

TRACTION BATTERY ASSEMBLY: REMOVAL - REFITTING



Note, one or more warnings are present in this procedure



Special tooling required

Lift table	Ms. 1976
Insulating blanket	Ms. 1978
Safety lockout plug padlock of the traction battery	Ele. 1980
Tool for removing/refitting the traction battery	Ms. 1968
Safety lockout plug of the traction battery	Ele. 2005
Kit of removal/refitting traction battery	Ms. 2004

Equipment required

Diagnostic tool
Class 00 or 0 electrical insulating gloves
Face shield
Electrical class 00 or 0 safety footwear
Protective overalls (Mainly cotton)
safety strap(s)

WARNING



■ To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair:

- [Vehicle: Precautions for the repair](#) ,
- [Wiring: Precautions for the repair](#) .



CAUTION

To prevent contamination of disconnected connectors and sockets, hermetically seal the connectors and sockets using a plastic bag and a securing clip. For traction battery sockets, use traction battery caps Vehicle: Parts and consumables for the repair .

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



Note:

Remove all personal metal objects (jewels, watch,...).

■ Required equipment:

- Class 00 or 0 electrical insulating gloves,
- Face shield,
- Electrical class 00 or 0 safety footwear,
- Protective overalls (Mainly coton).

REMOVAL

1. REMOVAL PREPARATION OPERATION

■ Position the vehicle on a two-post lift Vehicle: Towing and lifting .



Note:

Check that all of the two-post lift arms are at the same height from the ground.

■ Strap the vehicle using a safety strap(s).

■ Wear personal protective equipment during the removal operation:

- Protective overalls (Mainly coton),
- Electrical class 00 or 0 safety footwear,
- Class 00 or 0 electrical insulating gloves,
- Face shield.



Note:

Check that the gloves are not damaged.

WARNING

DANGER: HIGH VOLTAGE VEHICLE.



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

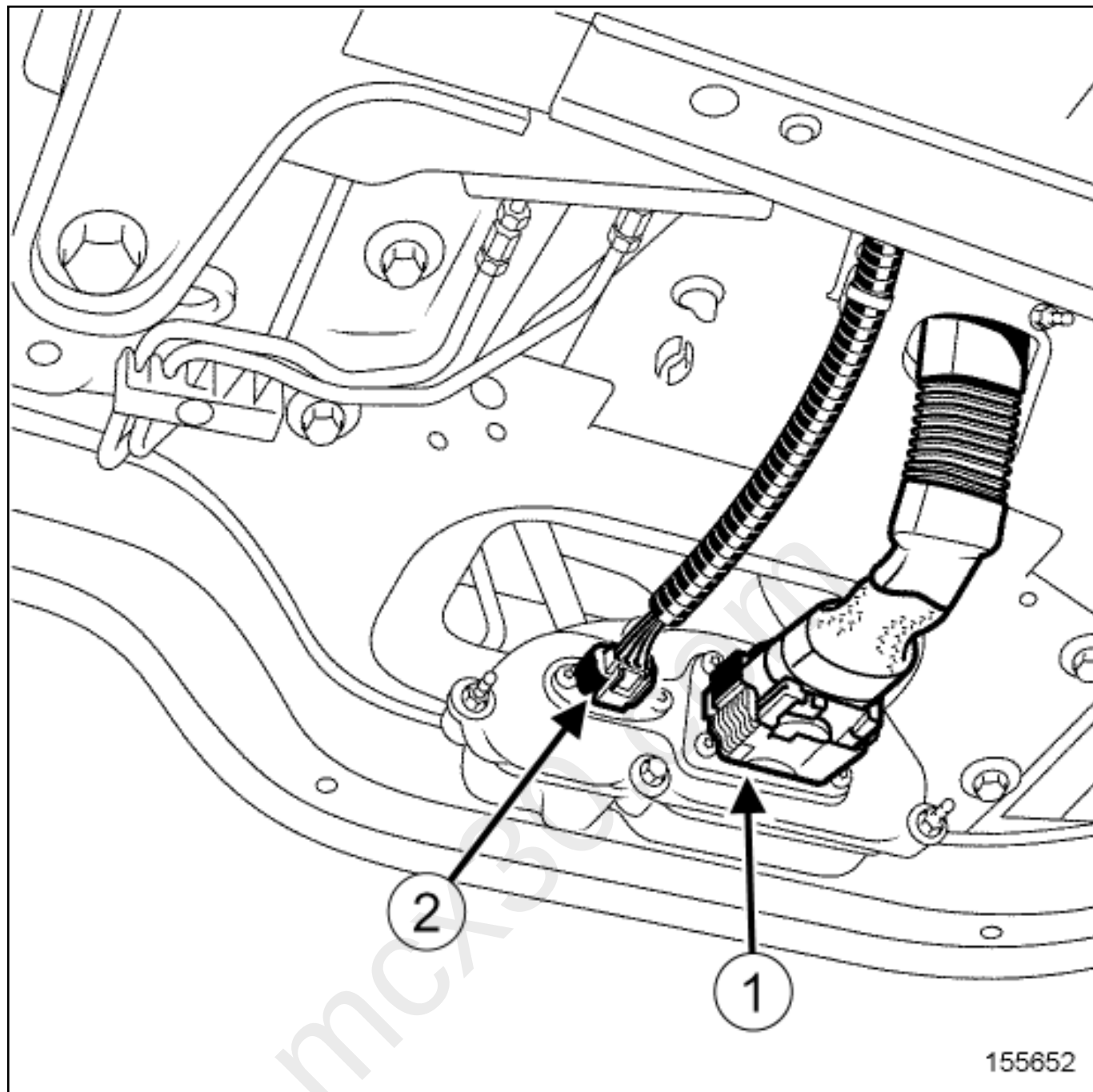
Before carrying out any work on the vehicle, it is essential that you follow the instructions regarding vehicle lockout. This work must be carried out by an employee who is qualified and authorised to work on a high-voltage onboard network [Vehicle:](#)

