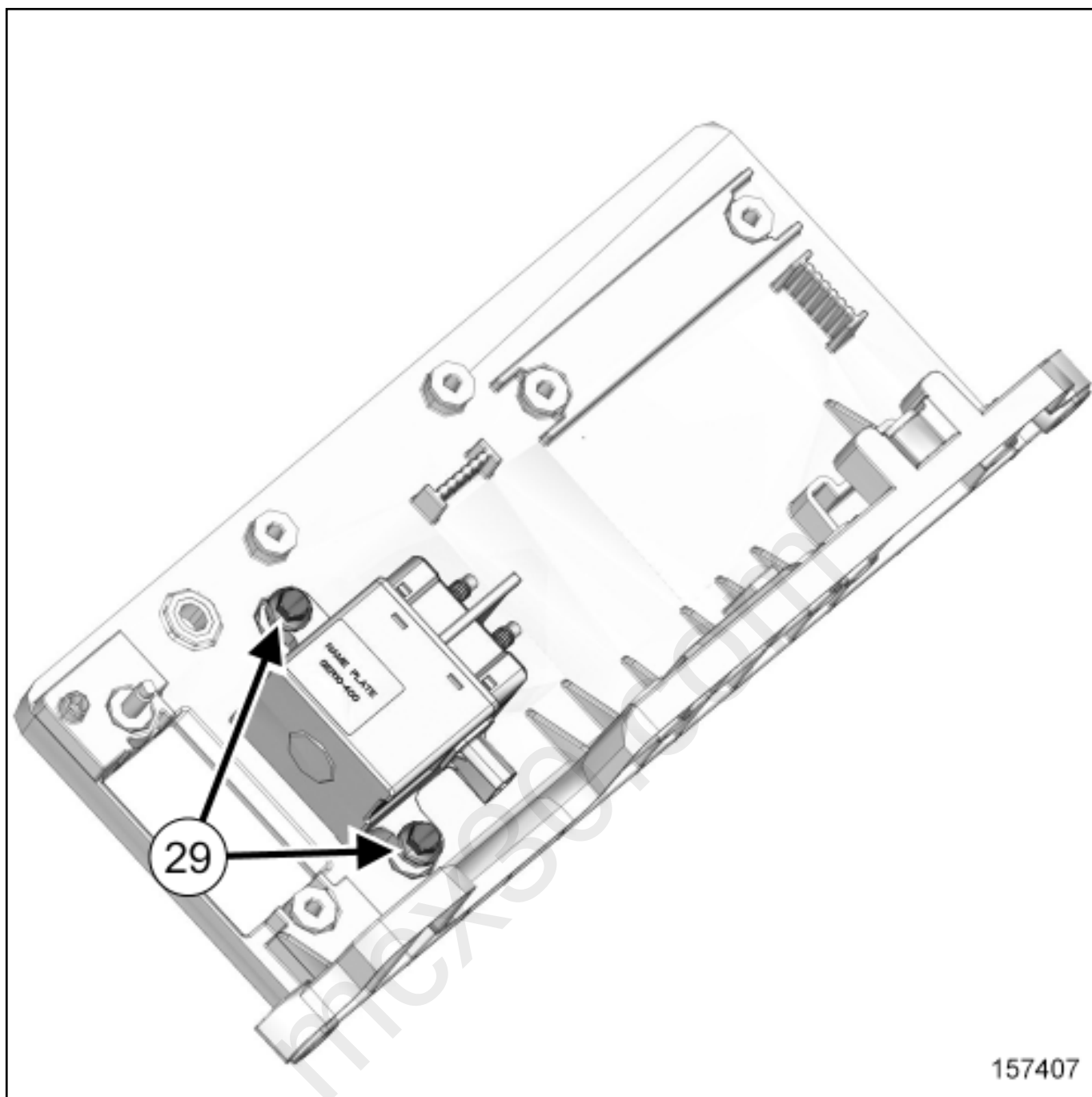


Check the state of the bus bar relays terminals and fuses terminals (no black marks, no corrosion, no trace of electrolusis, no tapping damages, no deformation of the contacts, no sign of break-age, or cracking on the plastic endings). Replace it in case of damage and analyse the origin.



157408

Refit the main relay(28) .



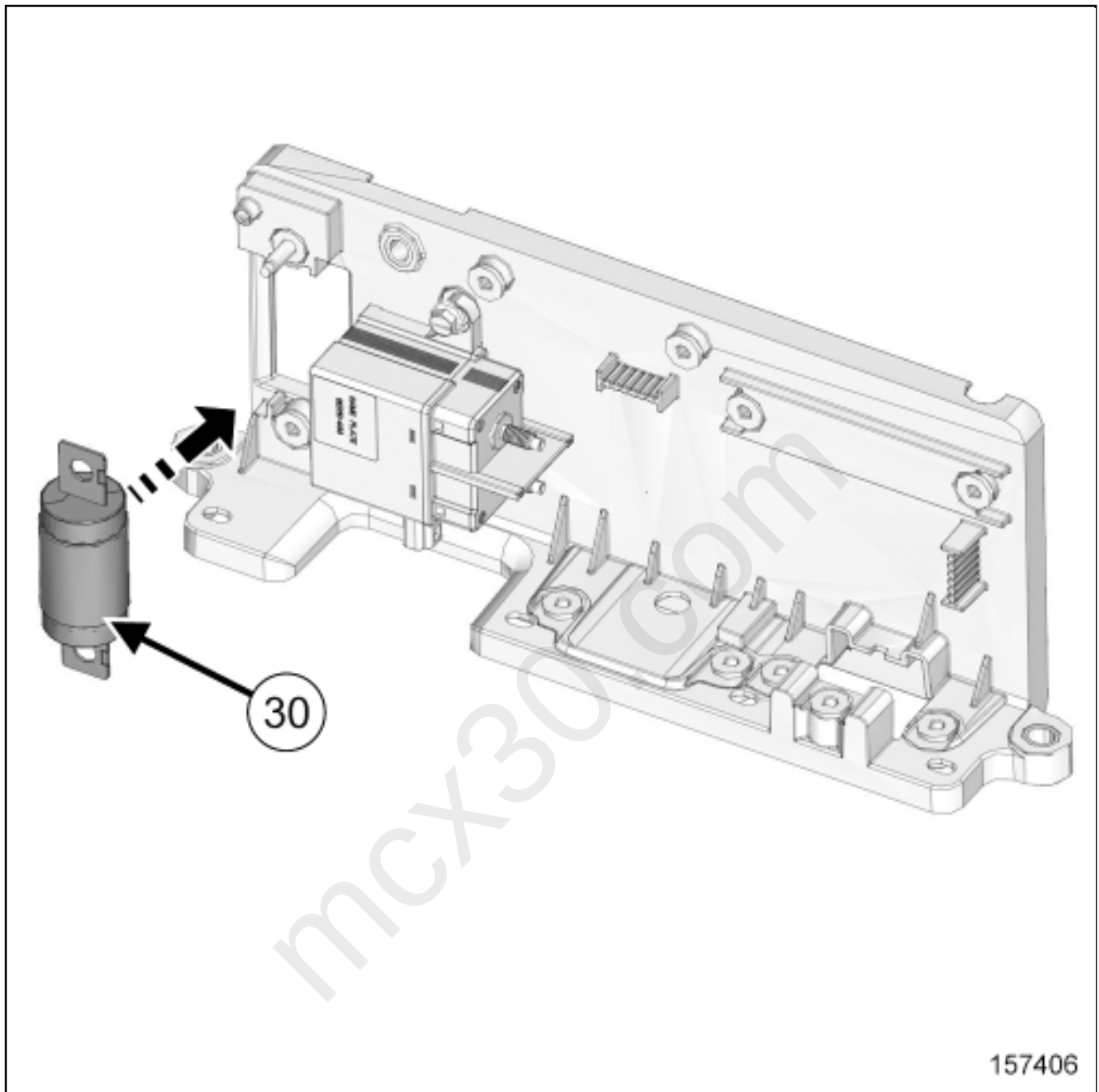
Refit the main relay screws(29) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



Torque tighten the main relay screws using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



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

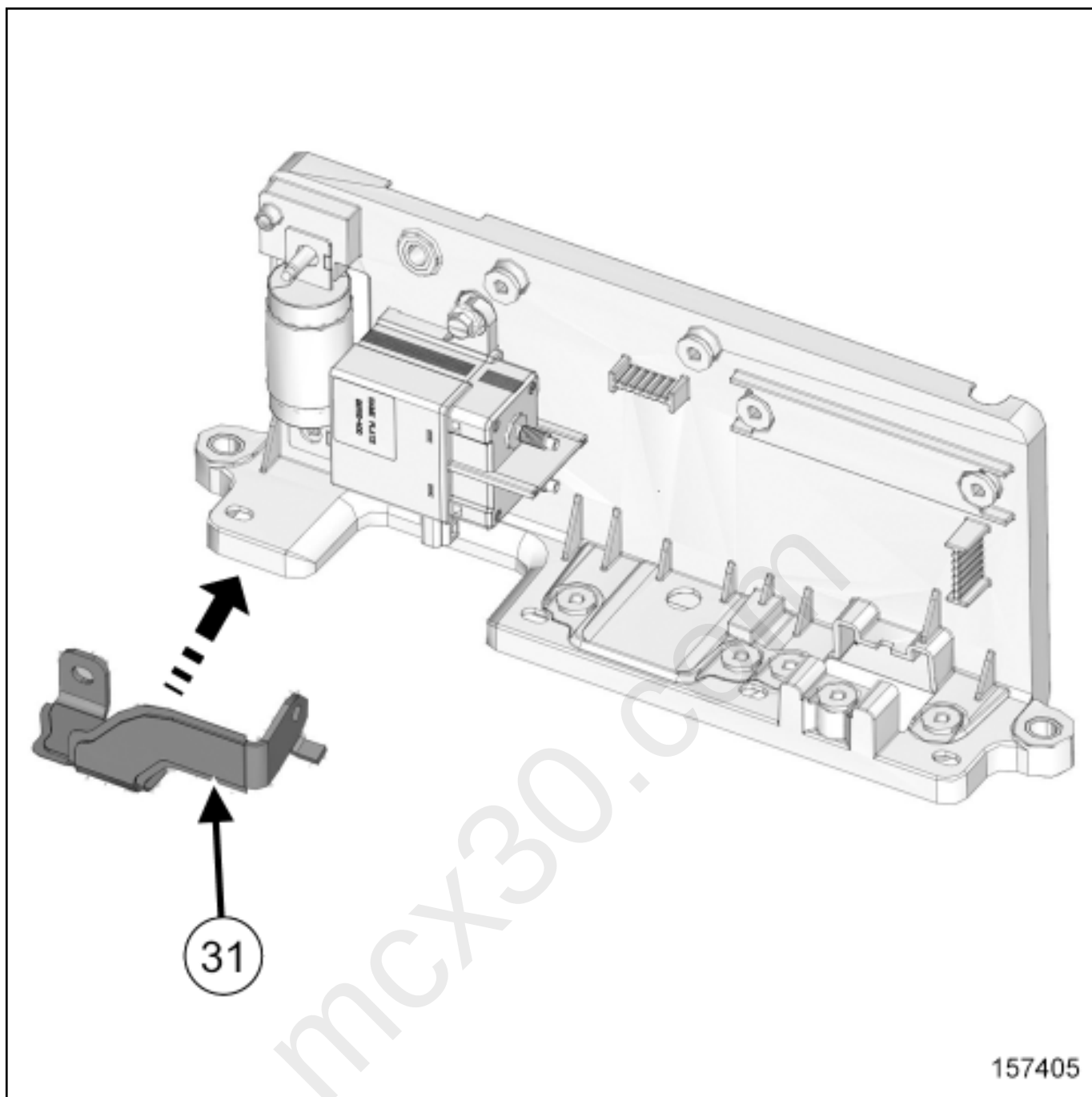


Refit the fuse(30) .

