

TECHNO-EASY INSTALLATION MANUAL

Drop Down Ladder and Stepladder Rack
TE-33-TRL / TE-34-TRL
TE-33-TRM / TE-34-TRM

Table of Contents

Contents of the Box	3
1. Assembly of the crossbars with the reinforcing bars	5
2. Installation of the longerons onto the reinforcing bars	6
3. Determining what equipment (ladder or stepladder) will be installed on the rack	7
4. Installation of the shaft and rear articulated arm	8
5. Installation of the rear articulated arm with the hinge arms	9
6. Installation of the locking lever and lever	10
7. Reconfiguration and adjustments	11
8. Installation of the rails	13
9. Completing the installation	15
Relevant information	17

It's the responsibility of the reseller/installer to ensure that the installation of the product is made according to a high standard to make sure that it is safe.

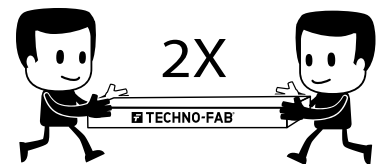
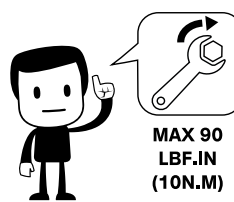
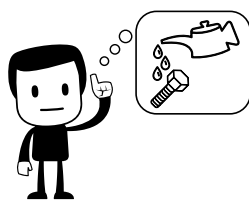
Techno-Fab is not responsible for the sealing of the installation and cannot be held responsible for any damage caused. The use of urethane sealing is recommended.

For safety purposes, ladder must not exceed 28 feet and stepladder, 10 feet.

Hardware tightness must be checked on a periodic basis and adjusted if necessary

Lubricants must be applied on the bolts to prevent them from jamming. It is important that the lubricant used is not detrimental to the nylon.

Never exceed the recommended maximum torque of 90 LBF. IN (10N. M).



It is recommended not to completely tighten the hardware during the assembly.
Wait until installation is completed before firmly tightening the hardware.

* Only an extension ladder may be used with the Techno-Easy.
For a single straight ladder, please contact Techno-Fab to obtain the necessary parts.

Contents of the Box



2X Crossbars



2X Mobile Arms*



1X Anchor Crossbar



2X Levers*



1X Rear Crossbar



2X Rear Fixed Hooks*



2X Shaft*



2X Locking Levers*



2X Reinforcing bars



2X Rear Articulated Arms*



2X Longerons

Tools not included in the box:

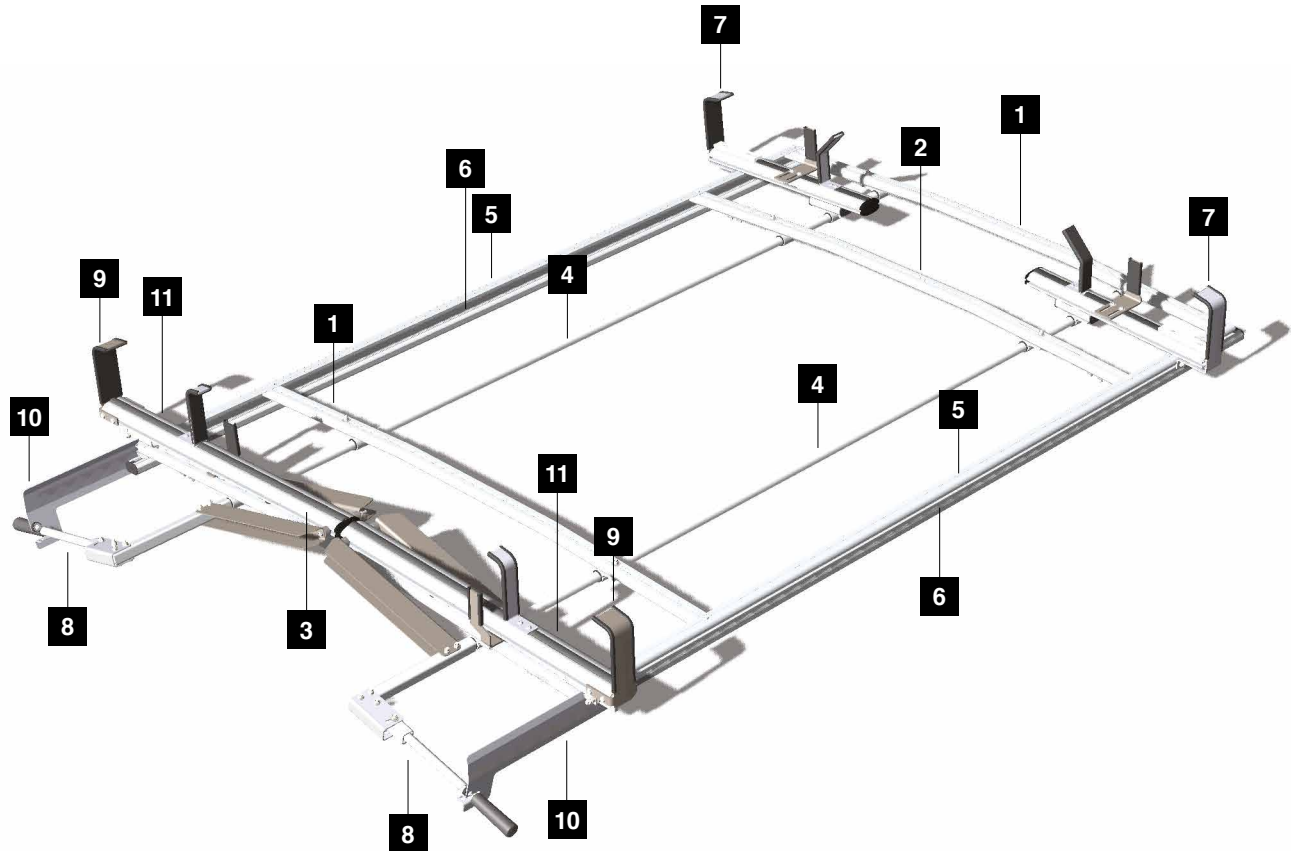
½" Ratchet

½" Key

Allen Key

* Some parts come in a single item in the box as in the case of a TE-34-TRL or TRM single rack.

Parts Diagram



- | | | | |
|----|---------------------|-----|--------------------------|
| 1. | 2X Crossbars | 7. | 2X Mobile Arms |
| 2. | 1X Anchor Crossbar | 8. | 2X Levers |
| 3. | 1X Rear Crossbar | 9. | 2X Rear Fixed Hooks |
| 4. | 2X Shaft | 10. | 2X Locking Levers |
| 5. | 2X Reinforcing bars | 11. | 2X Rear Articulated Arms |
| 6. | 2X Longerons | | |

It is the user's responsibility to ensure that the combined weight of the ladder rack and ladders does not exceed the maximum weight capacity recommended by the vehicle manufacturer.

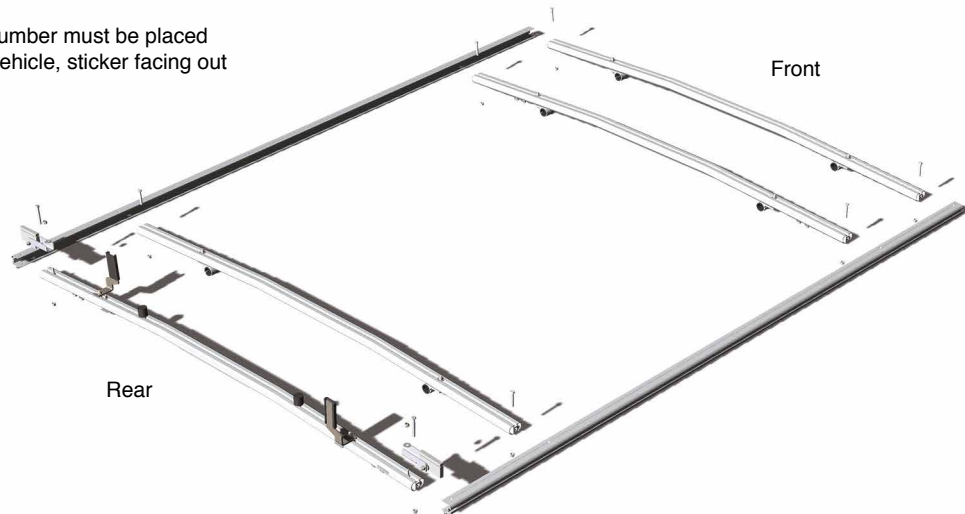
1 Assembly of the crossbars with the reinforcing bars