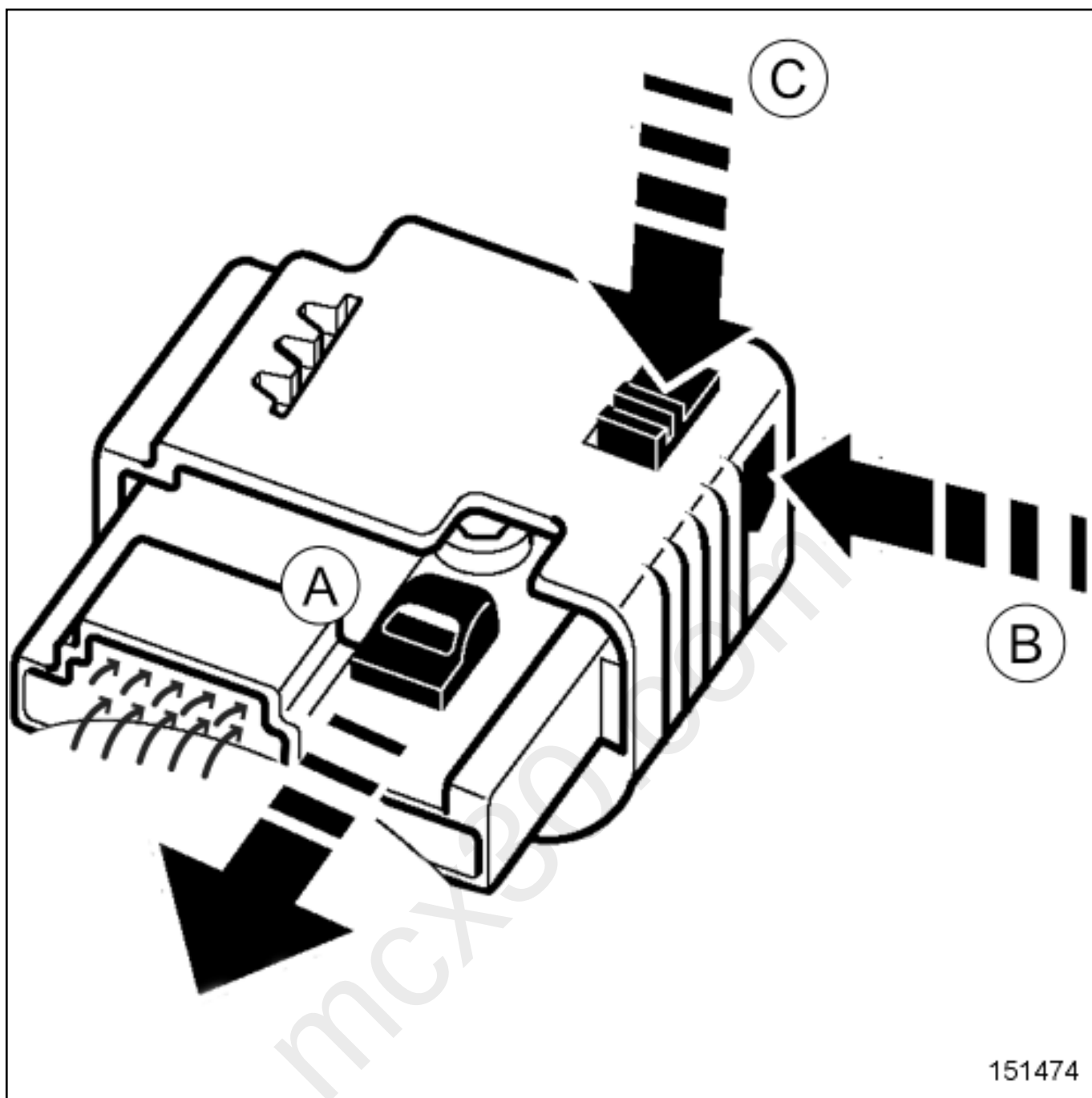
[Precautions for the repair](#) .