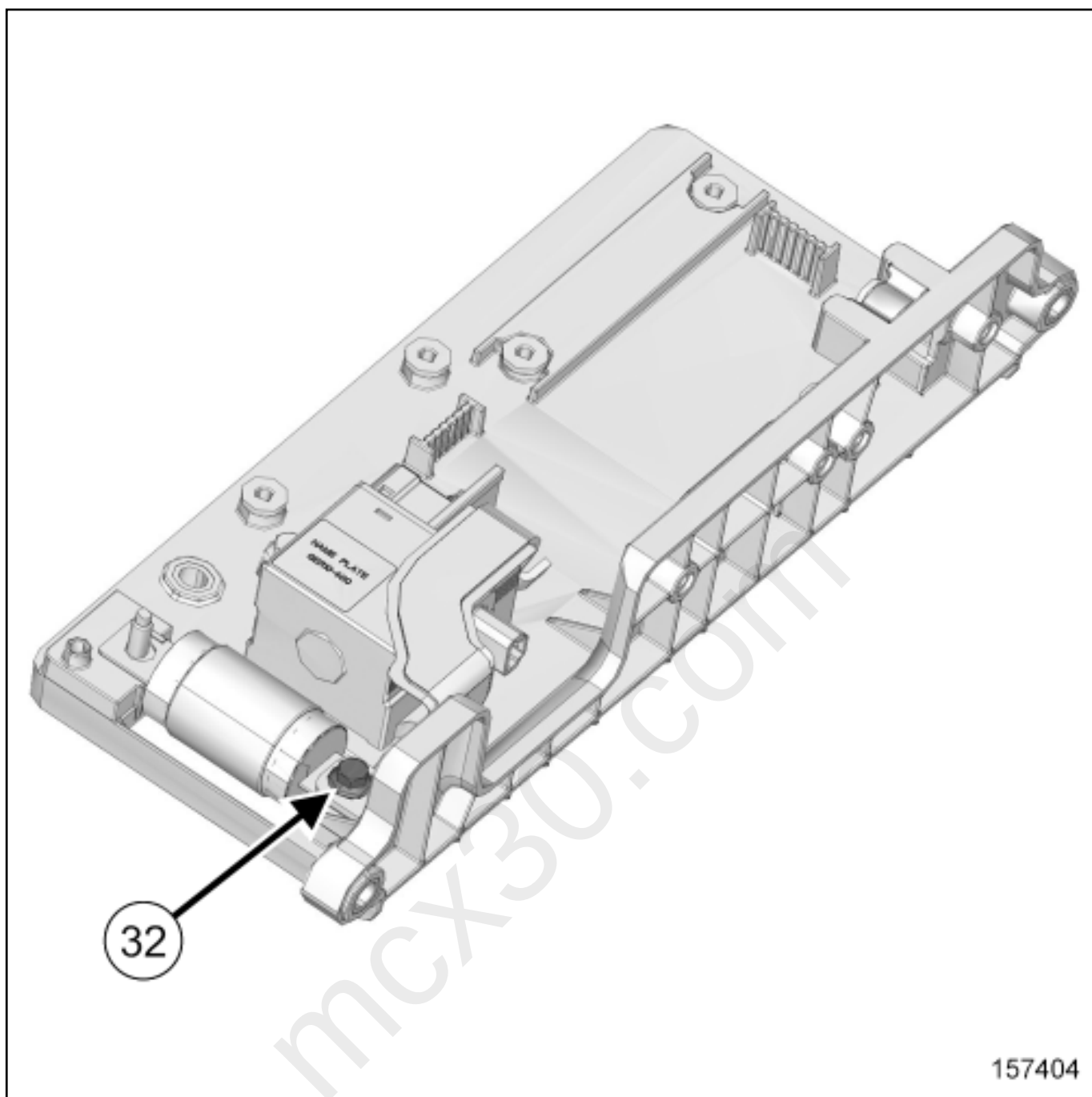


Note:

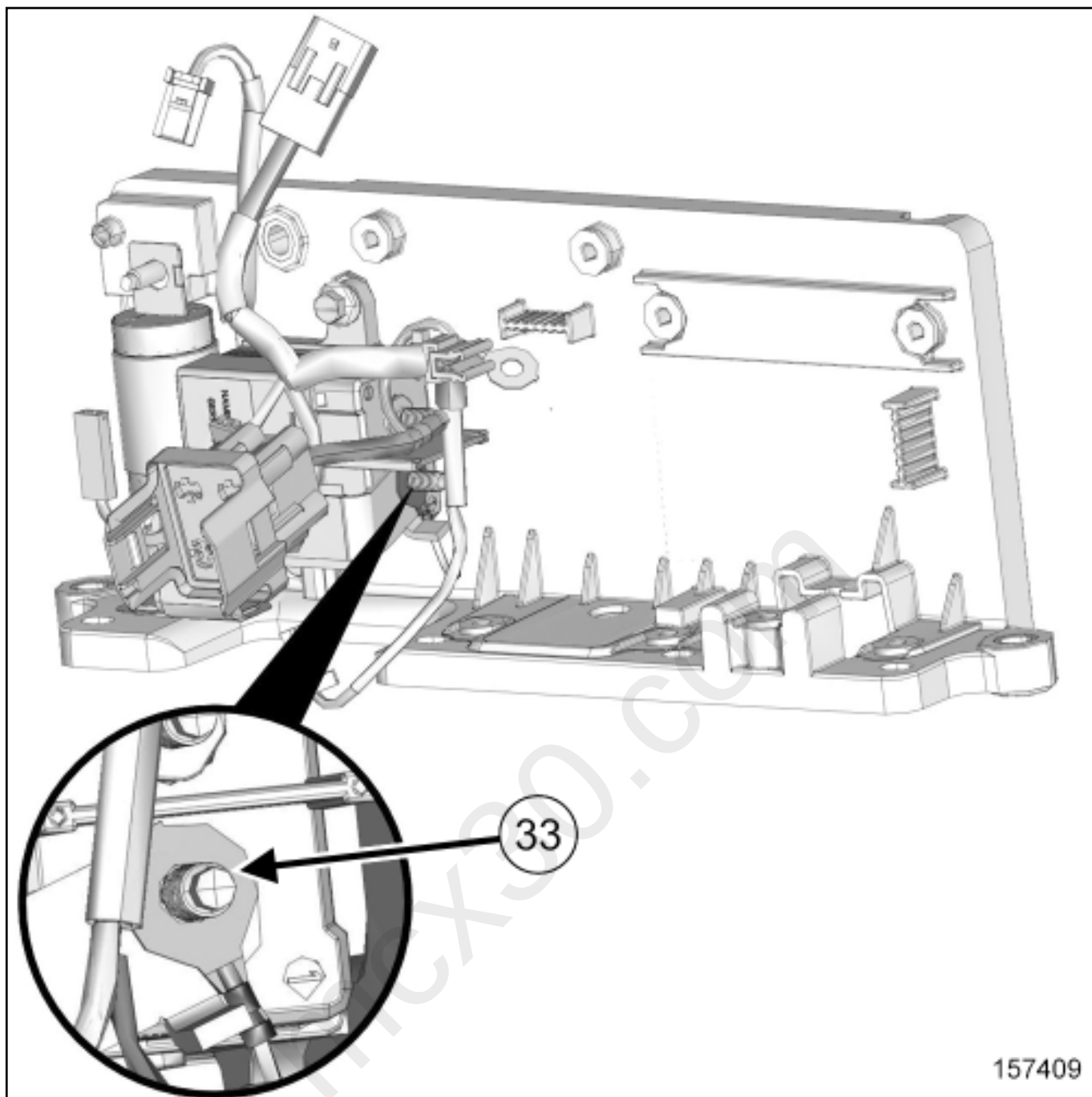
Visible mark.



Refit the bus bar(31) .



Refit the fuse electric connection screw(32) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



Refit the lower lug(33) using the toolSet of trim removal levers.(Car. 1363) .



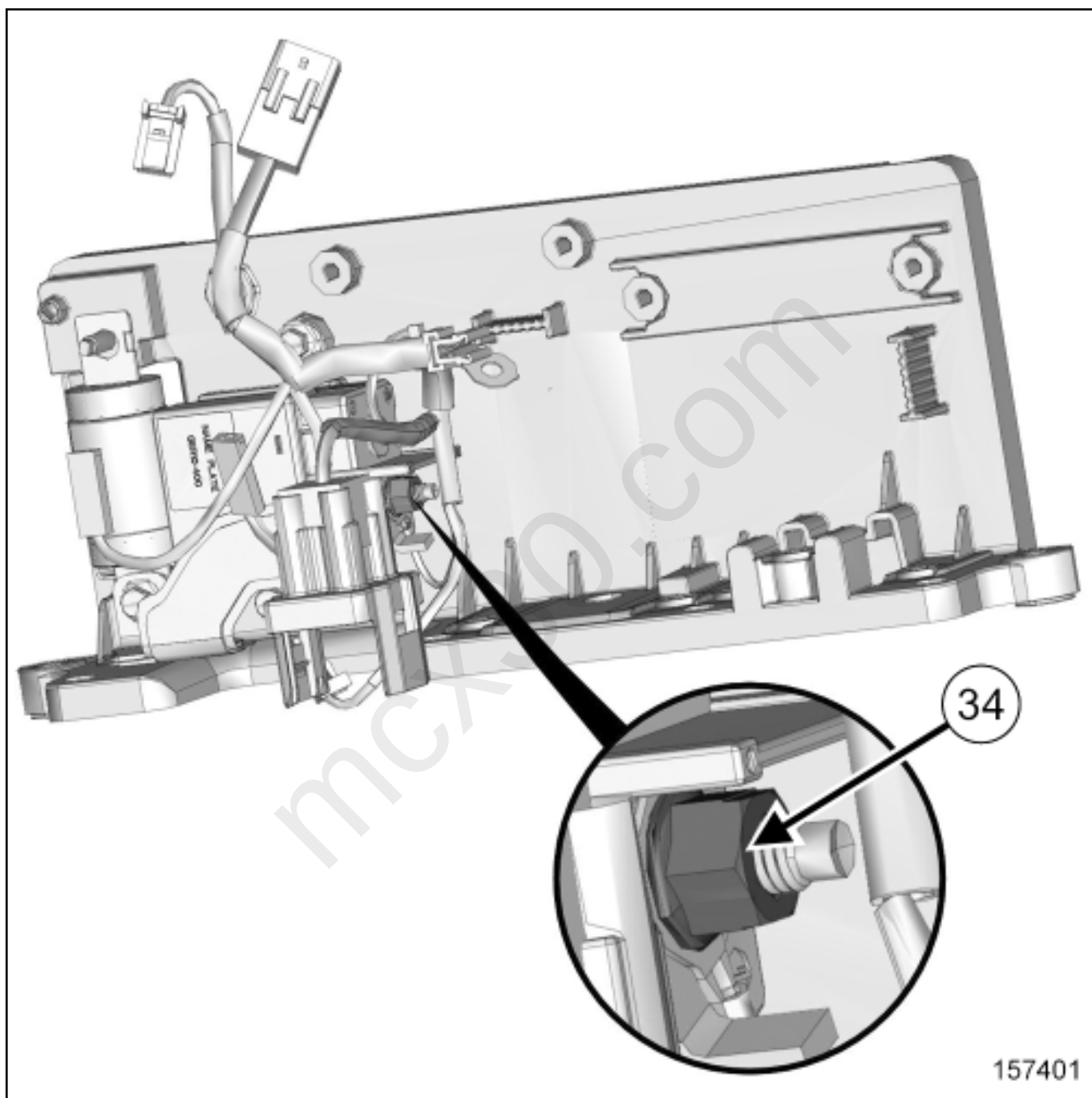
Note:

Red lug.