You will need:

Crossbars (2X)
Anchor Crossbar (1X)

Rear Crossbar (1X)
Reinforcing bars (2X)

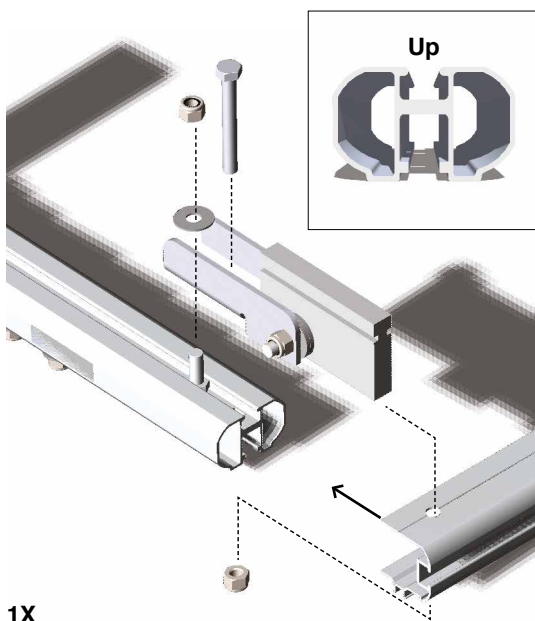
* The bar with the serial number must be placed towards the rear of the vehicle, sticker facing out



Repeat these steps for the second reinforcing bar

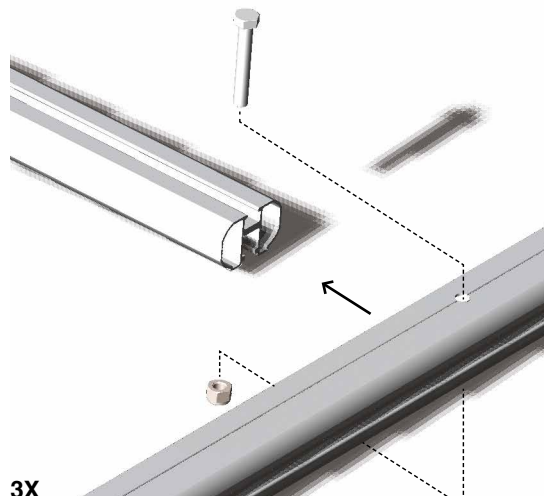
1.1

- Remove the bolts, nuts and washers



1.2

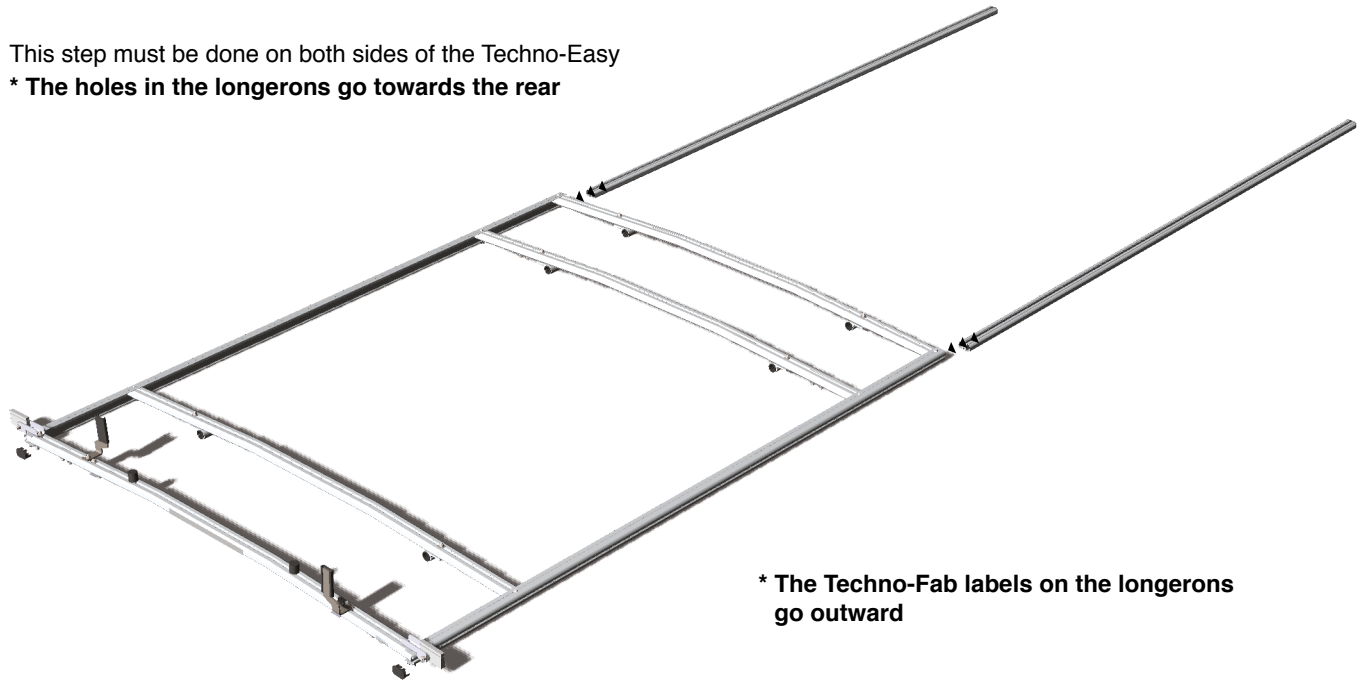
- Put the crossbars in place.
- Reinstall the bolts, nuts and washers without tightening them.



2 Installation of the longerons onto the reinforcing bars

This step must be done on both sides of the Techno-Easy

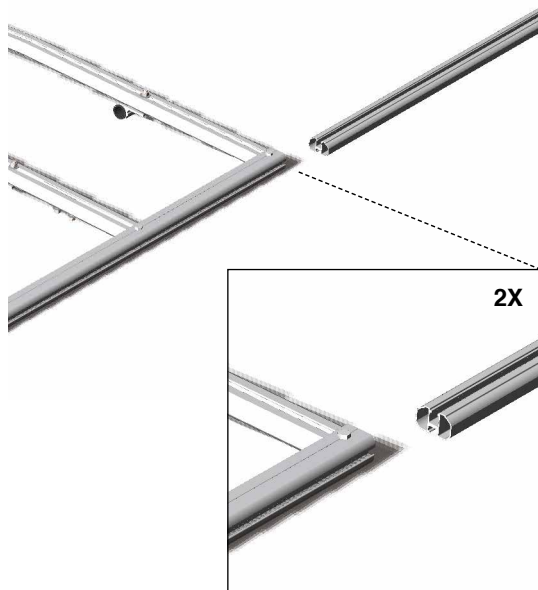
* The holes in the longerons go towards the rear