■ Lockout the vehicle [Vehicle: Lockout - Removal of lockout](#) .

■ Remove [\(see 19E, Traction battery, Traction battery assembly: Exploded view\)](#) :

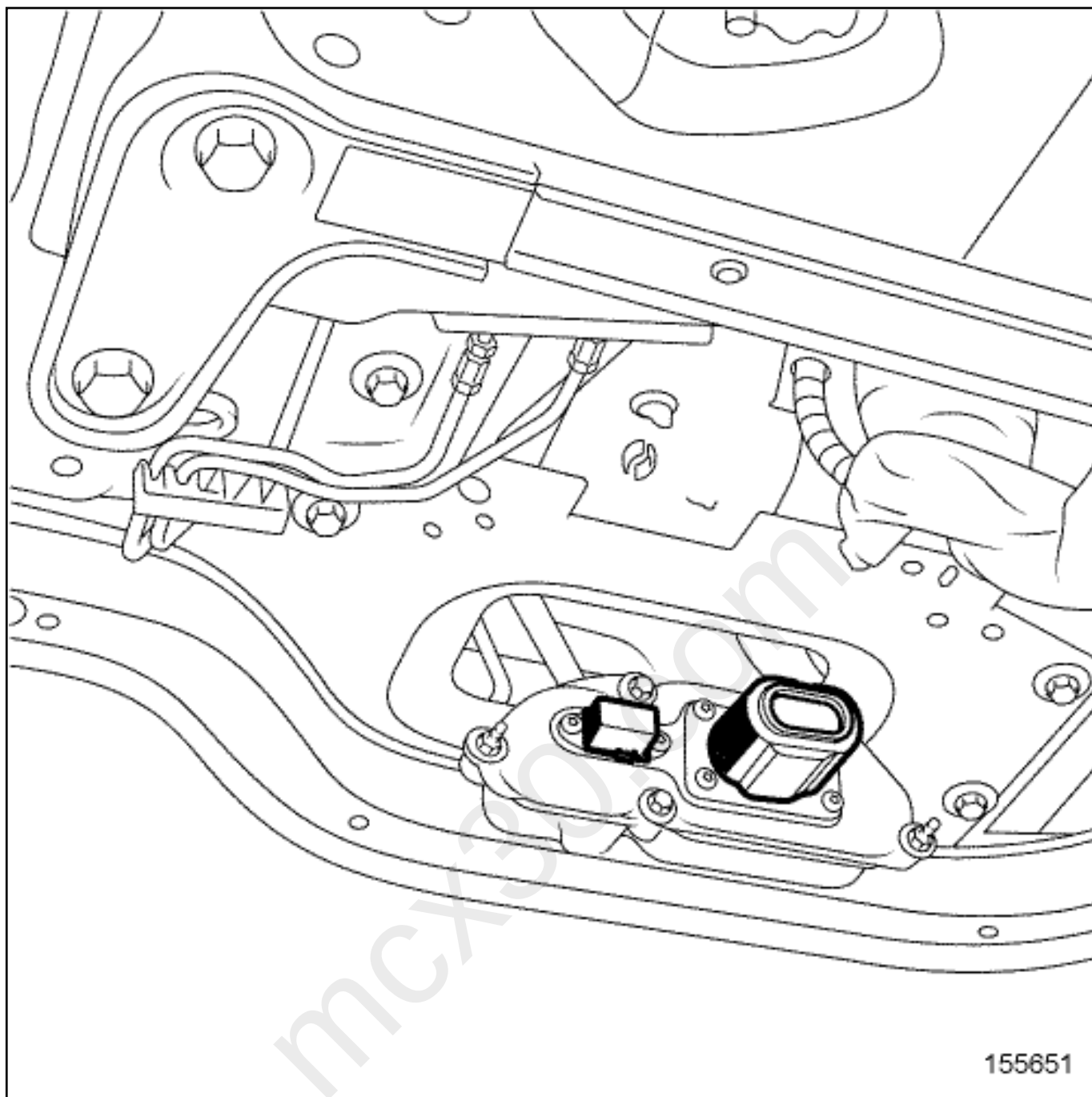
- the front protective housing screws,
- the front protective housing clips,
- the front protective housing,
- the wiring protective housing screws,
- the wiring protective housing.