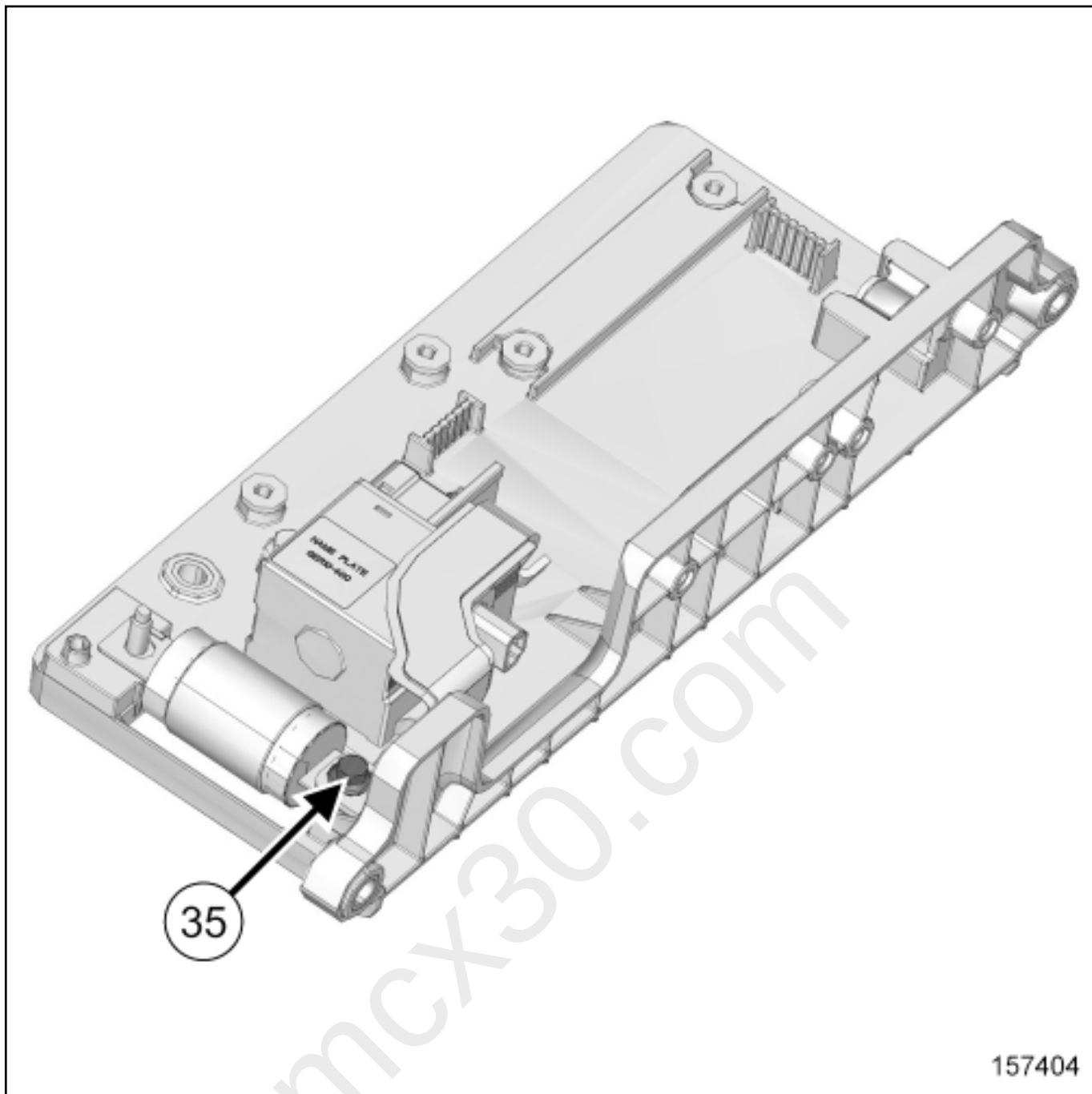


Note:

The sleeve of the lug passes behind the anti-rotation of the bus bar.



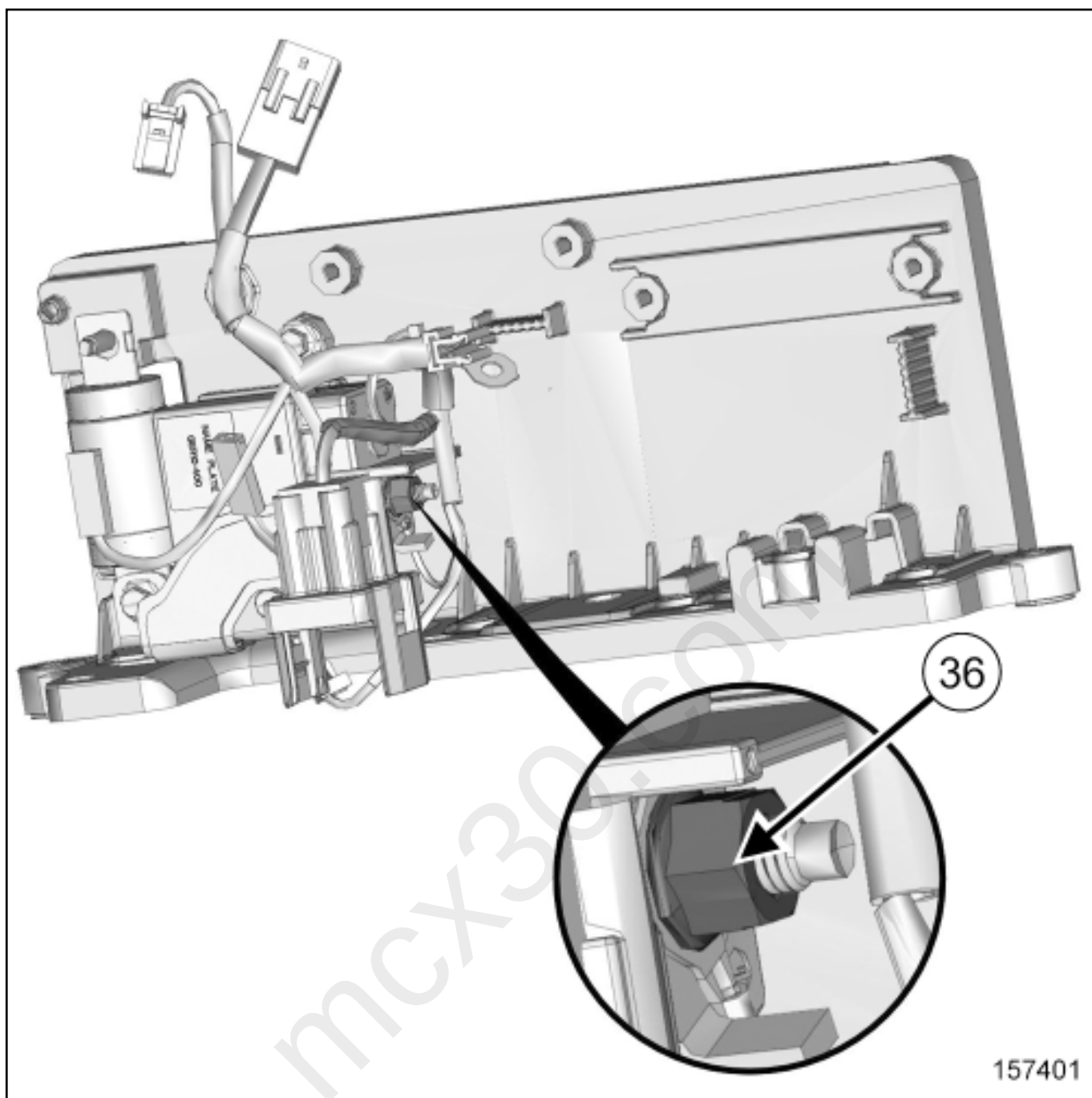
Refit the main relay electric connection lower nut using an insulated magnetic socket(see [19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



Torque tighten the fuse electric connection screw(35) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



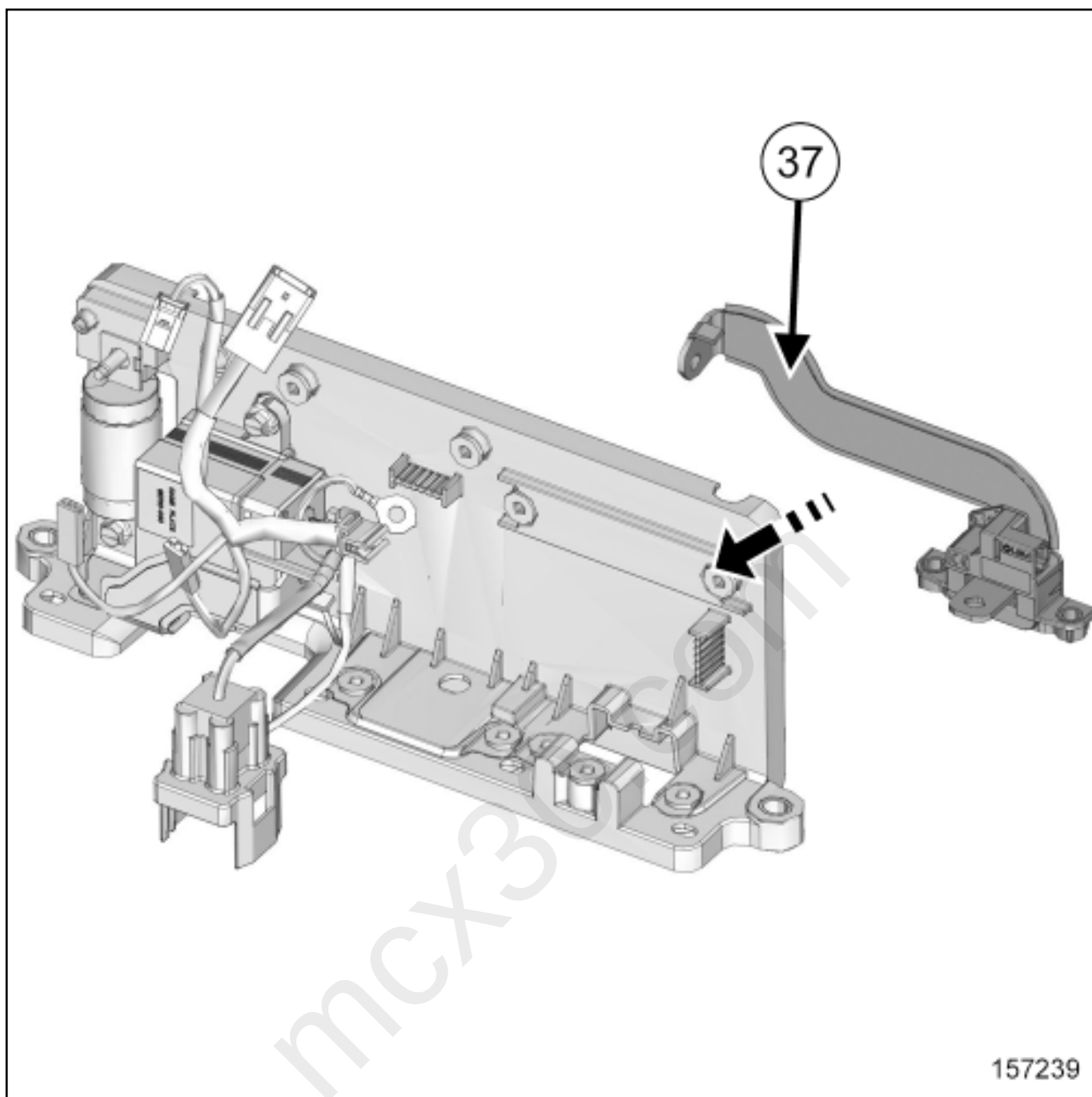
Mark always the screws with a PAINT MARKER of a color different from the original.



Torque tighten the main relay electric connection lower nut(36) using an insulated magnetic socket
([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



Mark always the nuts with a PAINT MARKER of a color different from the original.