* The Techno-Fab labels on the longerons go outward

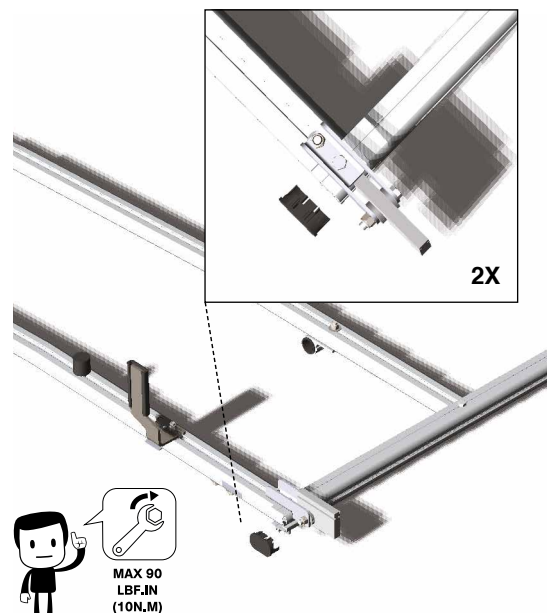
2.1

- Slide the longeron into the reinforcing bar



2.2

- Align the hole in the longerons with the crossbar hole



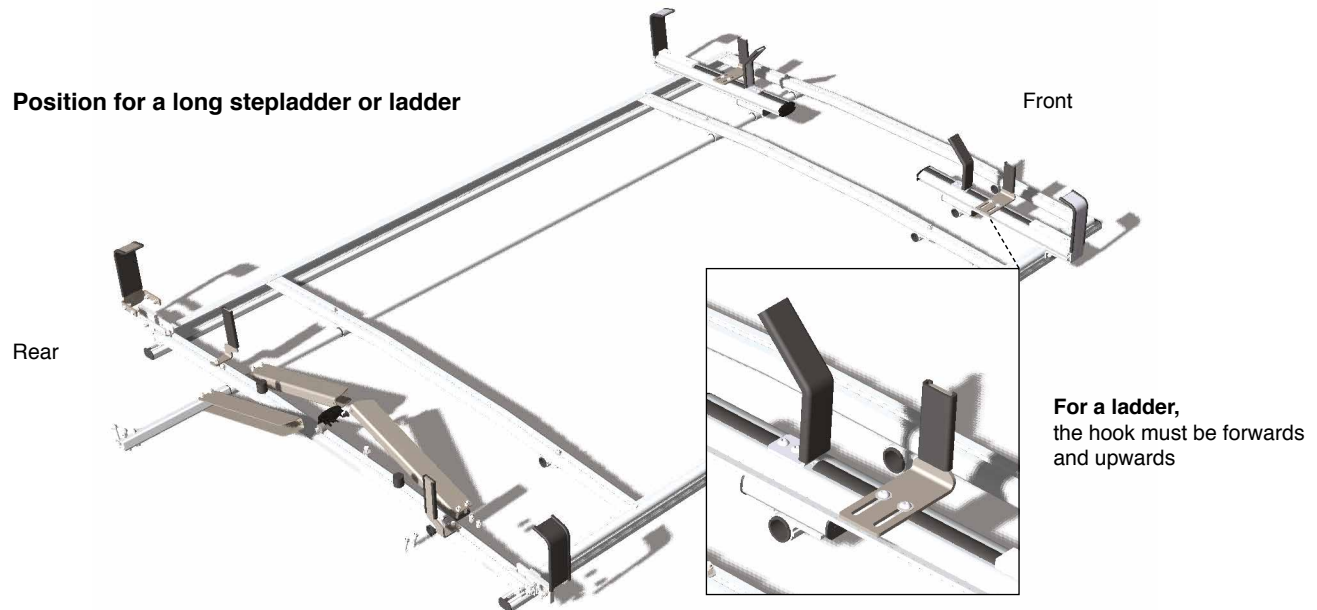
3 Determining what equipment (ladder or stepladder) will be installed on the rack

- Position the mobile arm in the right place

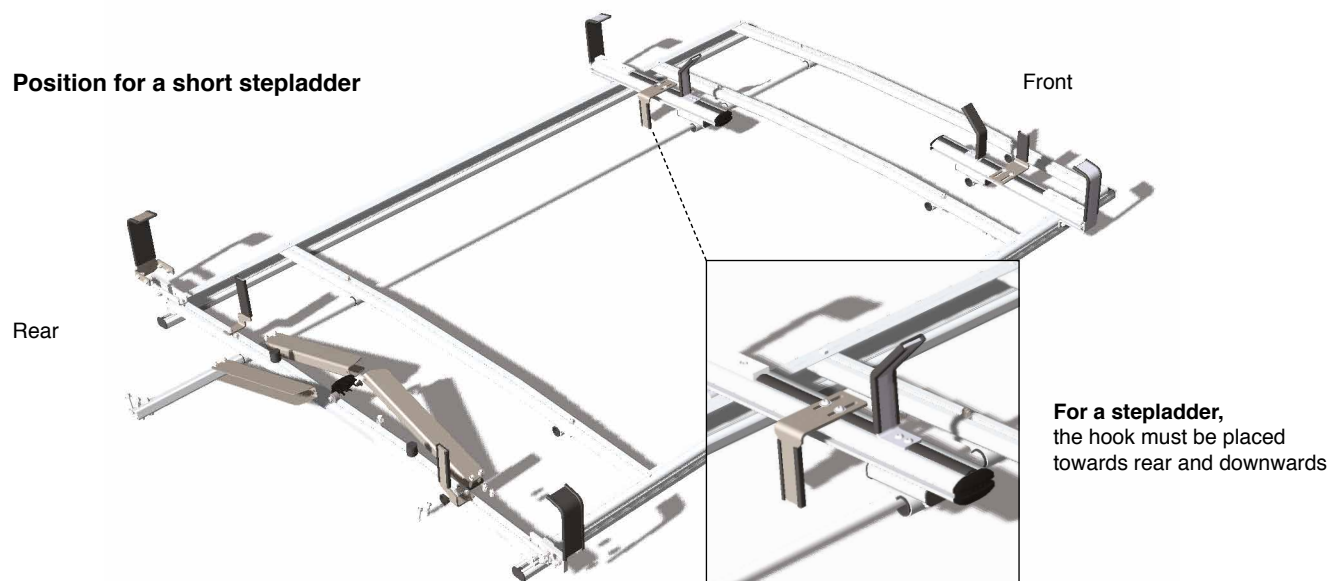
It is important to have the ladder/stepladder on hand to ensure the right adjustment

If you don't have the ladder/stepladder on hand, make sure you have the measurements

Position for a long stepladder or ladder



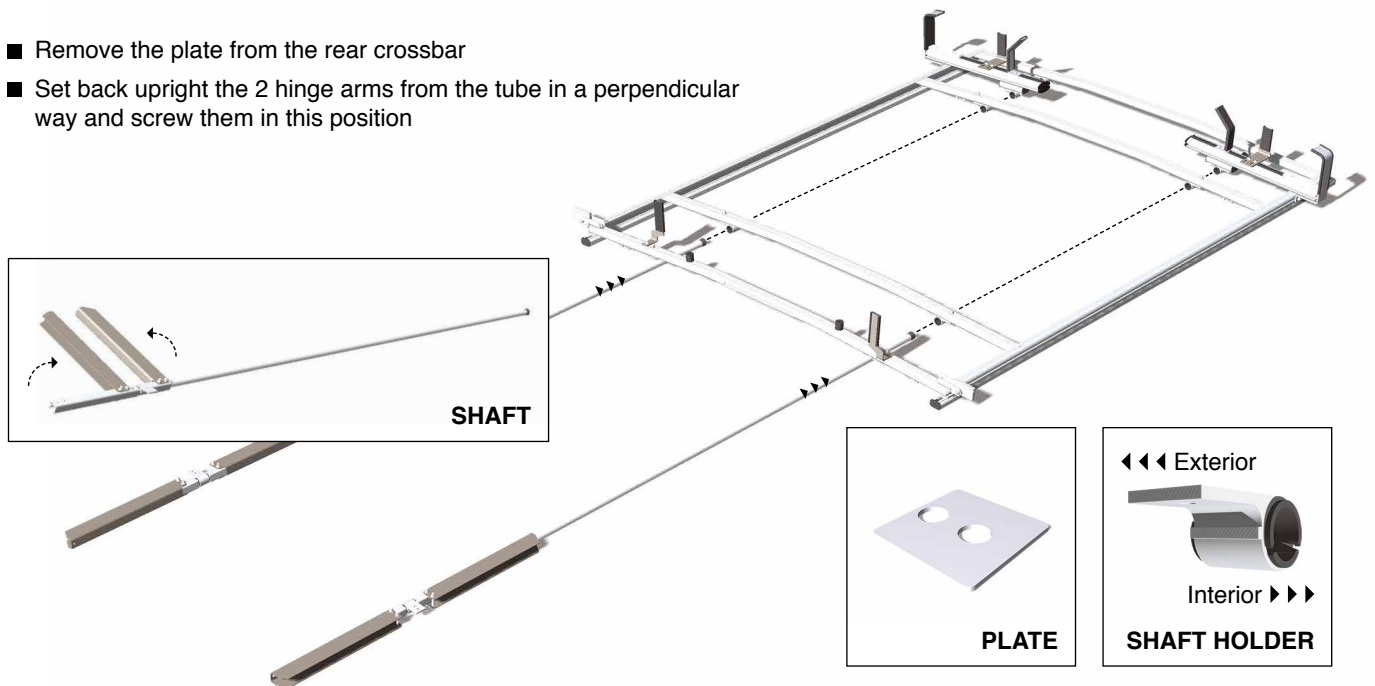
Position for a short stepladder



* See page 12 for reconfiguration and adjustments

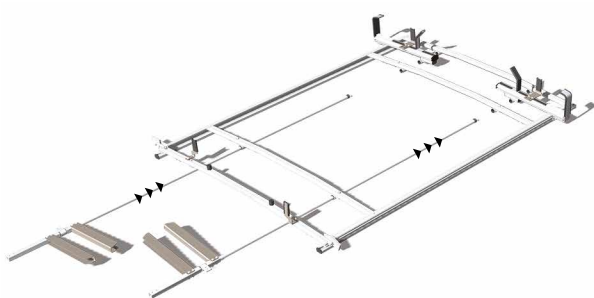
4 Installation of the shaft and rear articulated arm