 Disconnect:

- the traction battery connector(1) by following the steps specified by the arrows(A) , (B) and (C) ,
- the traction battery signal connector(2) .

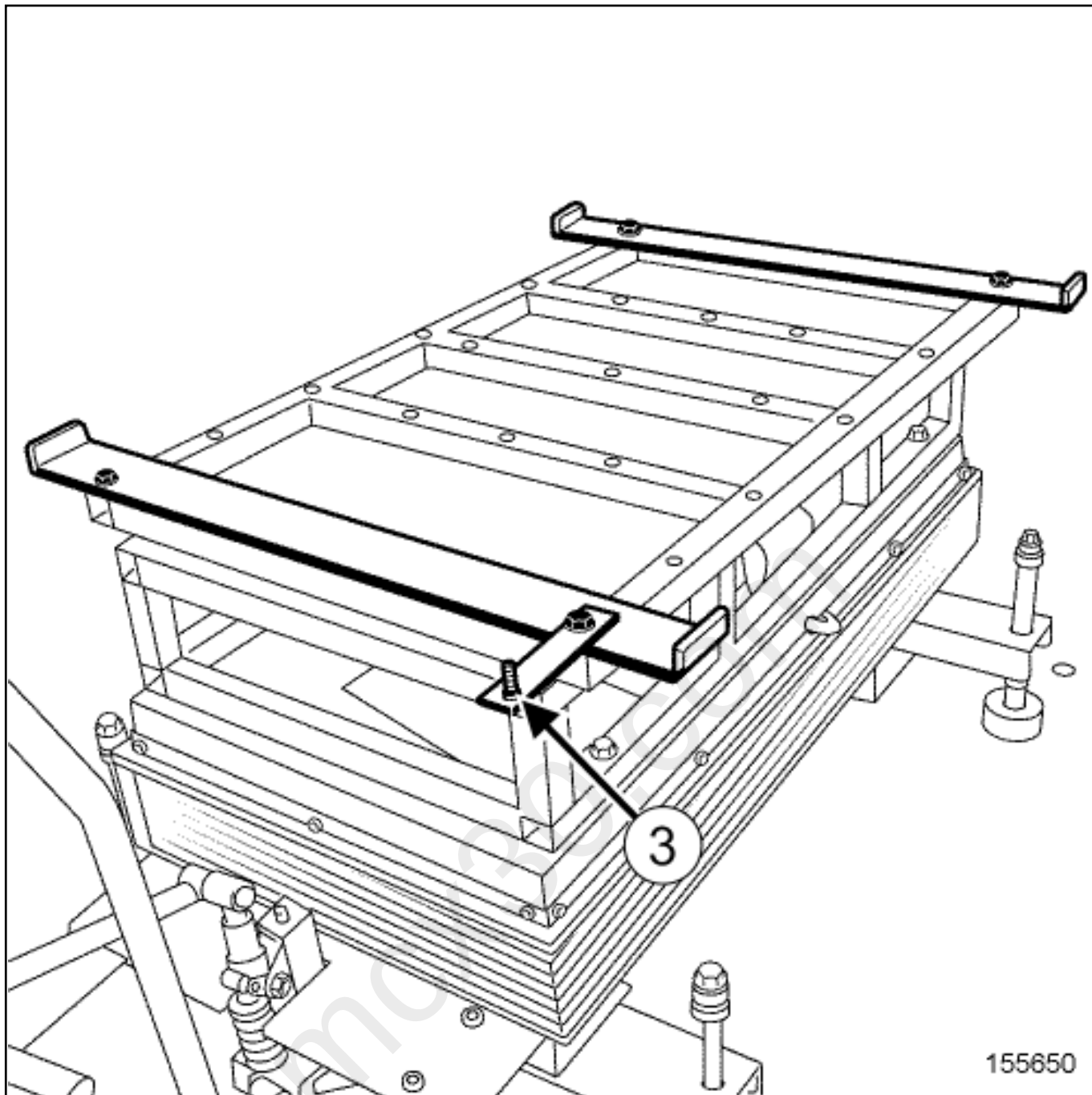


■ Protect:

- the traction battery connector sockets [Wiring: Precautions for the repair](#) ,
- the traction battery wiring [Vehicle: Precautions for the repair](#) .