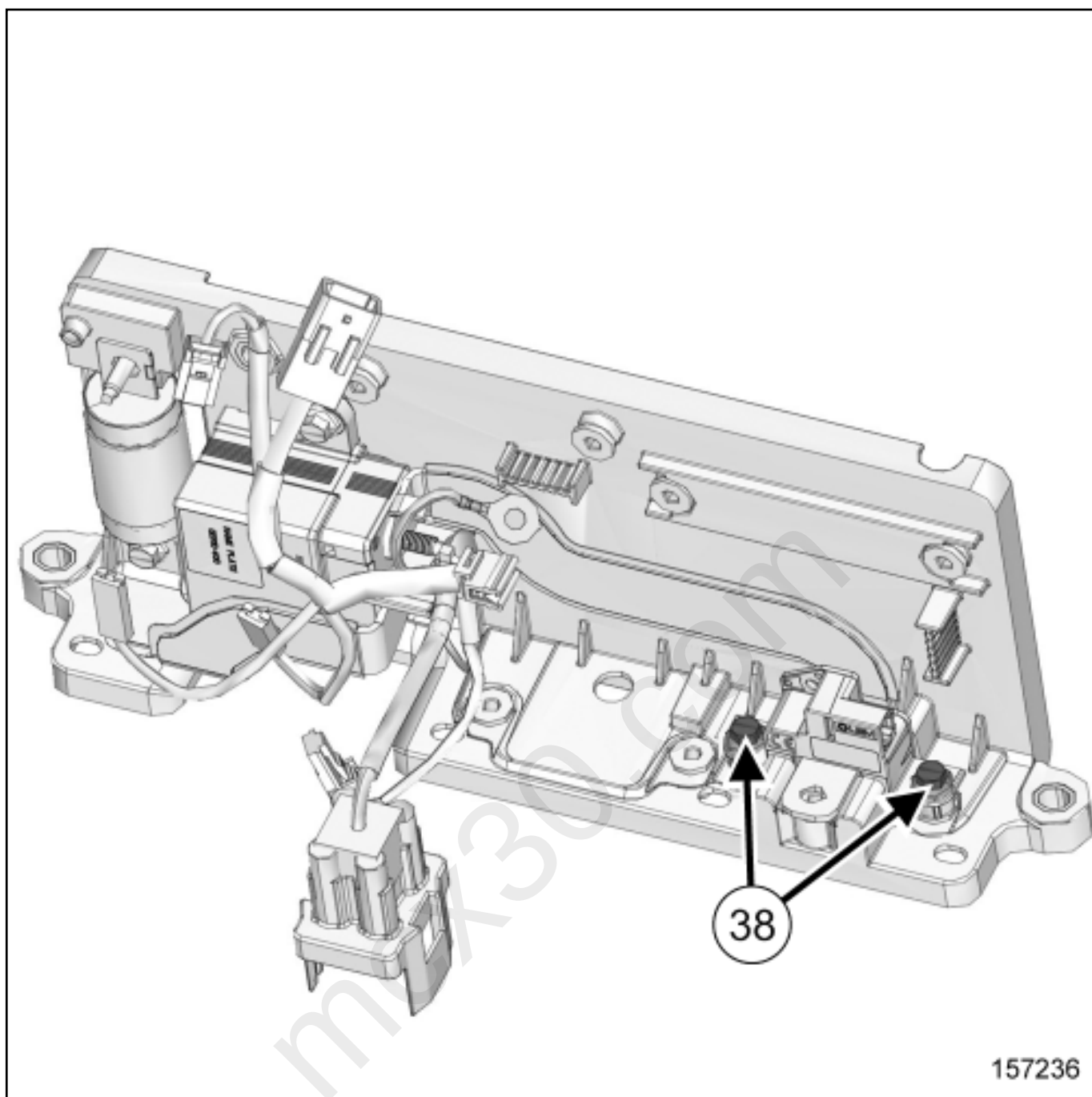


Refit the bus bar + the current sensor(37) .



Note:

Pay attention to the mechanical coding on the current sensor.



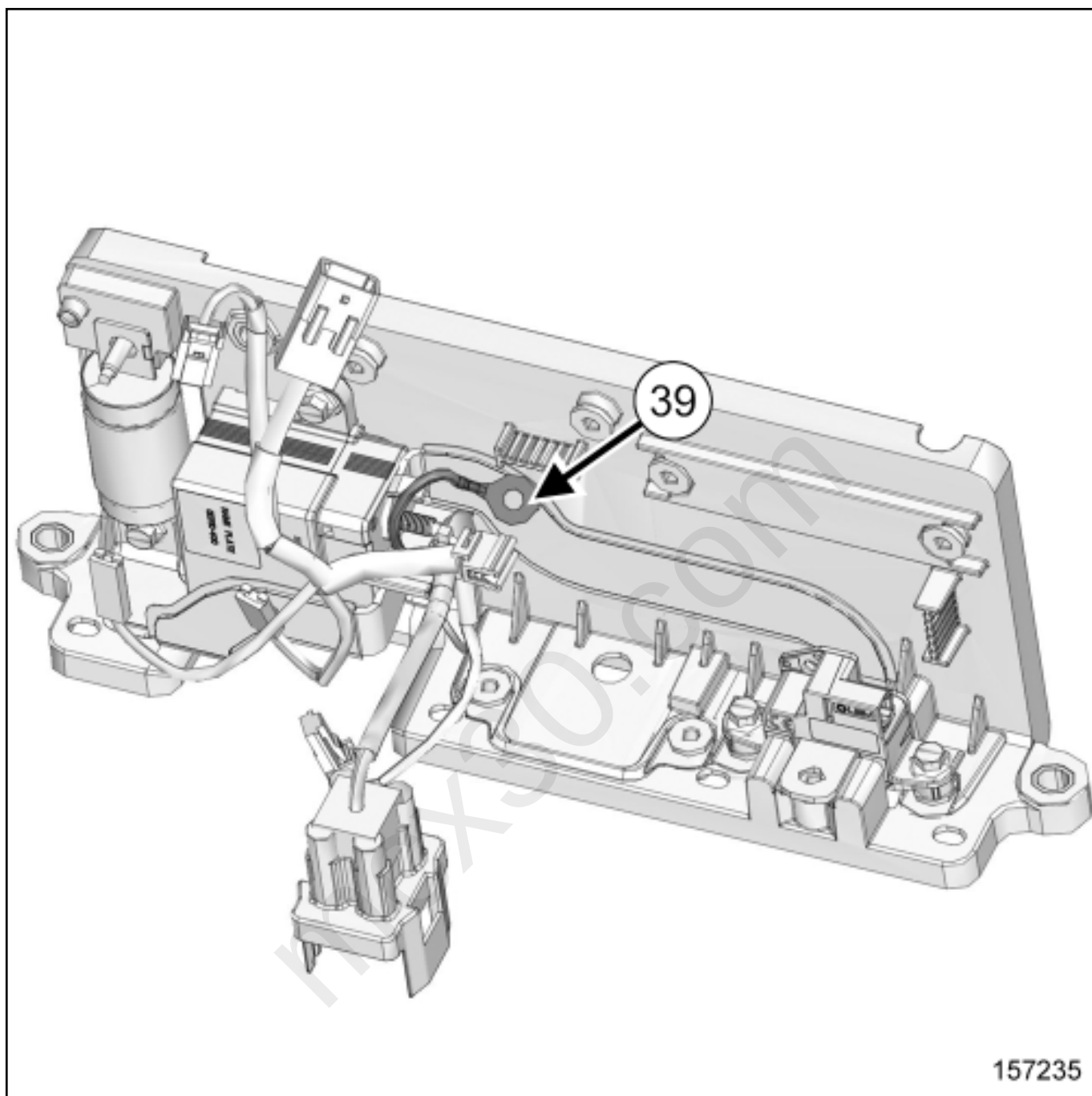
Refit the current sensor screws(38) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



Torque tighten the current sensor screws using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



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



Refit the upper lug(39) using the toolSet of trim removal levers.(Car. 1363) .



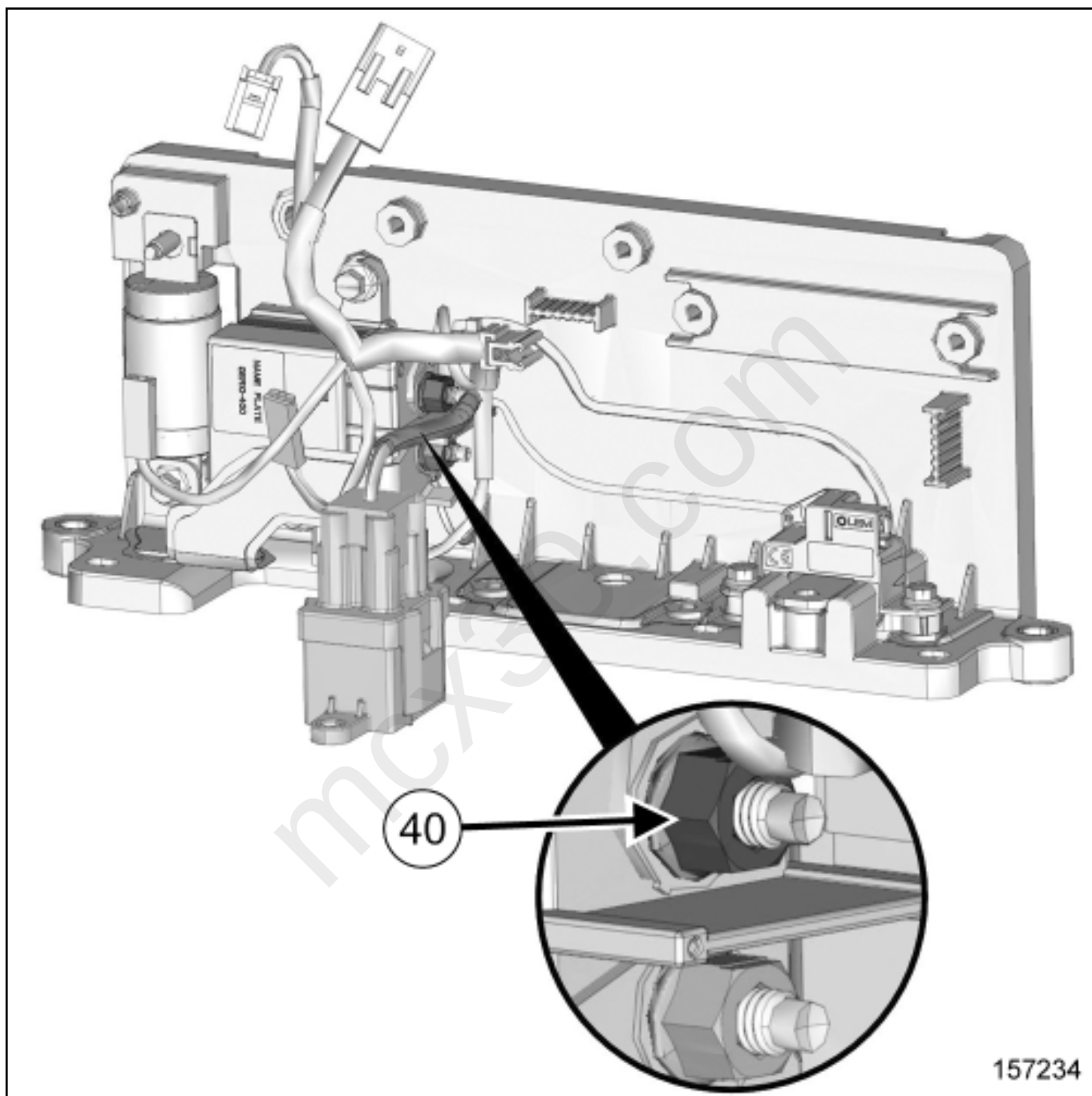
Note:

Black lug.



Note:

The sleeve of the lug passes behind the anti-rotation of the bus bar.