- Remove the plate from the rear crossbar
- Set back upright the 2 hinge arms from the tube in a perpendicular way and screw them in this position



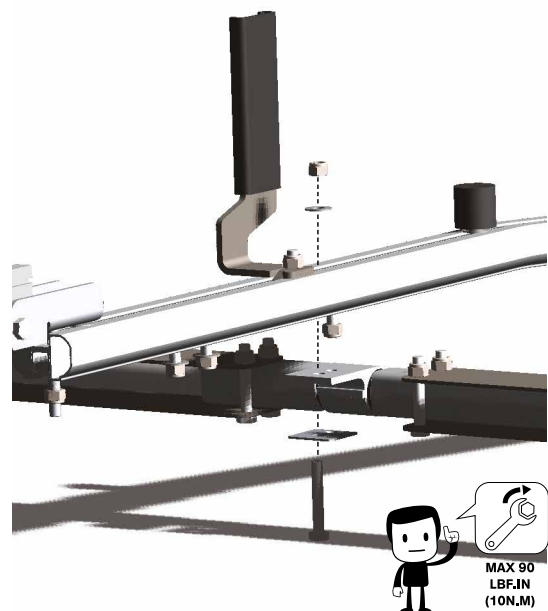
4.1

- Pass the shaft through the shaft holder of the crossbars and mobile arm



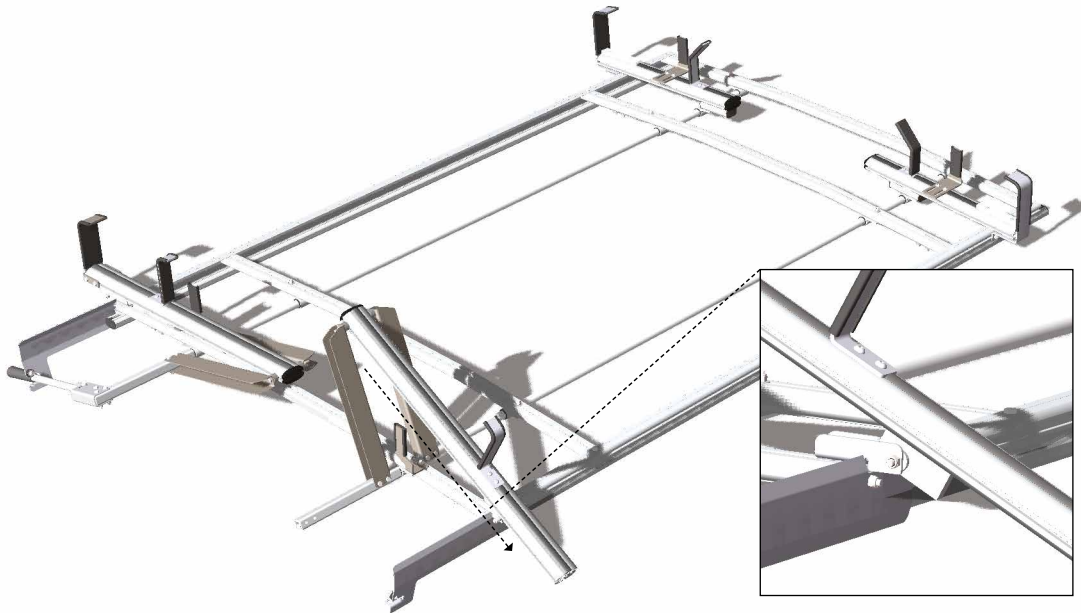
4.2

- Screw the plate and shaft holder of the shaft head onto the shaft holder on the rear crossbar



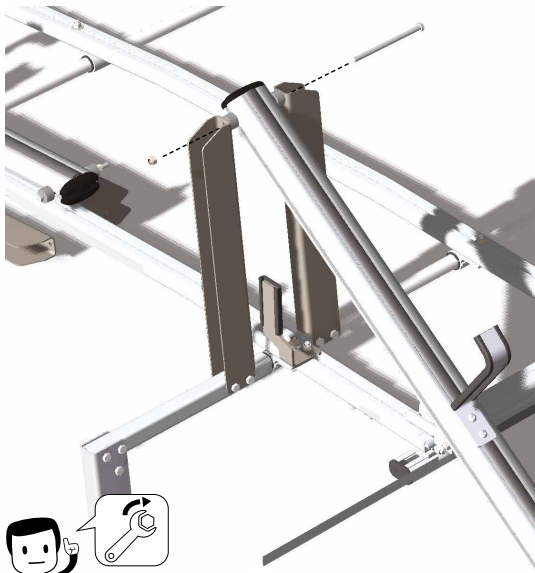
5 Installation of the rear articulated arm with the hinge arms