■ Remove the traction battery earth strap screw ([see 19E, Traction battery, Traction battery assembly: Exploded view](#)) .

2. REMOVAL OPERATION

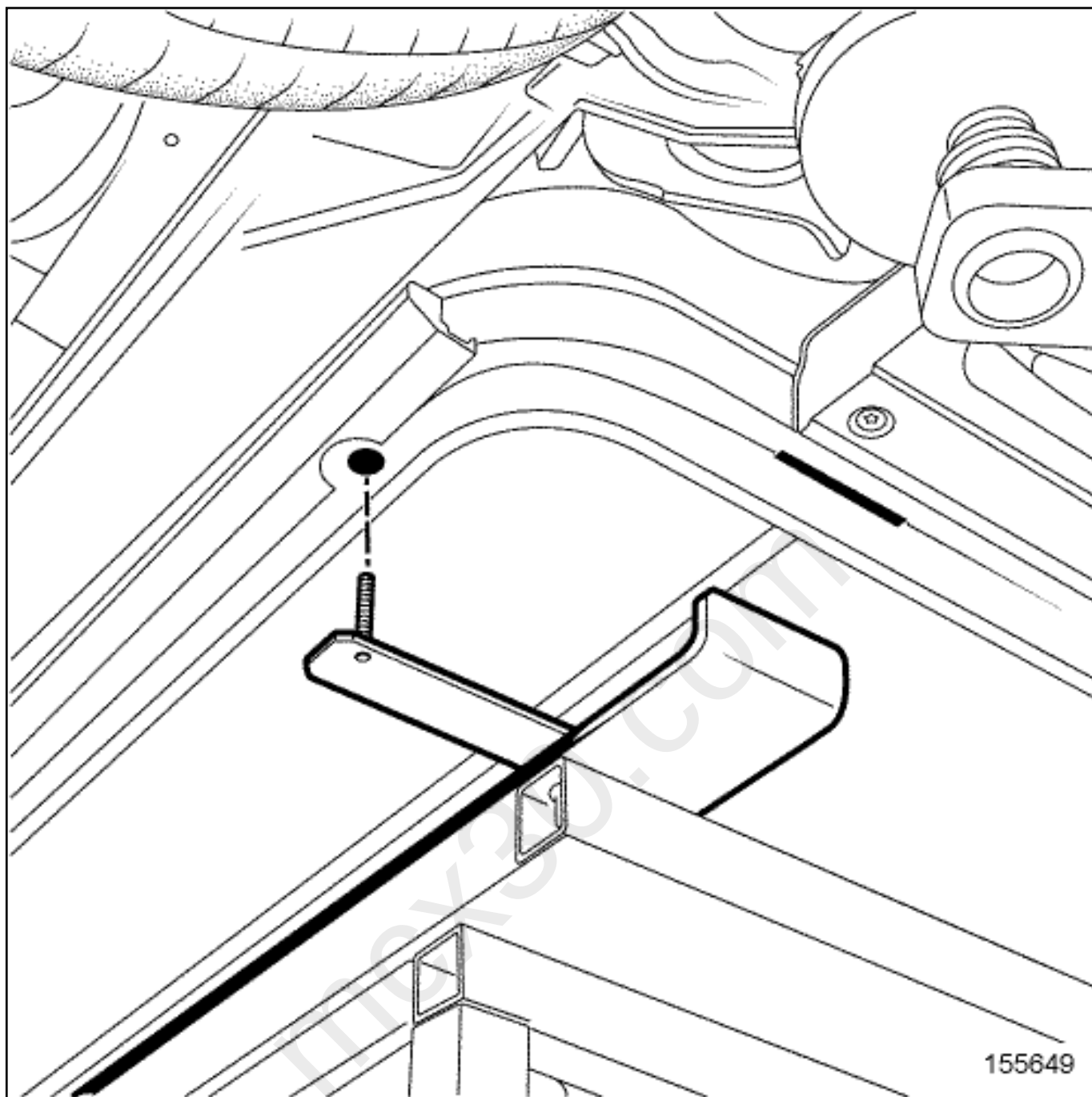


■ Fit the toolKit of removal/refitting traction battery([Ms. 2004](#)) on the toolTool for removing/refitting the traction battery ([Ms. 1968](#)) .