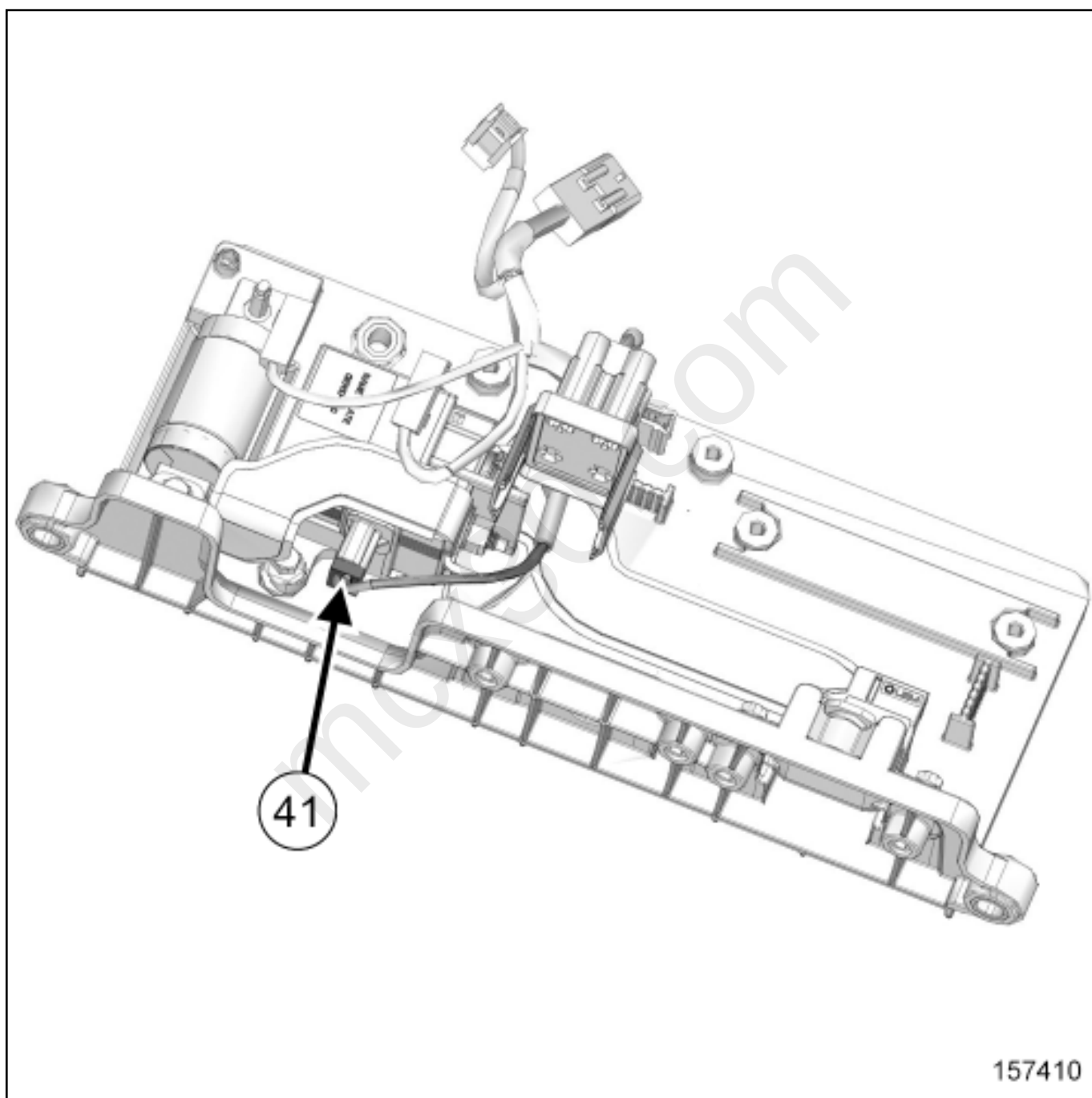


Refit the main relay electric connection upper nut(40) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



Torque tighten the main relay electric connection upper nut using an insulated magnetic socket [\(see 19E, Traction battery, Traction battery module stack assembly : Exploded view\)](#) .

Mark always the nuts with a PAINT MARKER of a color different from the original.



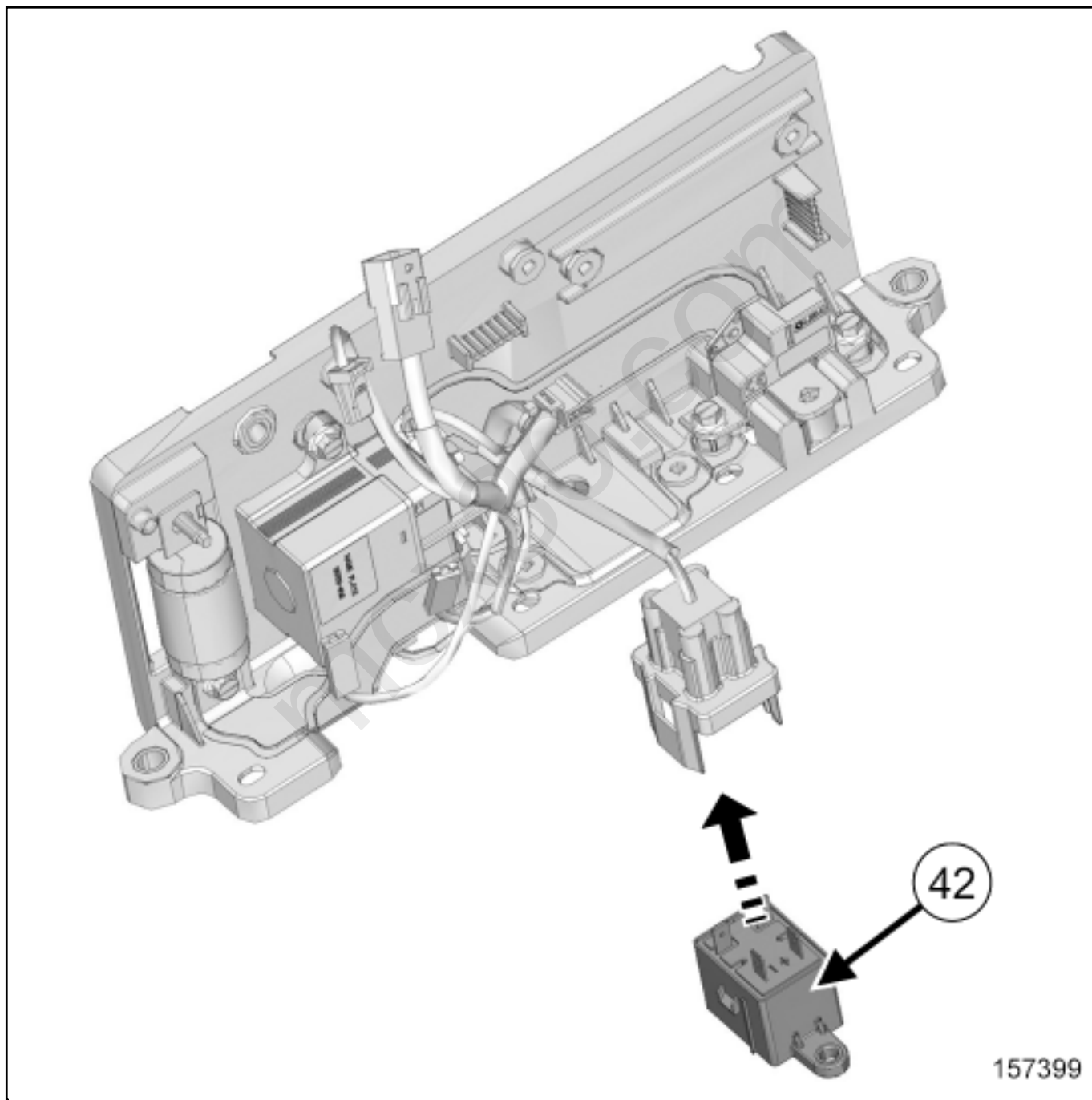
Connect the main relay plug [\(41\)](#) .



Note:

Make a push-pull test on the connector.

2. REFIT THE TRACTION BATTERY PRECHARGE RELAY



Connect the precharge relay plug(42) on the precharge relay.



Note:

Pay attention to the mechanical coding on the socket.



Note:

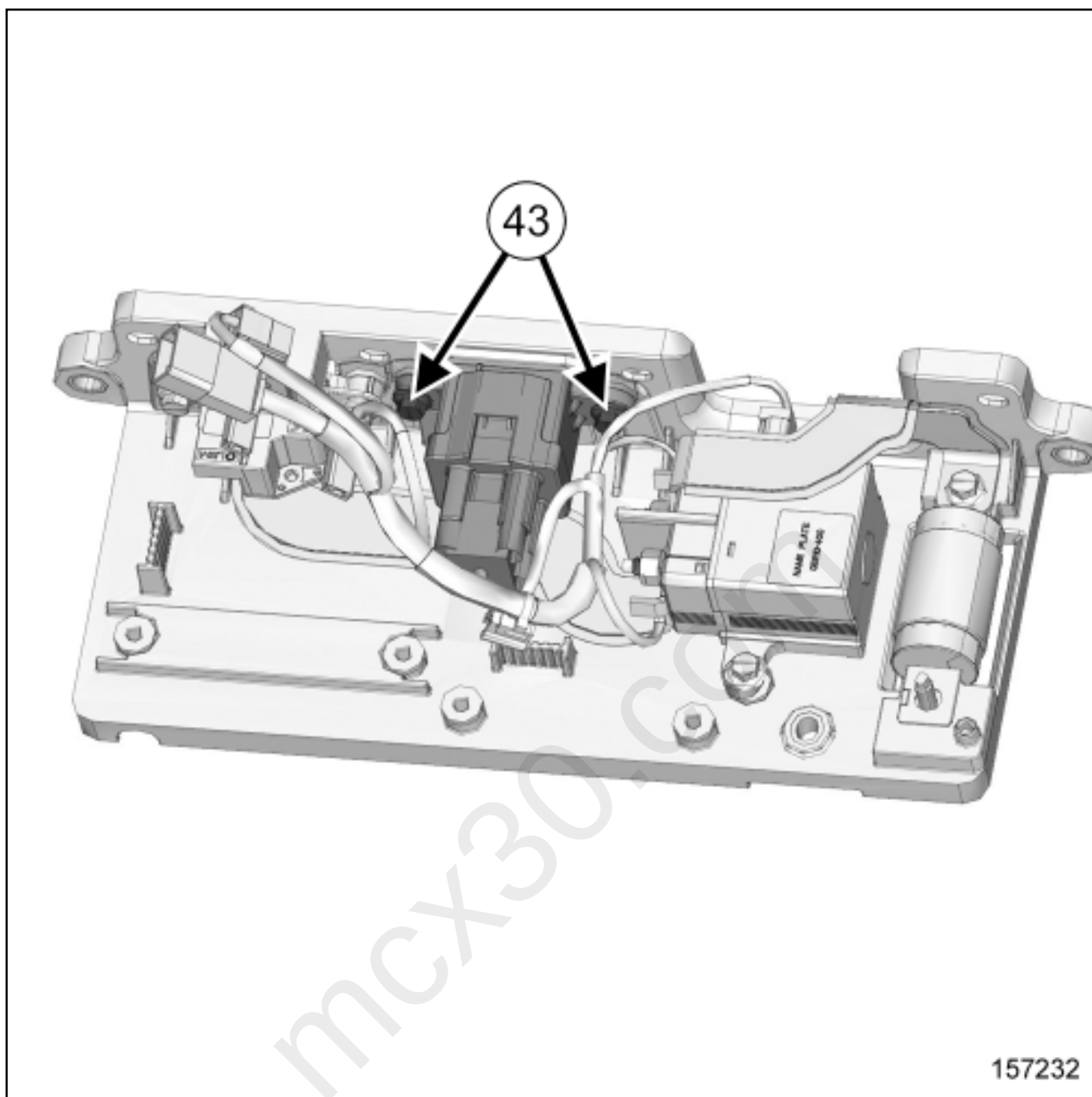
Feeling two clics during the connection.

 Refit the precharge relay with the wiring.



Note:

Pay attention to the color coding on the precharge relay. Electrical wire yellow, front right.