- Slide the rear articulated arm onto the slider



5.1

- Pass the shaft through the 4 shaft holders of the crossbars and mobile arm



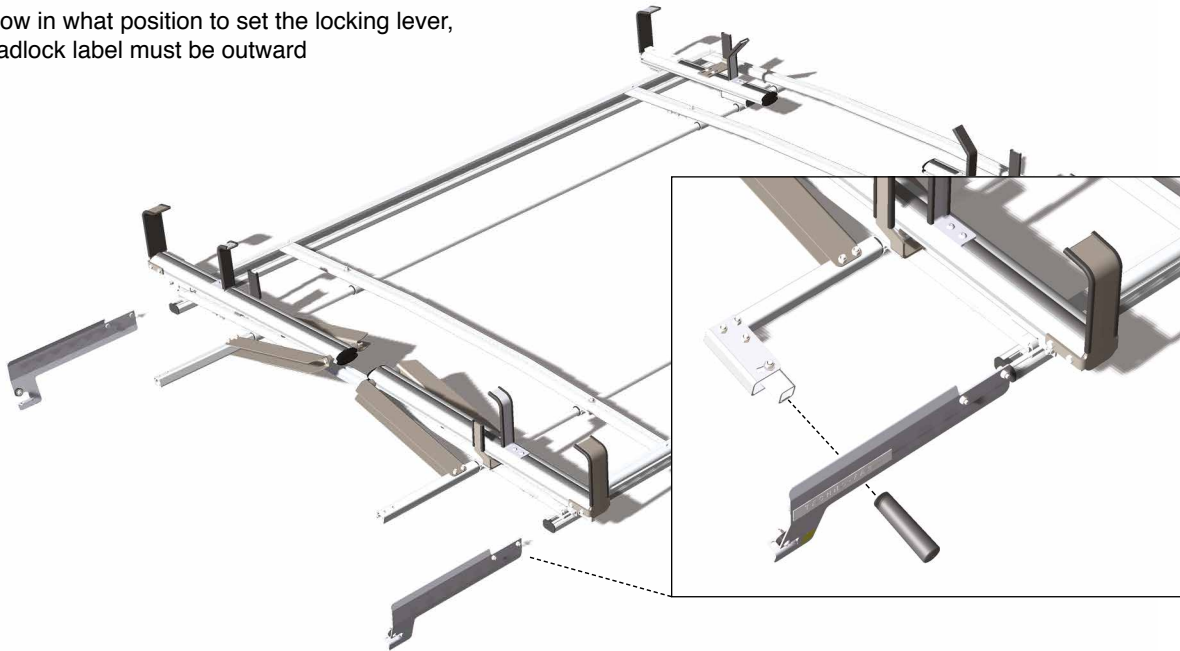
5.2

- Fix the rear hook onto the rear articulated arm

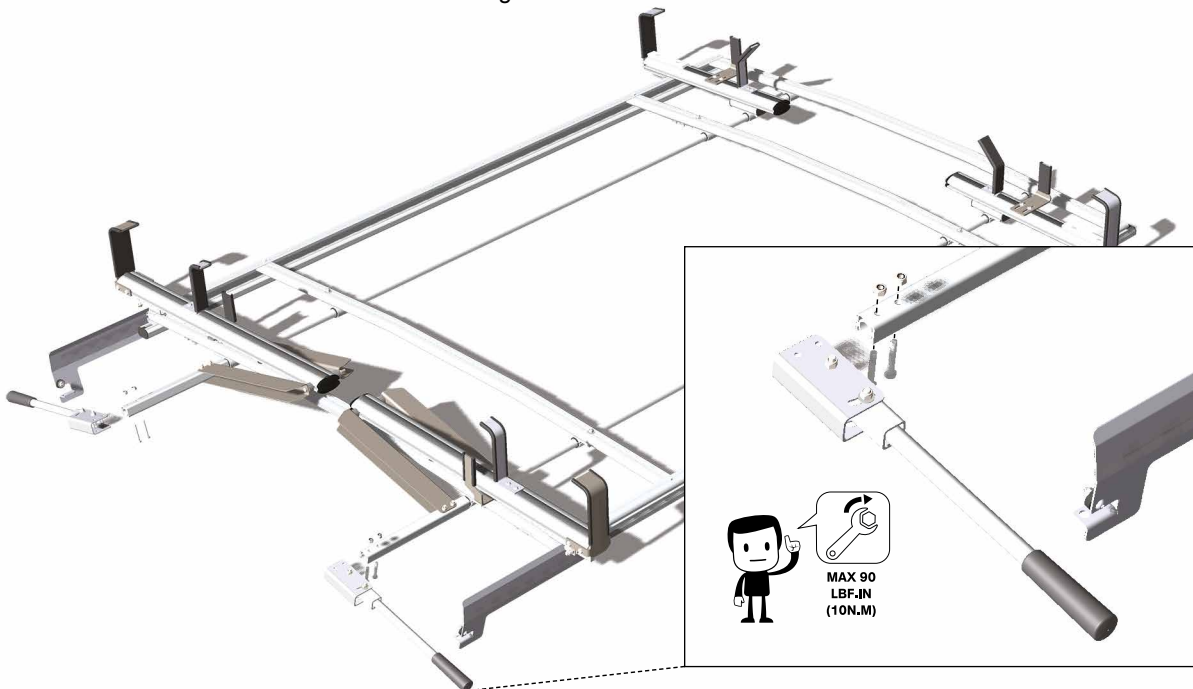


6 Installation of the locking lever and lever

- Put the locking lever in place on the reinforcing bar
- To know in what position to set the locking lever, the padlock label must be outward



- Place the lever at the end of the shaft and fasten together

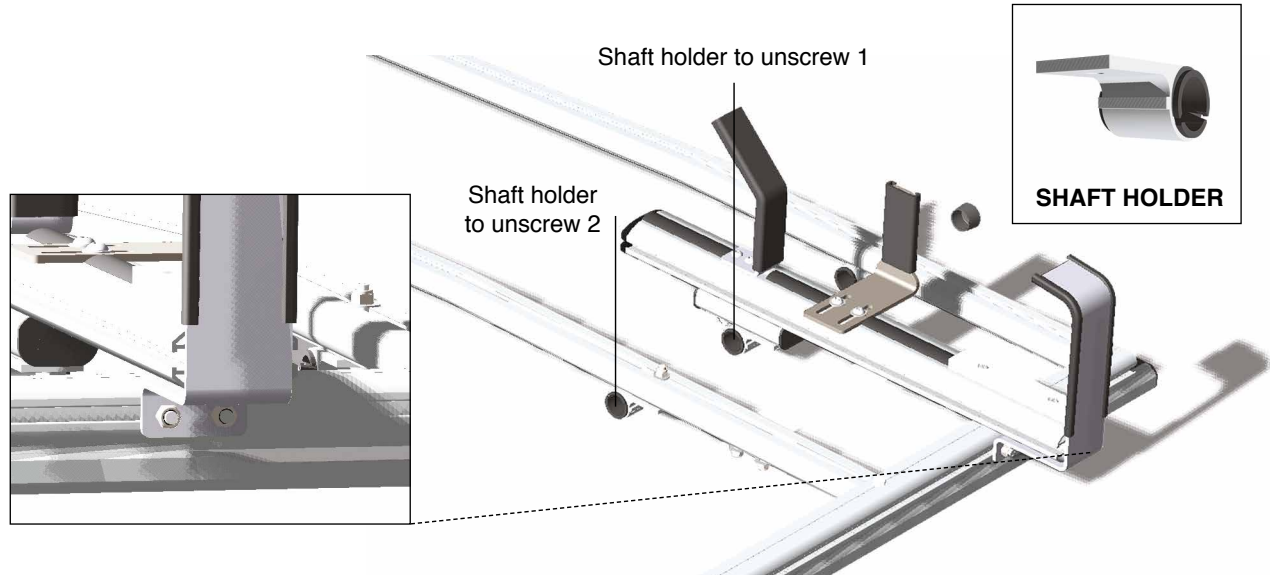


Repeat the same steps for the driver side if it's a double drop down.

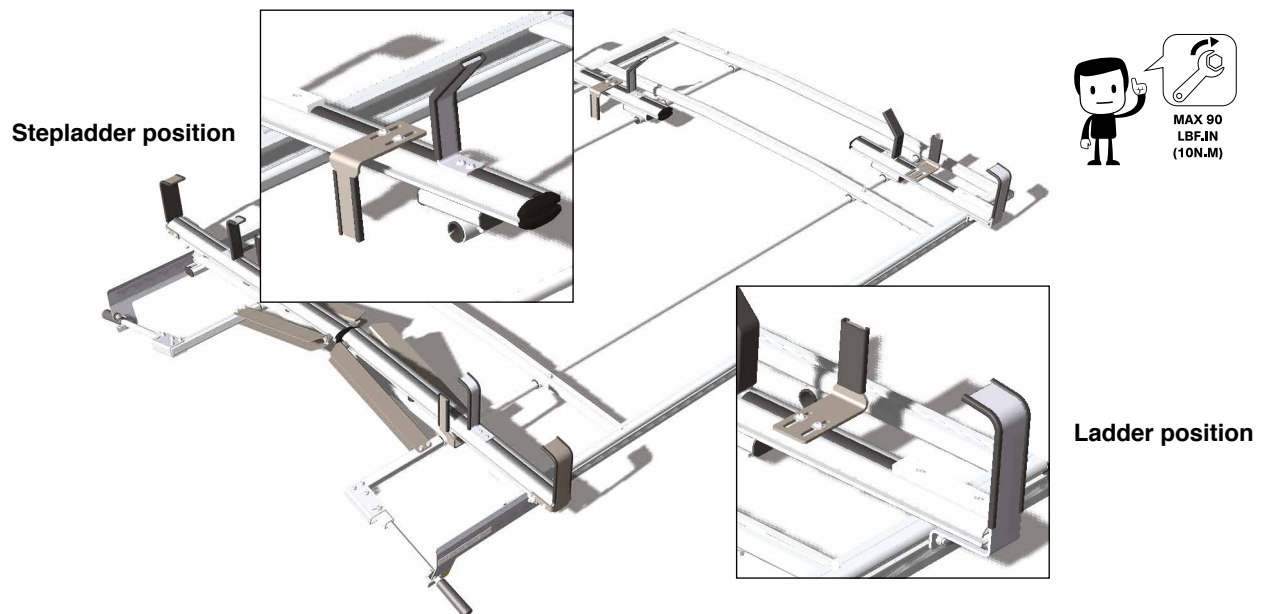
7 Reconfiguration and adjustments

To change the length of the equipment used

- Loosen the mobile arm from the longerons
- Unscrew the shaft holder from the crossbar and mobile arm



- Move the mobile arm on the other side of the crossbar
The crossbar's shaft holder also becomes the mobile arm bar's shaft holder and vice versa
- Adjust the mobile arm hooks to ensure ladder or stepladder is position correctly
- Adjust the rear arm hooks to ensure ladder or stepladder is well fastened



For a stepladder: reverse the hook downward, as it is not in useful for a stepladder. By doing this, it will be easy to reach when a next reconfiguration is necessary.