Note:



The centring pin([3](#)) of the toolKit of removal/refitting traction battery([Ms. 2004](#)) is positioned at the rear.



- Fit the toolsLift table([Ms. 1976](#)) , Kit of removal/refitting traction battery([Ms. 2004](#)) and Tool for removing/refitting the traction battery([Ms. 1968](#)) assembly under the vehicle.



Note:

Check that the lift table is centred in relation to the battery.

- Approach the toolsLift table([Ms. 1976](#)) , Kit of removal/refitting traction battery([Ms. 2004](#)) and Tool for removing/refitting the traction battery([Ms. 1968](#)) assembly 10 cm under the traction battery.

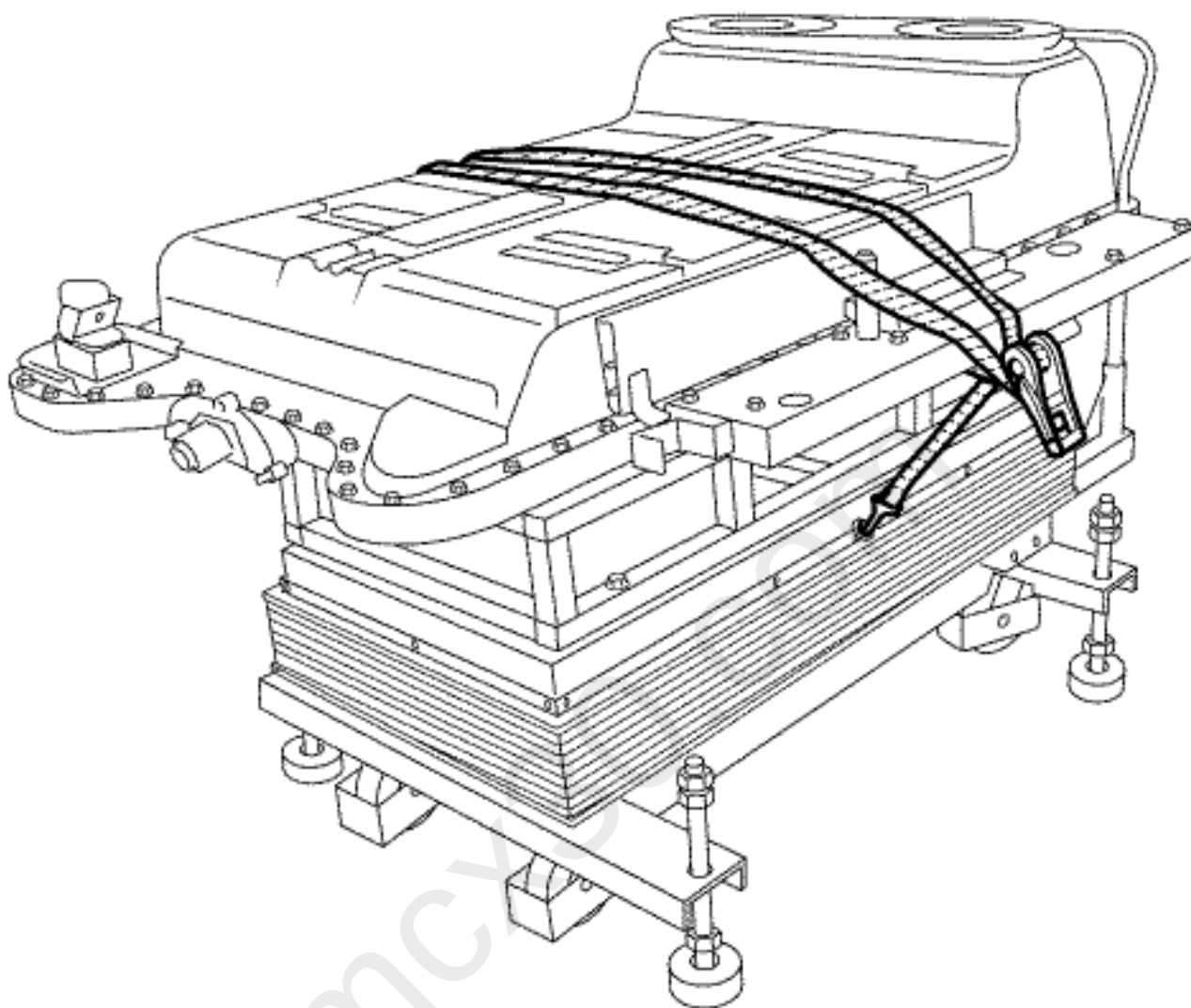
- ❑ Position the tool Tool for removing/refitting the traction battery([Ms. 1968](#)) parallel to the traction battery lower cover.
- ❑ Using a ruler or measuring tape, measure the distance between the four corners of the traction battery lower housing and the lift table surface.
- ❑ Adjust the height of the toolTool for removing/refitting the traction battery([Ms. 1968](#)) by the adjustment feet on the toolLift table([Ms. 1976](#)) .
- ❑ Put the toolKit of removal/refitting traction battery([Ms. 2004](#)) in contact with the traction battery.
- ❑ Remove the traction battery assembly bolts([see 19E, Traction battery, Traction battery assembly: Exploded view](#)) .