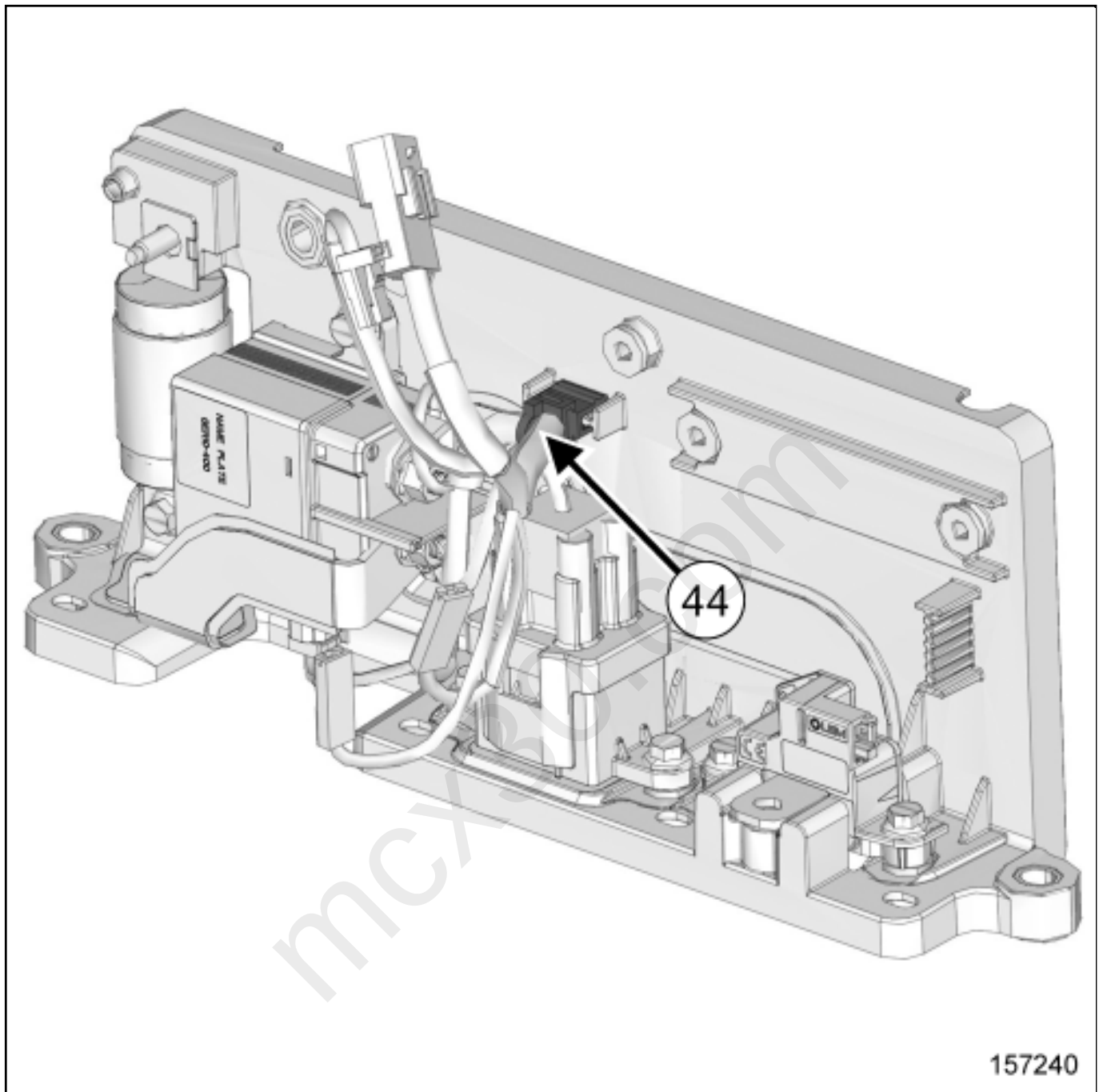
Refit the precharge relay screws(43) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



Torque tighten the precharge relay screws using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



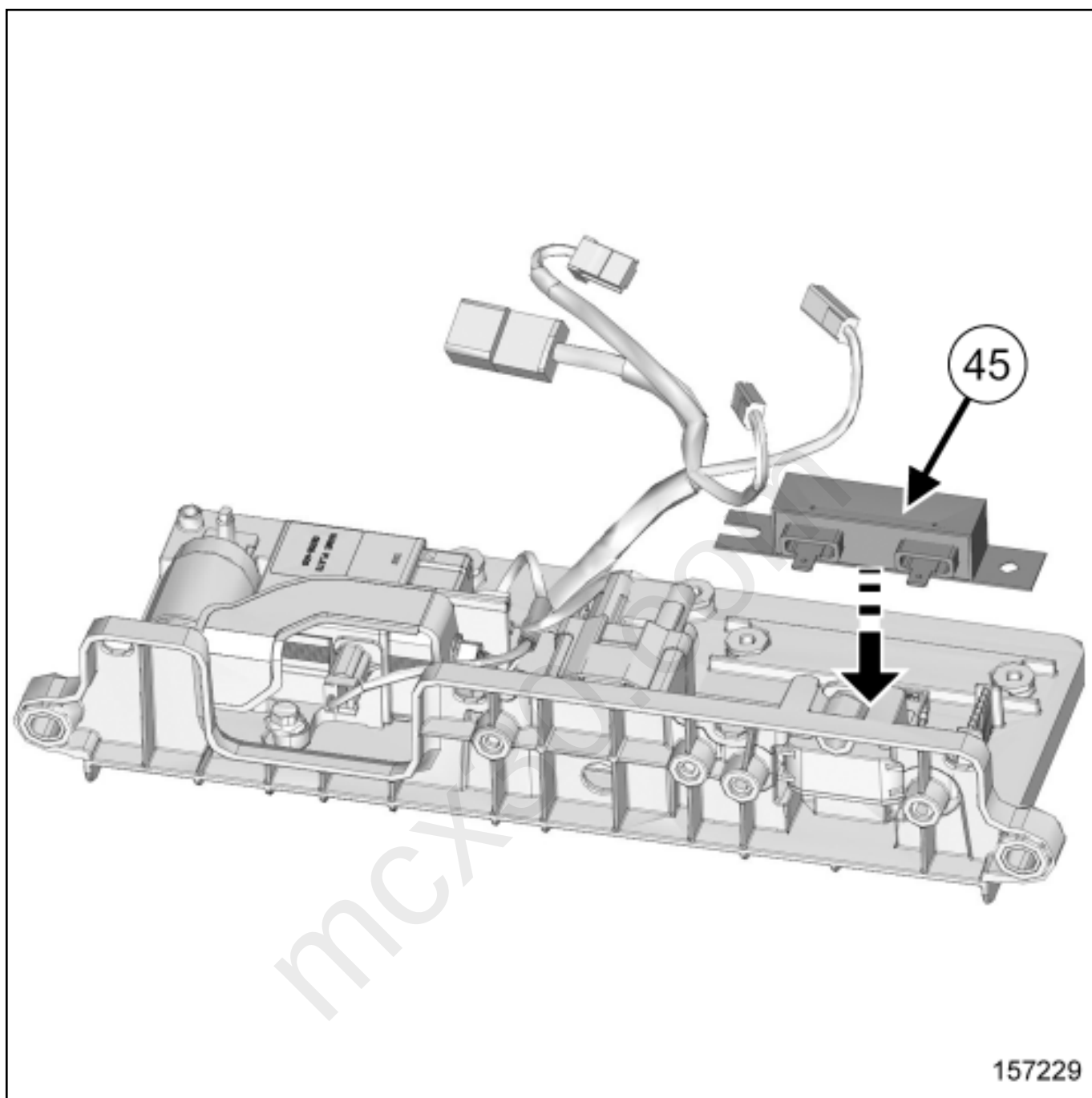
Mark always the screws with a PAINT MARKER of a color different from the original.



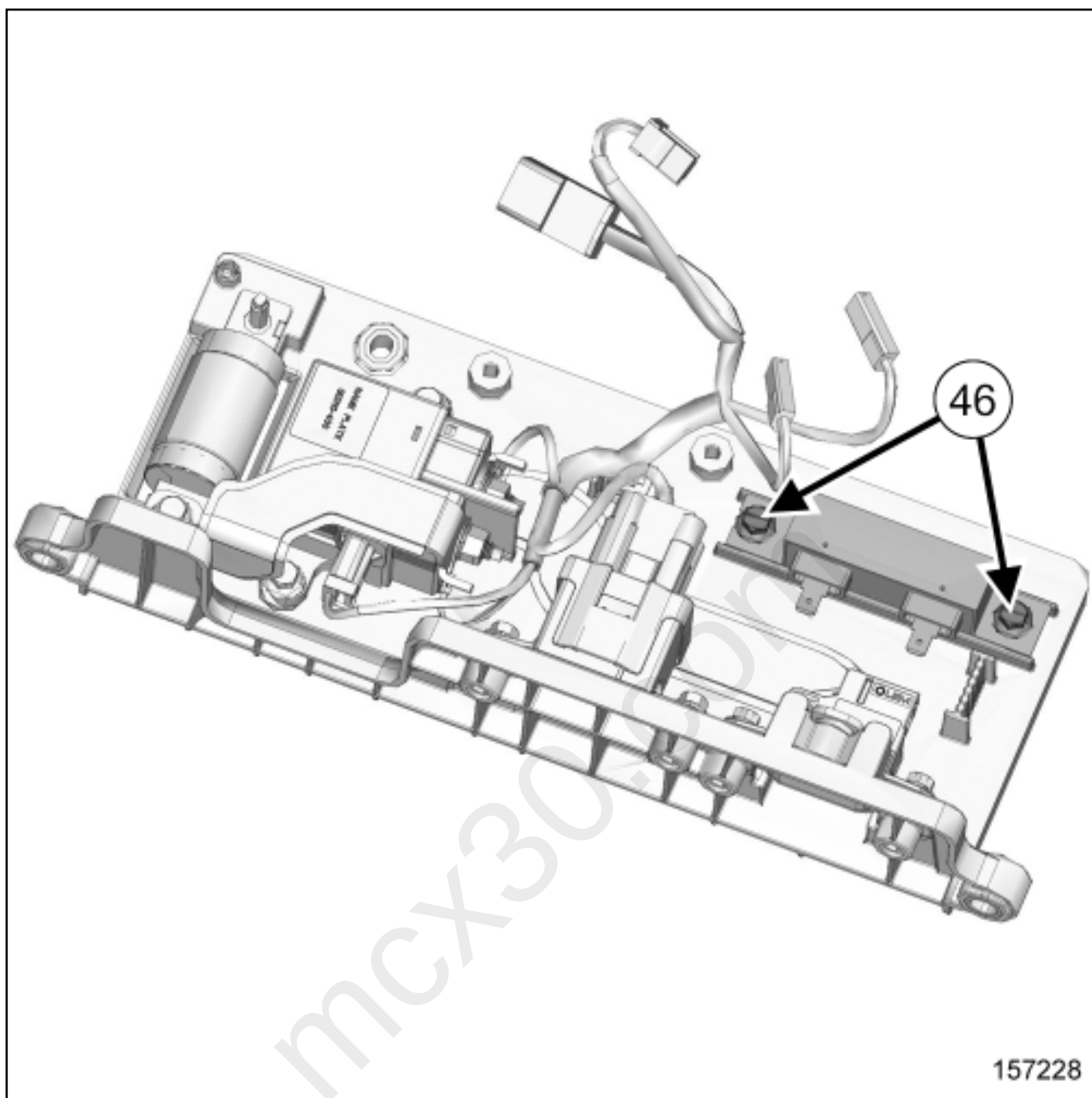
Fit the clamp(44) at the place indicated on the internal junction box wiring.

Clip the clamp clip.

Cut the clip clamp using an insulated cutting pliers.



Refit the precharge resistor(45) .