Once this step is completed, retighten the bolts and nuts according to recommendations.

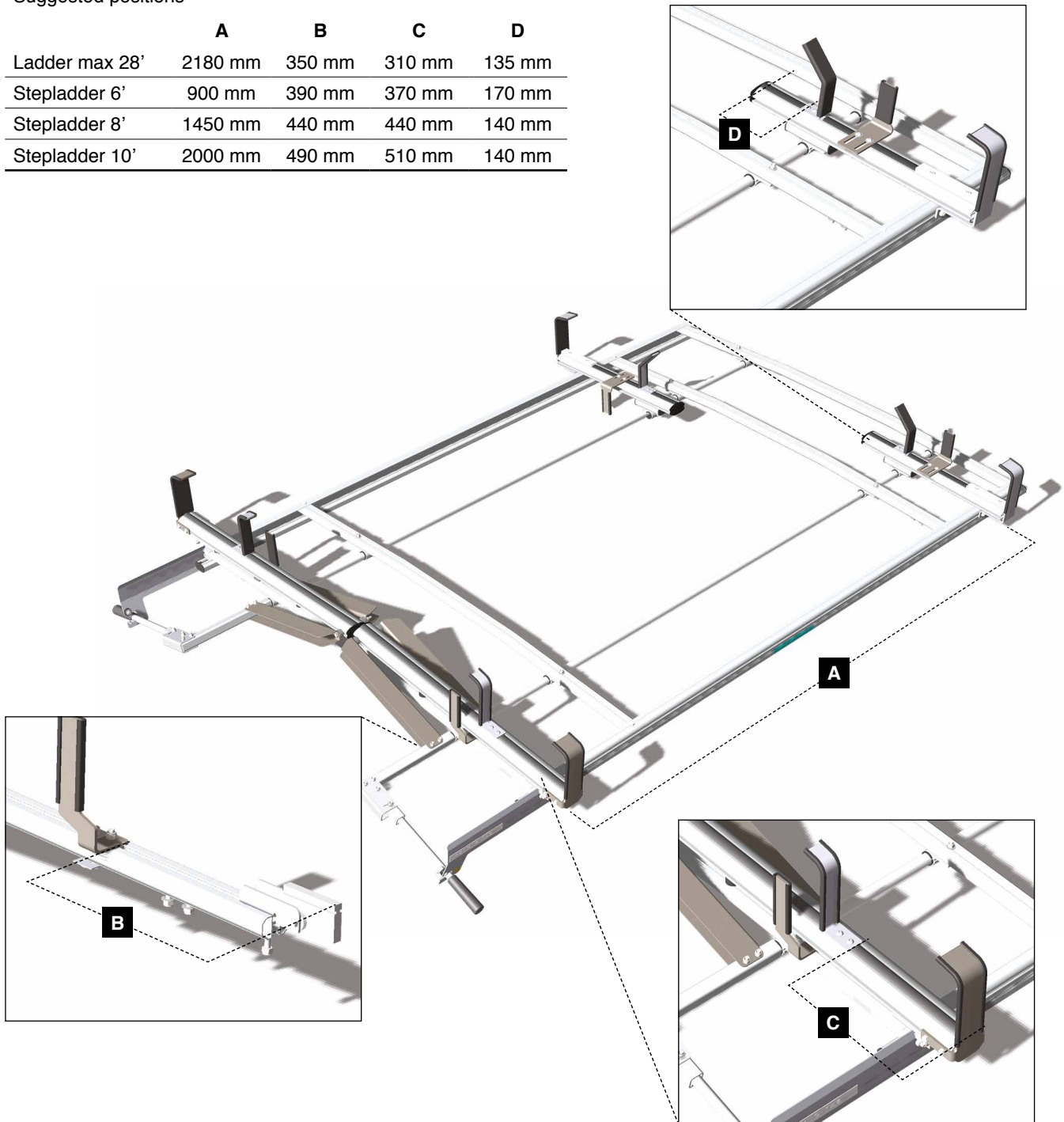
7 Reconfiguration and adjustments (cont'd)

Illustrated adjustment (passenger side)

Do the same for the driver's side

Suggested positions

	A	B	C	D
Ladder max 28'	2180 mm	350 mm	310 mm	135 mm
Stepladder 6'	900 mm	390 mm	370 mm	170 mm
Stepladder 8'	1450 mm	440 mm	440 mm	140 mm
Stepladder 10'	2000 mm	490 mm	510 mm	140 mm



**Warning: it is important not to put pressure between the stoppers and the ladder / stepladder.
A gap of around 15 mm is required.**

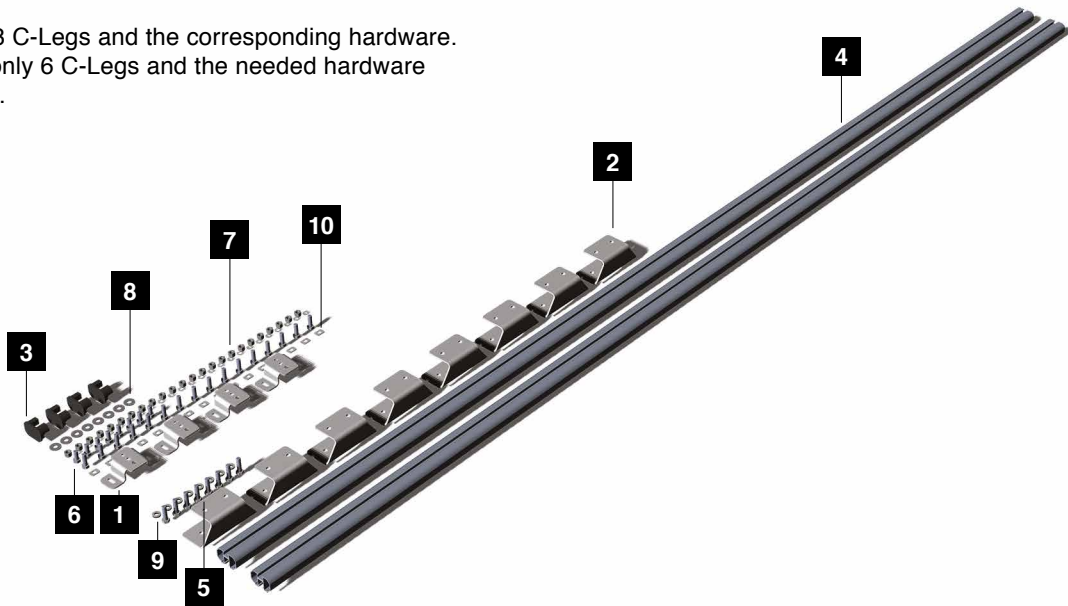
* Measurements are provided for illustrative purposes only, as ladders and stepladders may differ from one manufacturer to another.