Note:



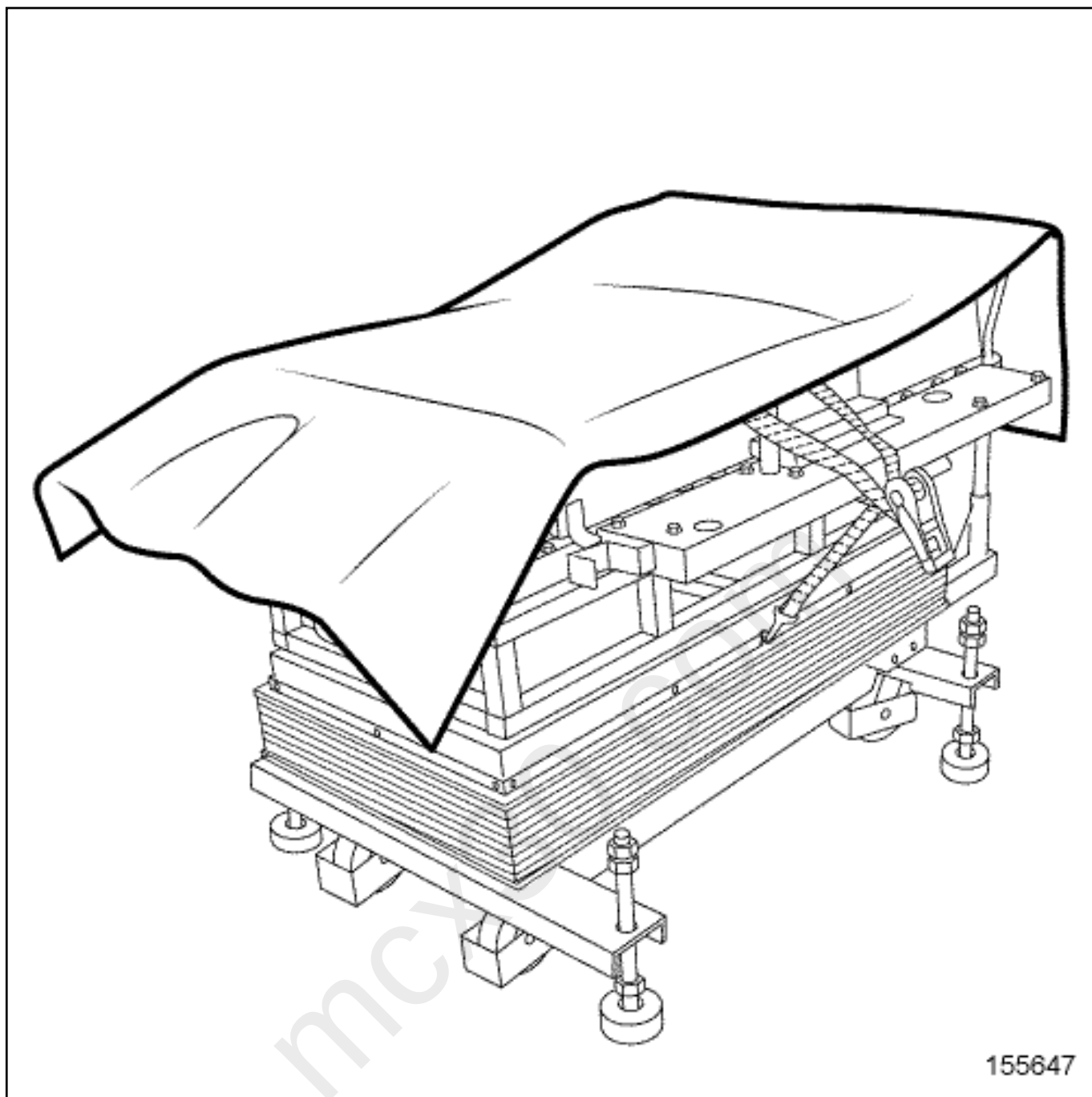
During removing traction battery screws, if the lift tableLift table([Ms. 1976](#)) goes down slightly, give one or two shots pedal to adjust the height of the whole.