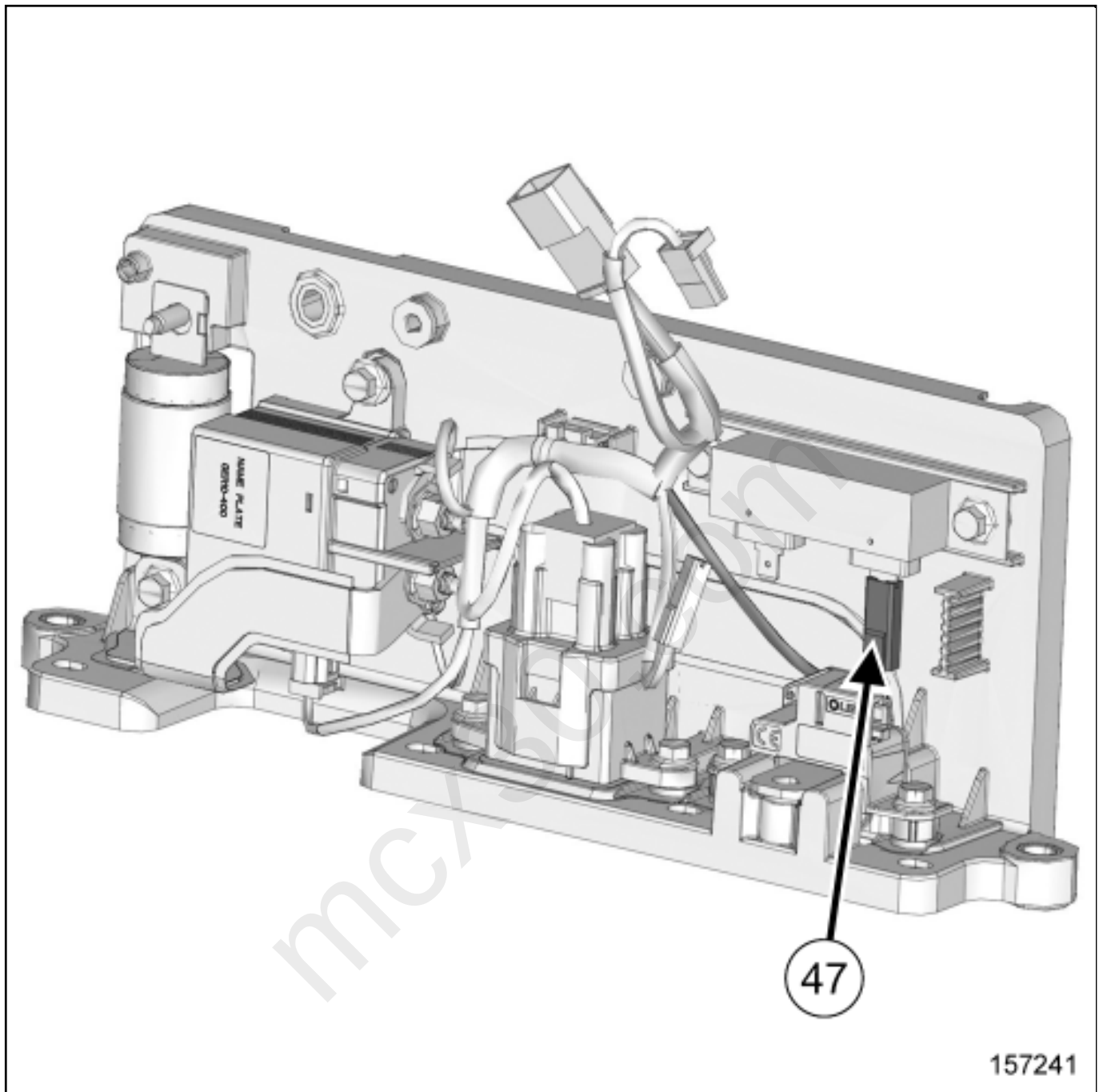
Refit the precharge resistor screws(46) using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



Torque tighten the precharge resistor screws using an insulated magnetic socket([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



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

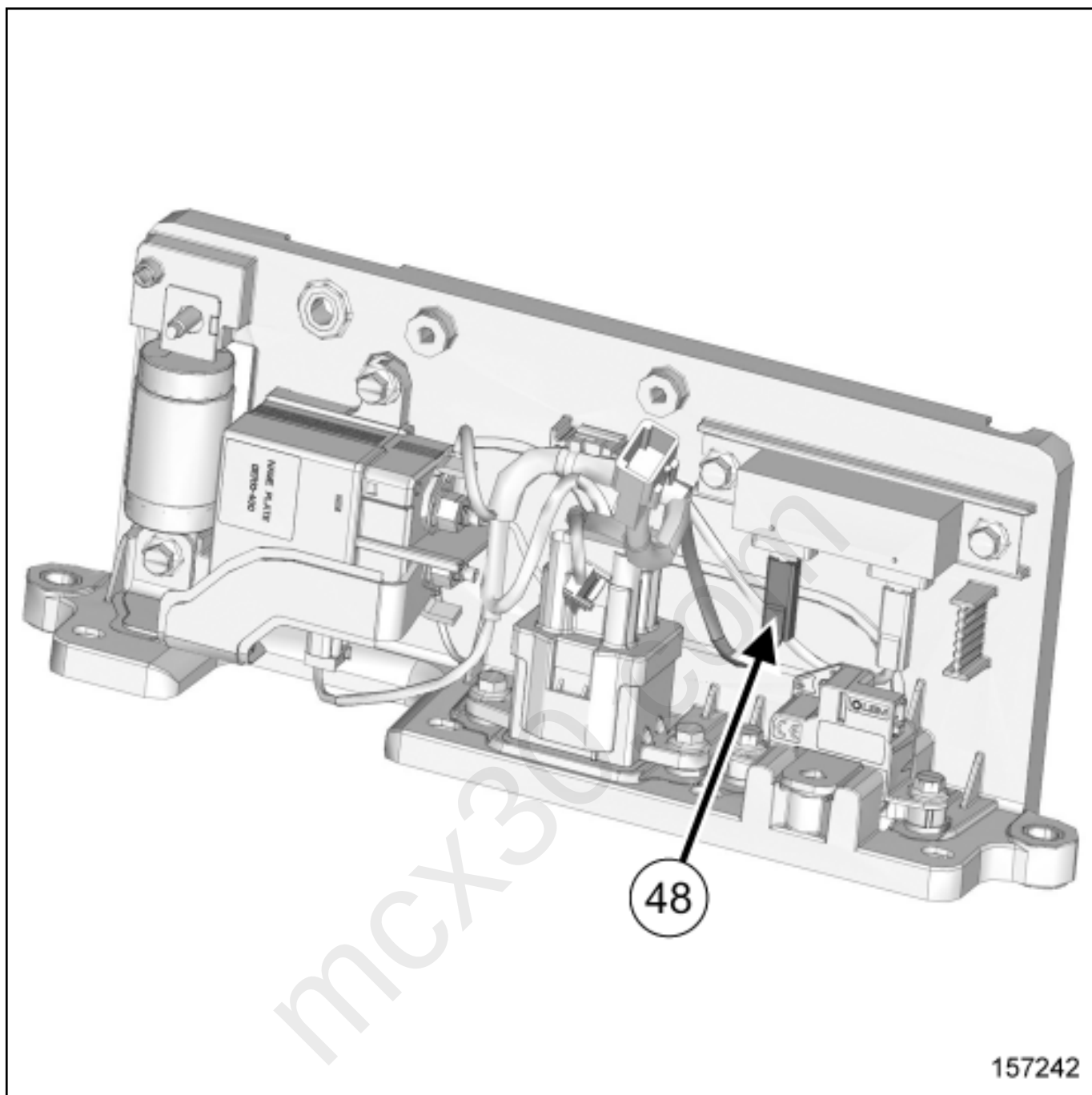


Connect the right side terminal(47) from the precharge resistor using the toolSet of trim removal levers. (Car. 1363) .



Note:

The black terminal wiring passes behind the current sensor.

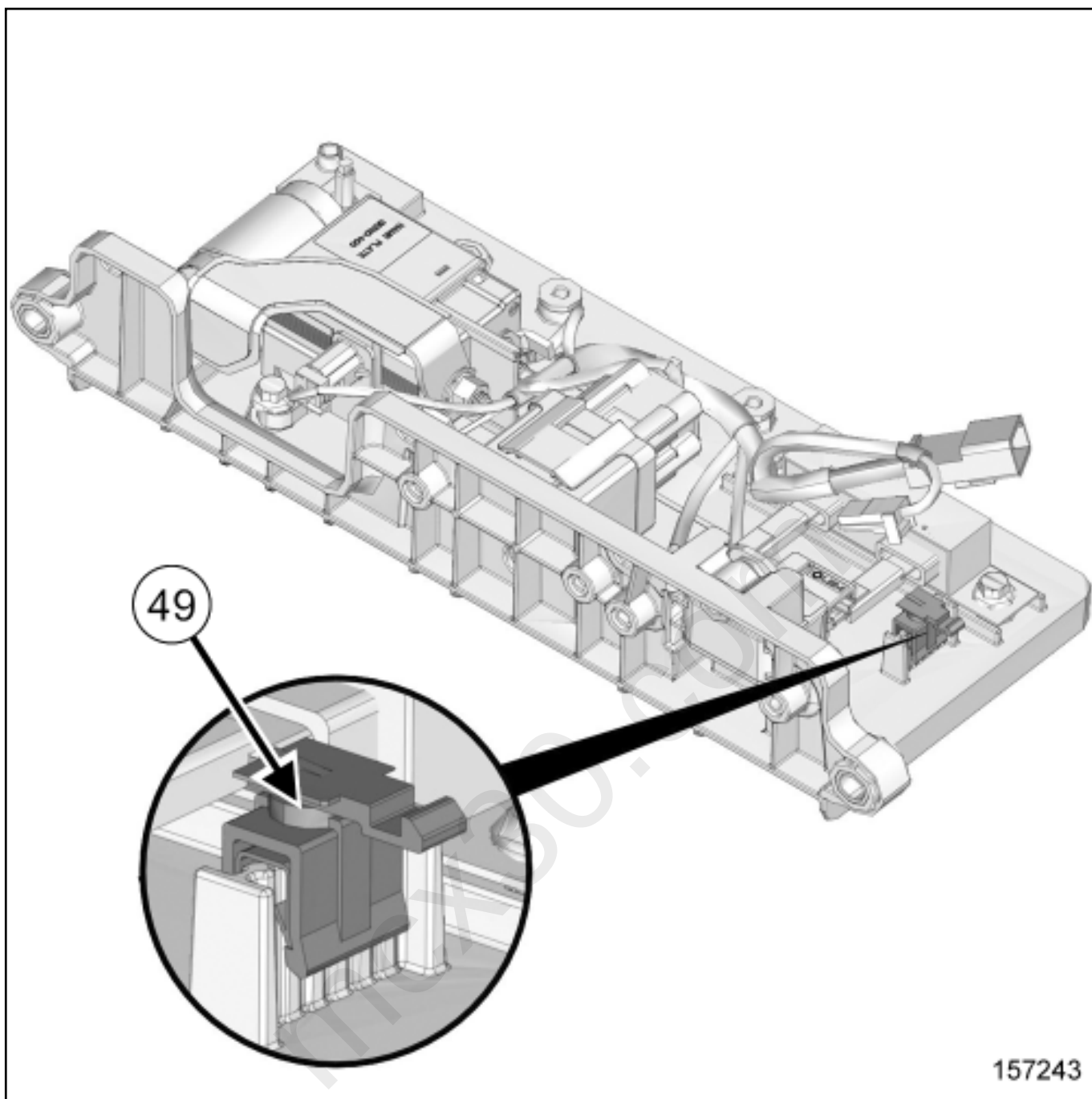


Connect the left side terminal(48) from the precharge resistor using the toolSet of trim removal levers. (Car. 1363) .

Note:



The blue terminal wiring passes over the control wiring and over the current sensor wiring.