8 Installation of the rails

You will need:

- | | | | |
|---|-------------------------------|----|--|
| 1 | 4X Angled Bracket | 6 | 24X 5/16 x 3/4 bolts* |
| 2 | 8X C-Legs* | 7 | 24X 5/16 Nuts with Nylon Insertion* |
| 3 | 4X Rail Caps | 8 | 8X Washers* |
| 4 | 2X Rails | 9 | 8X Stainless Steel and Neoprene Washers* |
| 5 | 8X Metric Bolts 1.25 x 25 mm* | 10 | 16X Reinforcing Plate* |

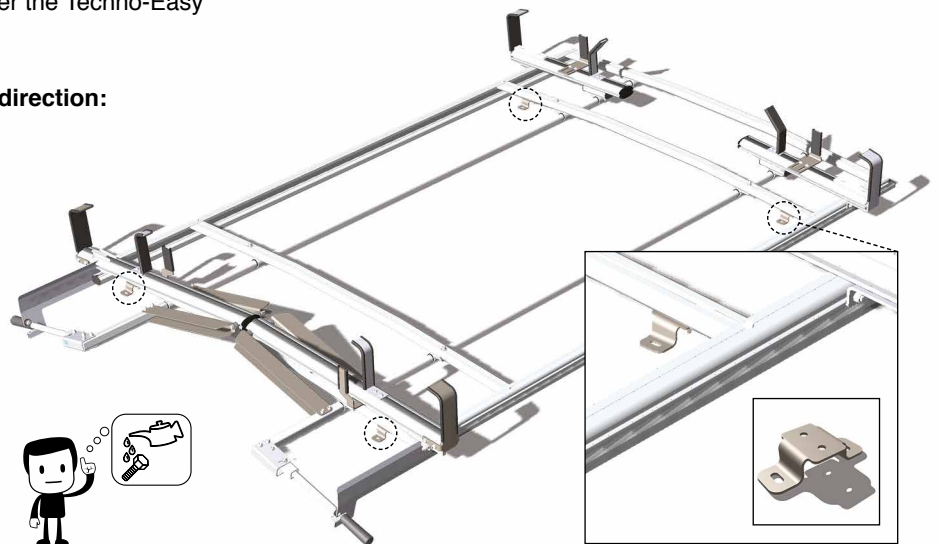
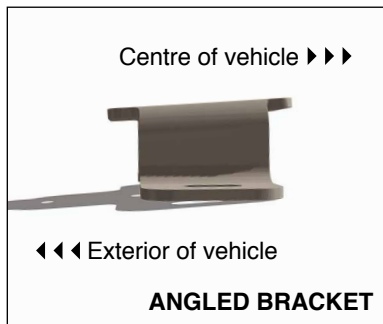
* TRLs have 8 C-Legs and the corresponding hardware.
For TRMs, only 6 C-Legs and the needed hardware are required.



***For the next steps, make sure the hardware is well lubricated**

- Install the angled bracket directly under the Techno-Easy using the bolts already in place

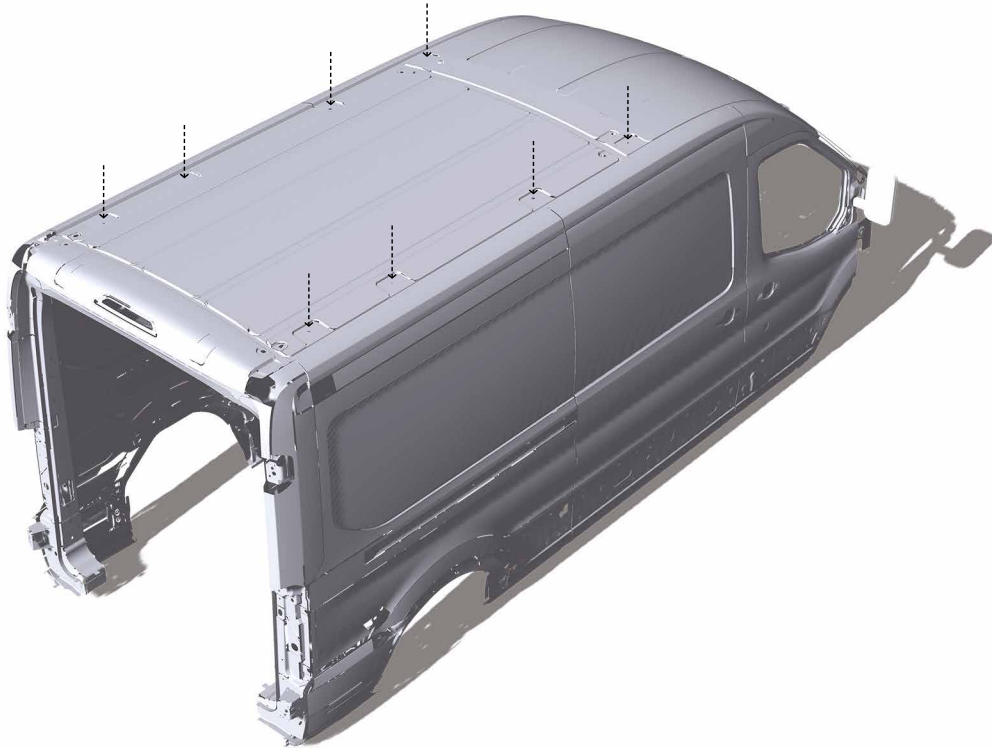
Pay attention to the angled bracket's direction:



Hardware contained in the box has not been lubricated
Installer has the responsibility of using an appropriate lubricant.

8 Installation of the rails (cont'd)

- Remove the caps from the pre-drilled holes on the vehicle's roof
- Carefully seal the holes with urethane to ensure waterproofing



8.2

- Place the C-Leg: **the open side of the C-Leg goes inwards**



* To install the C-Leg on the roof, place the **metric bolts** over the stainless steel and neoprene washer: neoprene face down.



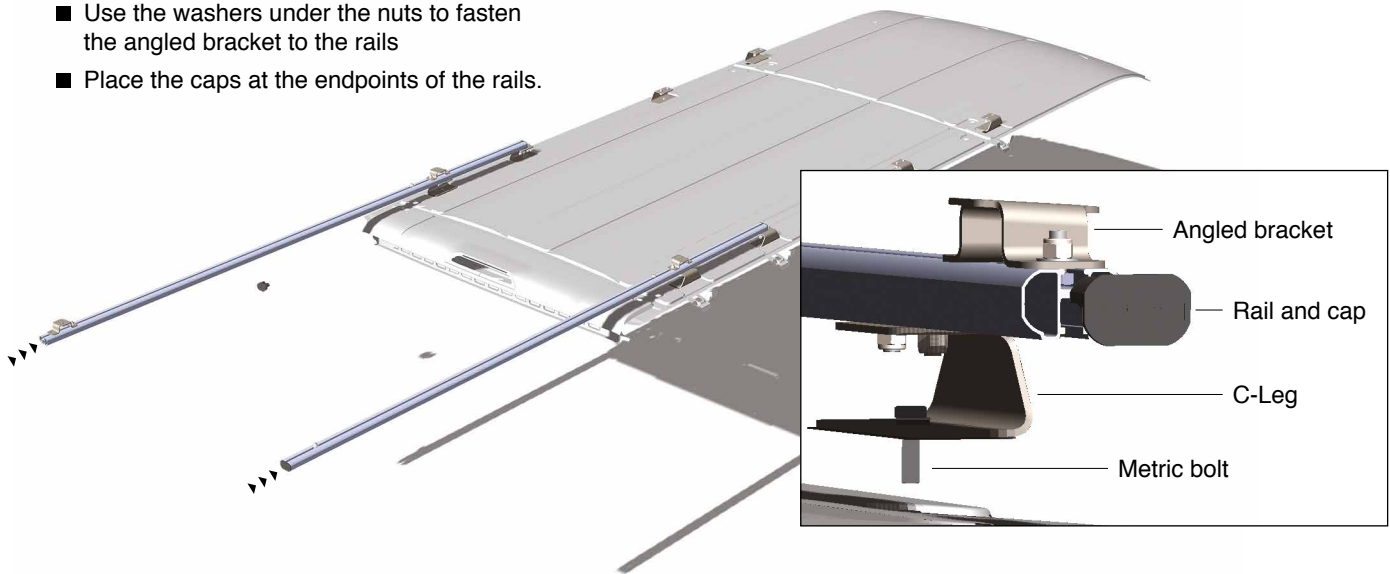
8.3

- Put the bolt in the C-Leg (2 for each), reinforcing plate and head upward



8 Installation of the rails (cont'd)

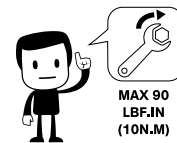
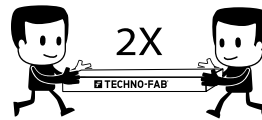
- Slide the rails in the bolts' heads
- Slide 4 bolts on each rail to fasten to the angled bracket
- Use the washers under the nuts to fasten the angled bracket to the rails
- Place the caps at the endpoints of the rails.



