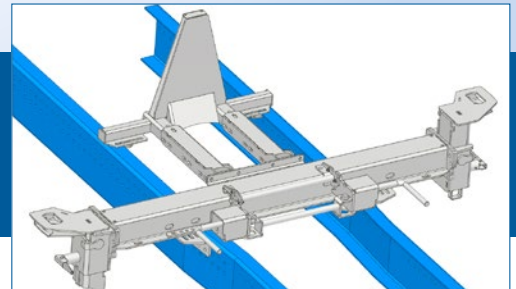


## Assembly instructions

With height adjustment 120:  
410.696.408 - 410.696.482

# Swap systems



Item no. 410.610.099

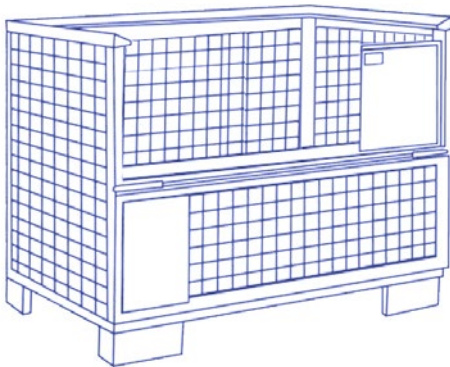
*Please read these instructions carefully and completely before commencing the assembly.*



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## 1. Safety and warning information



To create a fault-free swap system **please adhere to these work instructions**, especially the following warning notes, otherwise the guarantee claim expires. Colour representations only serve for illustration purposes. **Contact us immediately in cases of ambiguity.**

### 1.1 Check scope of delivery

**Please check the delivery for completeness using the enclosed packing list.** Immediately report any transport damages to the forwarder. Please understand that we must reserve the right to make changes in the delivery with regard to form, equipment and technology. *You will find the general scope of delivery on page 8.*

### 1.2 Safety instructions

**Please pay attention to your own safety and that of your employees.** Working with kits bears risks. Therefore, be cautious at all times, and it is especially imperative that:

- While unloading with a forklift, you push the pallet all the way onto the forks. You place kits only on level surfaces and secure these against sloping, tilting, falling over.
- You always wear a helmet during crane work and only lift assemblies vertically and not at an angle! You never walk under suspended loads! A suspension fitting is always above the centre of gravity of the assembly!
- You comply with legal specifications, such as vehicle licensing regulations.
- Components may have zinc bumps and sharp edges. Always wear safety gloves. You should also wear safety footwear, as heavy parts may fall. Wear ear protection while working with a compressed air-screw-driver, flex, grinding machine.



Suspended loads on the crane



Falling objects



Risk of crushing



Hazardous contents



falling parts or assemblies



### 1.3 Warning notes

Schneider normally does not precisely know how the swap system is going to be used. **As the vehicle builder, you must adjust the order and further processing of the kit to the needs of your customers as well as to the installation guidelines of the chassis manufacturer.**

- Do not angle the screws when applying, and always tighten them to the torques described under 2.3. Falling below the prescribed torque weakens the system's stability; significantly exceeding it can cause damage to components!
- Connect components only in direct contact with the supplied screws and only once! Third-party or used screws endanger operational safety. Always use new screws for repairs.

### 1.4 Copyright

The copyright of these instructions belongs to Schneider. They are only intended for the professional installation company and its staff, and its contents may not, either completely or in part, be:

- Duplicated
- Distributed or
- Communicated in any other manner.

*Infringements may result in civil and criminal penalties!*

## 2. Preparatory work/human resources

Schneider kits can be assembled in any well-equipped workshop. Before commencing assembly, execute the following preparations:

### 2.1 Human resources

For this, 1-2 mechanics with training as a vehicle and car body constructor, or equivalent training, are required.