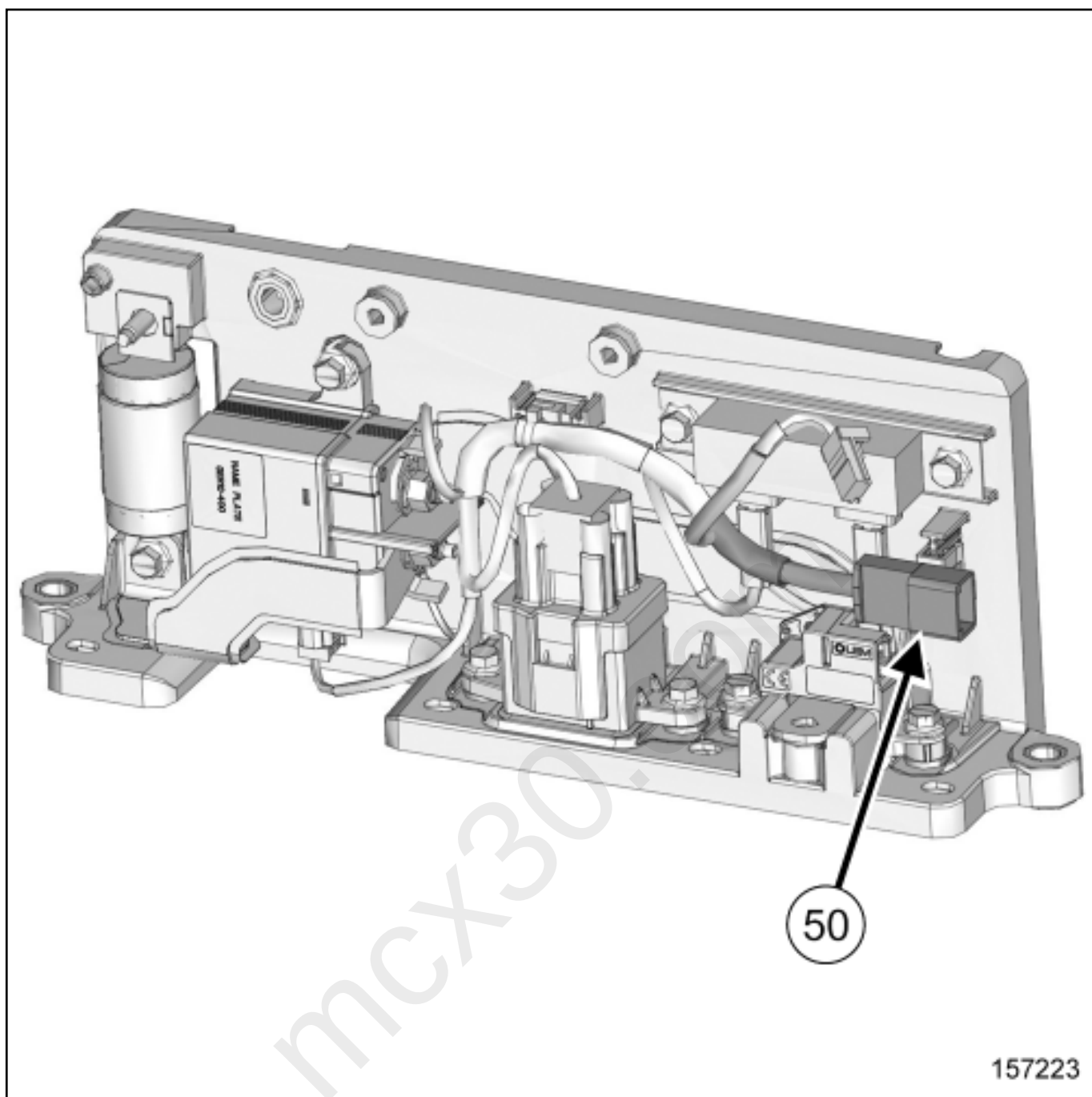


Clip the clip(49) on the internal junction plate.

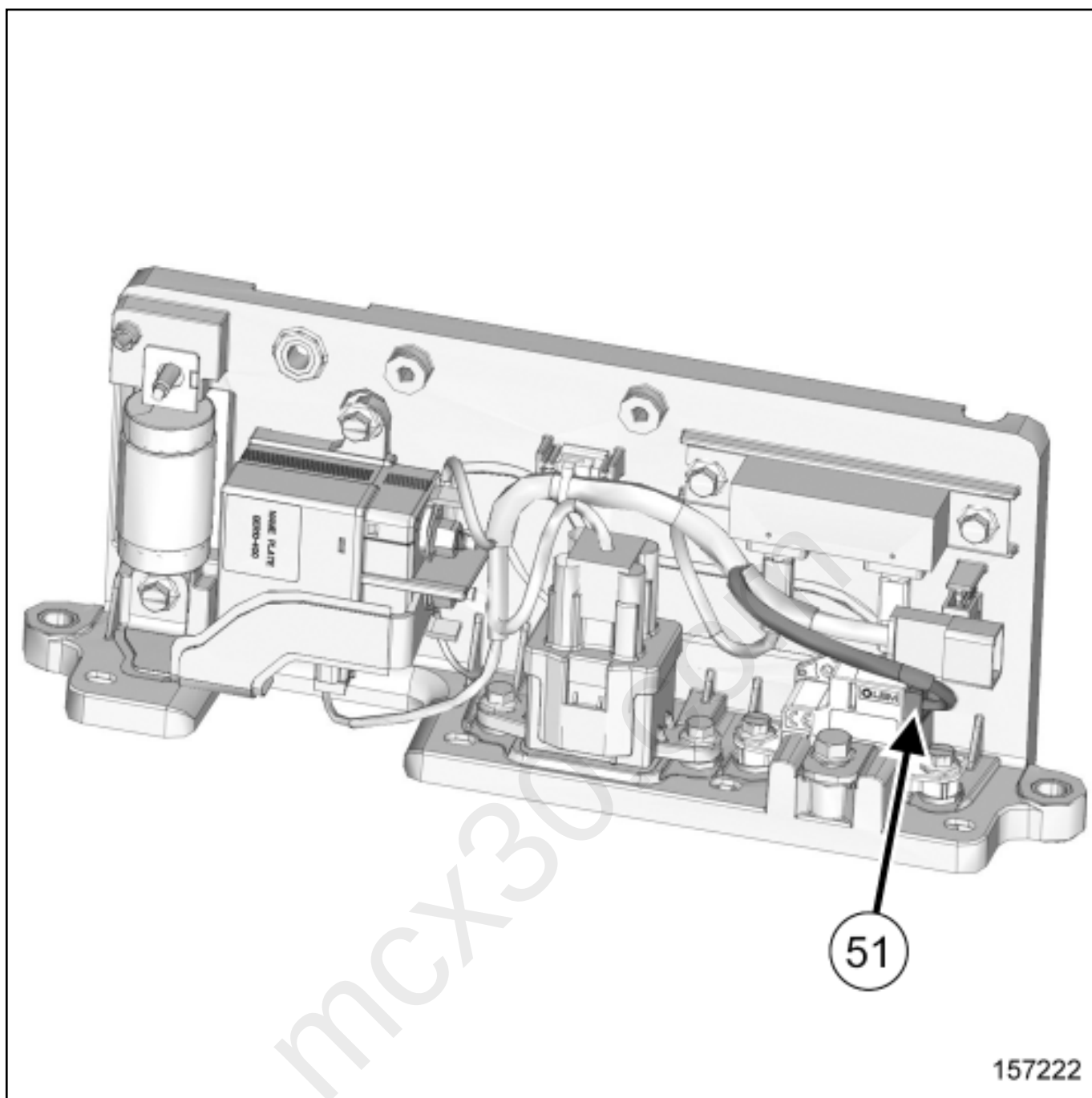


Note:

The lever of the clip to the right.



Clip the internal junction box wiring socket(50) using the toolSet of trim removal levers.(Car. 1363) .

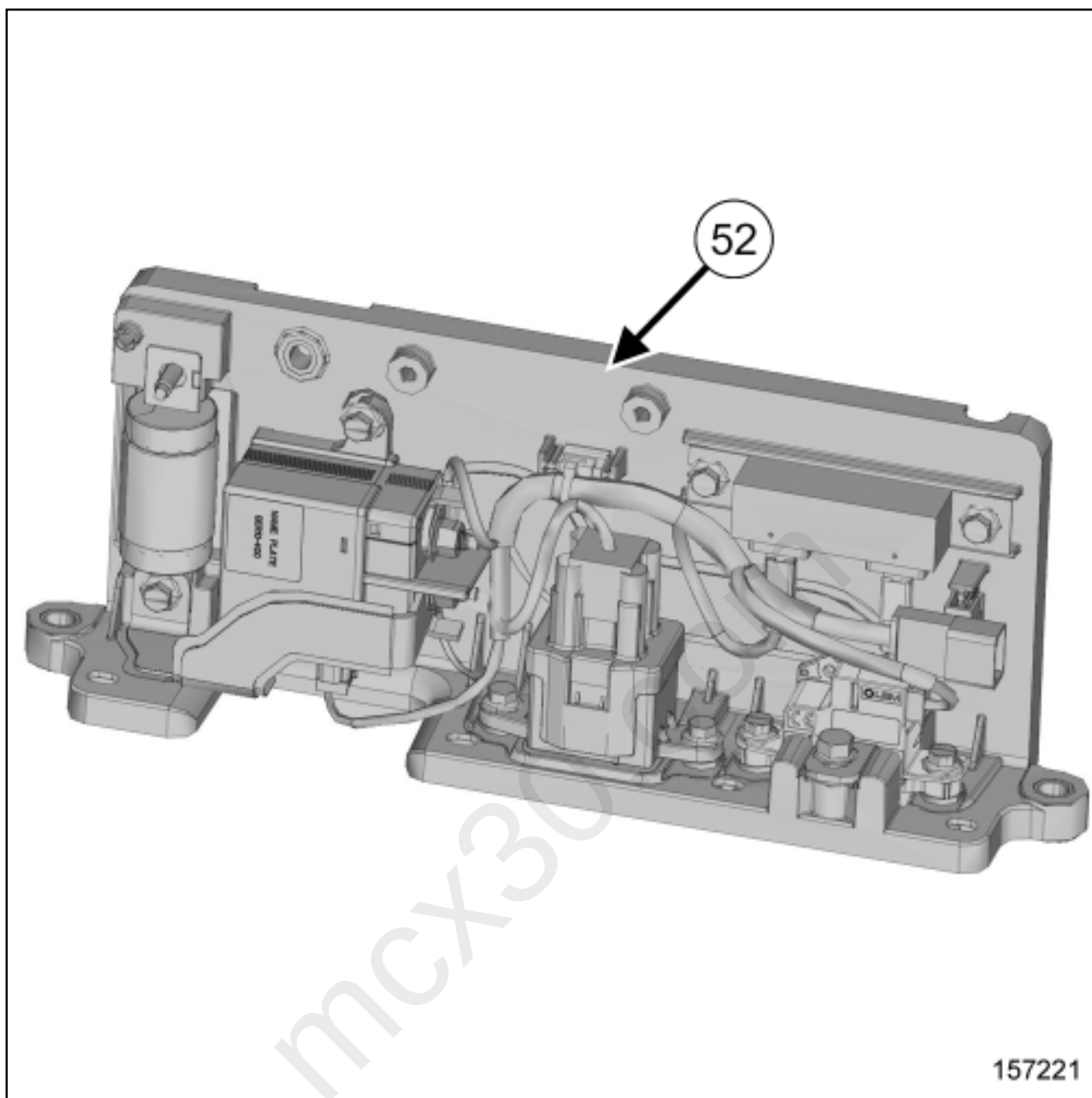


Connect the current sensor plug(51) using the toolSet of trim removal levers.(Car. 1363) .



Note:

Make a push-pull test on the connector.



Refit the traction battery internal junction box(1) ([see 19E, Traction battery, Traction battery module stack assembly : Exploded view](#)) .



Refit the traction battery upper cover([see 19E, Traction battery, Traction battery housing assembly : Exploded view](#)) .

3. FINAL OPERATION

Proceed in the reverse order to removal.



Repair-14x02x01x30-01x37-1-2-1.xml



XSL version : 3.02 du 22/07/11

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