9 Completing the Installation

It is important to have at least 2 people to install the rack on the roof

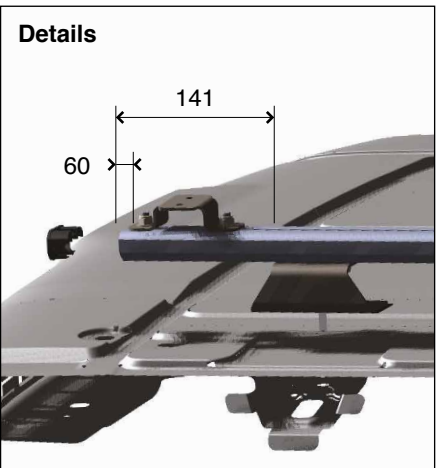
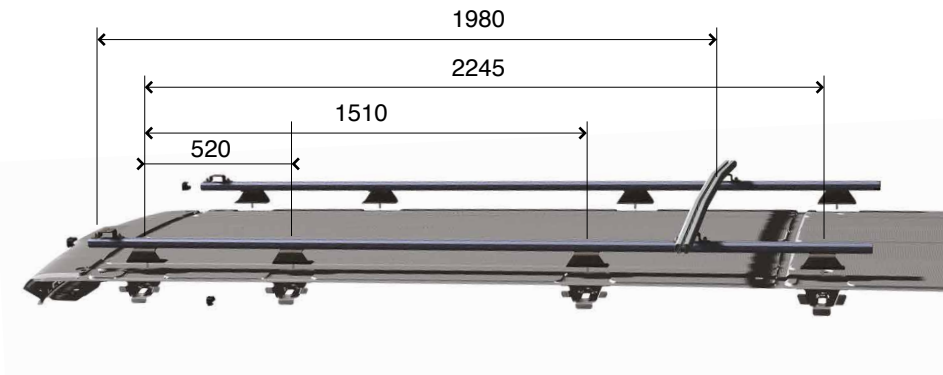
- Once the rack has been installed on the rails and adjustments have been done, tighten the bolts and nuts according to recommendations.



An extension arm is included in the box.

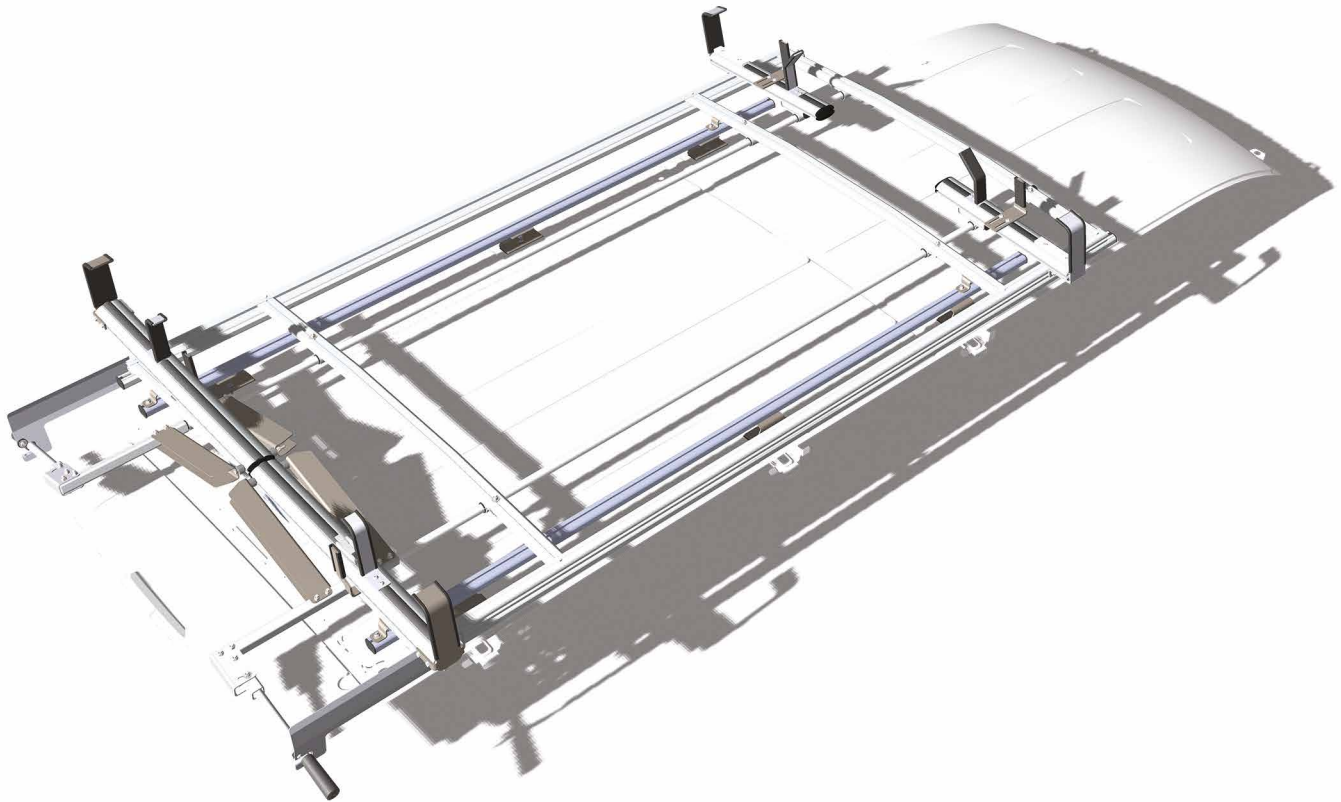
To use the extension arm, remove the black handles from the lever using a sharp object.

For the rails, we recommend using the following distances in millimetres.



9 Completing the Installation (cont'd)

- Firmly tighten the bolts
- Ensure a natural downward (as per specs) movement: It is not normal to have a jerky movement or a sudden stoppage during the descent.



Available Options

For the TE-33-TRL, available options are:

6" Beacon holder	TO-SG-6
10" Beacon holder	TO-SG-10
Additional extension arm	TO-ARM-TE

For the TE-34-TRL, available options are:

6" Beacon holder	TO-SG-6
10" Beacon holder	TO-SG-10
4" Assembled PVC Tube	TO-TB-A4
6" Assembled PVC Tube	TO-TB-A6
4" Non assembled PVC Tube	TO-TB-N4
6" Non assembled PVC Tube	TO-TB-N6
Additional extension arm	TO-ARM-TE

Relevant Information

It is required that rack be locked when the vehicle is in motion.

Use a padlock with a stainless steel or coated shackle to prevent corrosion of the components.

To ease the installation task, we suggest you favour team work.

The installation of the rack on the vehicle means that the installer acknowledges having read and understood the recommended installation method outlined in this manual.

Nuts with nylon insert that have already been tightened firmly must be changed to retain their properties

See the Installation Tutorial



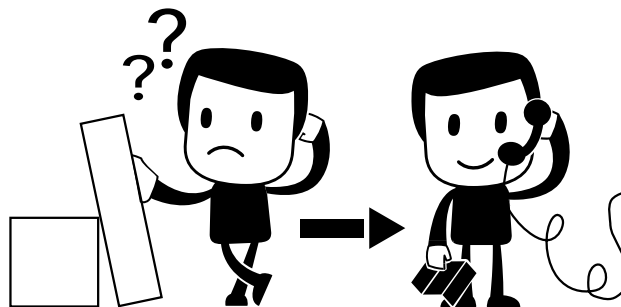
See the Adjustment and reconfiguration Tutorial



See these Techno-Fab videos on our *YouTube* channel

TECHNO-FAB®

For more information
www.techno-fab.com
info@techno-fab.com
 450 253-8400



TECHNO-FAB®



Serial Number

Date of Purchase

Place of Purchase

Techno-Fab's warranty covers a three-year period.

Please read the online warranty at www.techno-fab.com/en/warranty

In accordance with the terms of this Guide, it is understood that Techno-Fab will not be liable for any malfunctions, breakage and scratching of the products and/or for any damage resulting from any parts and/or components not coming from Techno-Fab but rather from third parties, including, among others, third-party manufacturers, and which parts and/or components could potentially have been attached to the products during assembly and/or installation and/or subsequent to these operations.

User is responsible for ensuring a periodic inspection and also ensuring that necessary adjustments to the tightness of the hardware are done.

It is important to provide this document to the user.

User must keep this document for future reference.