- ❑ Lower the traction battery assembly([see 19E, Traction battery, Traction battery assembly: Exploded view](#)) using the toolLift table([Ms. 1976](#)) with the toolKit of removal/refitting traction battery([Ms. 2004](#)) on the tool Tool for removing/refitting the traction battery([Ms. 1968](#)) .



155648

- Strap the traction battery assembly on the toolLift table([Ms. 1976](#)).



- Protect the traction battery assembly using an insulated blanket (Insulating blanket (Ms. 1978)).
- For all movement and stocking (see 19E, Traction battery, Traction battery : Lifting) .



WARNING

To prevent accidents from occurring, never position the lift table in its highest position with a traction battery on it. Always strap traction batteries securely to the lift table when you need to move it.

REFITTING

1. REFITTING OPERATION

- For all movement and stocking([see 19E, Traction battery, Traction battery : Lifting](#)) .



WARNING

To prevent accidents from occurring, never position the lift table in its highest position with a traction battery on it. Always strap traction batteries securely to the lift table when you need to move it.

- Remove:
 - the insulated blanket from the traction battery assembly,
 - the protective cover from the safety device switch socket.
- Refit the Safety lockout plug of the traction battery([Ele. 2005](#)) and the Safety lockout plug padlock of the traction battery([Ele. 1980](#)) on the safety device switch socket.
- Centre the toolTool for removing/refitting the traction battery([Ms. 1968](#)) on the toolLift table([Ms. 1976](#)) .
- Approach the toolsLift table([Ms. 1976](#)) , Kit of removal/refitting traction battery([Ms. 2004](#)) and Tool for removing/refitting the traction battery([Ms. 1968](#)) assembly 15 cm under the vehicle.
- Position the tool Tool for removing/refitting the traction battery([Ms. 1968](#)) with the traction battery parallel to the vehicle.
- Measure the distance between the four corners of the traction battery assembly and the vehicle.
- Adjust the height of the traction battery by the adjustment feet on the toolLift table([Ms. 1976](#)) .
- Lift the traction battery assembly([see 19E, Traction battery, Traction battery assembly: Exploded view](#)) using the toolsLift table([Ms. 1976](#)) , Kit of removal/refitting traction battery([Ms. 2004](#)) and Tool for removing/refitting the traction battery([Ms. 1968](#)) assembly.
- Unlock the toolTool for removing/refitting the traction battery([Ms. 1968](#)) on the lift table.
- Centre the traction battery assembly with the toolTool for removing/refitting the traction battery([Ms. 1968](#)) .

Note:



Check that the toolSafety lockout plug padlock of the traction battery([Ele. 1980](#)) is in place.

For this operation, the traction battery must be guided with the retaining shock of the traction battery.

- Ensure the correct fitting of the traction battery assembly by a mirror.
- Fit without tightening the traction battery assembly screws([see 19E, Traction battery, Traction battery assembly: Exploded view](#)) .
- Torque tighten the traction battery assembly screws in a criss-cross pattern([see 19E, Traction battery, Traction battery assembly: Exploded view](#)) .

Note:



During removing traction battery screws, if the lift tableLift table([Ms. 1976](#)) goes down slightly, give one or two shots pedal to adjust the height of the whole.

- Proceed in the reverse order to removal.
- Remove the lockout of the vehicle[Vehicle: Lockout - Removal of lockout](#) .
- Apply the after repair procedure using the Diagnostic tool[Diagnostic tool : Use](#) :
 - Computer concerned by the After repair procedure:
 - "Traction battery computer" ,
 - Component controlled by this computer concerned by the After repair procedure:
 - "Traction battery assembly" .



Repair-14x02x01-01x37-1-4-1.xml



XSL version : 3.02 du 22/07/11