### 2.2 Required tools and equipment

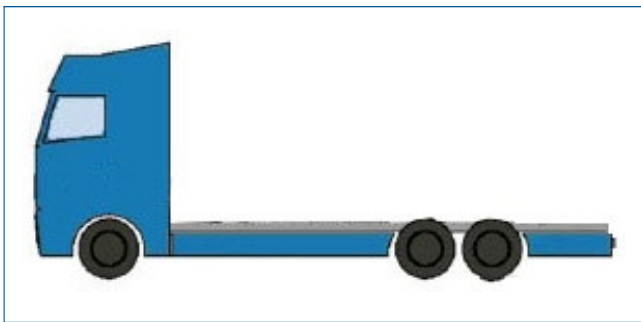
- Gather the following equipment before assembly:
  - Tape measure
  - Precision compressed air screwdriver or cordless powered screwdriver, torque setting up to 320 Nm
  - Torque wrench up to 320 Nm
  - Screw driver and wrench for dismantling/assembly of vehicle components that are preventing assembly of the kit
  - Sockets for hexagon head screws M 14, M 16
  - Grease pencil for marking positions

### 2.3 Tightening torques of the screws

- Please note the required tightening torques for hexagon head screws:
  - as per MBN 10105 M 14 x 45 10.9 must be 210 Nm
  - as per MBN 10105 M 16 x 50 10.9 must be 320 Nm

The settings on the screwdrivers must be checked by appropriate measuring equipment. The torques are intended for the nut with dry thread.





## 2.4 Preparations on the chassis

- To begin, align the vehicle so that it is straight and easily accessible from the side and rear, on even ground. **Now proceed as follows:**
- Temporarily remove any interfering covers and components.
- Install components without clearance to the support surface. For this reason, bring the parts into the correct position before tightening the screws e.g. by using screw clamps.
- Please pay attention to axle parts that may protrude from the chassis as they snap in.

**Tip:** You can set up the swap system on the chassis or partially prefabricate it on supports.

## 3. Assembly of the kit

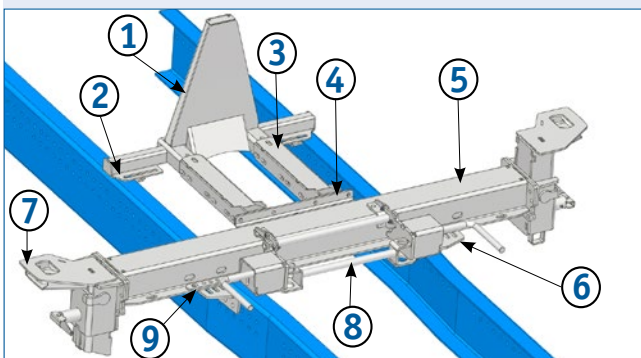
Assemble the swap system in four steps:

### 3.1 Assembly of front stops and front traverses

### 3.2 Assembly of middle supports

### 3.3 Assembly of rear traverses

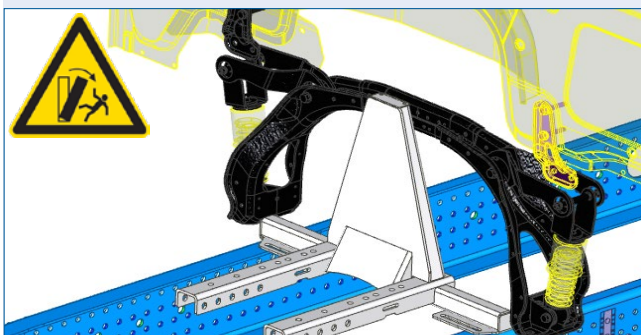
### 3.4 Finishing work



### 3.1 Assembly of front stops and front traverses

Generally, the assembly consists of:

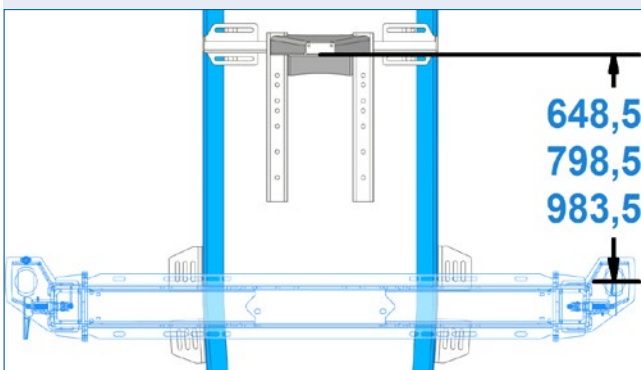
- [1] The front stop, possibly hinged (1x)
- [2] The clamping plates/consoles (2x)
- [3] The connections for the front stop (2x)
- [4] The Z profile (only with individual twist locks - 1x)
- [5] The traverse without holder for guide roller (1x)
- [6] The consoles for the traverse (2x or 4x with divided consoles)
- [7] Asymmetric twist lock housing (1x left, 1x right)
- [8] The collapsible middle support (1x)
- [9] The reinforcement plates (4x)



- Place the front stop on the chassis with the rear facing the driver's cab and secure it against falling.

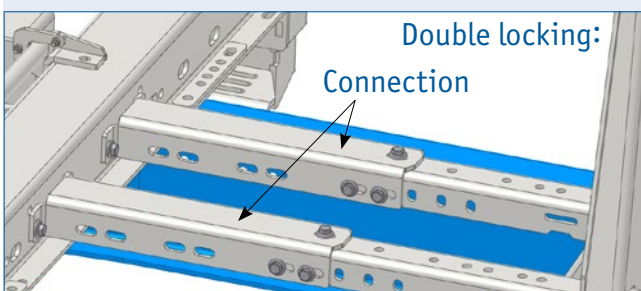
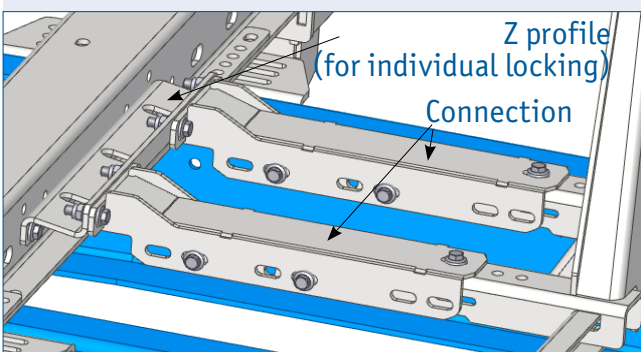
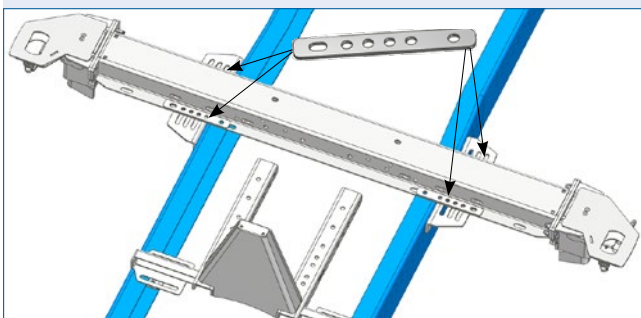
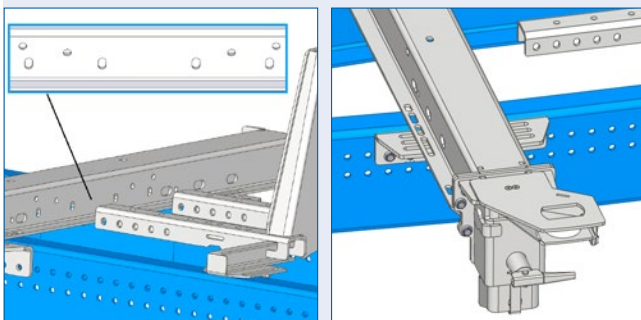
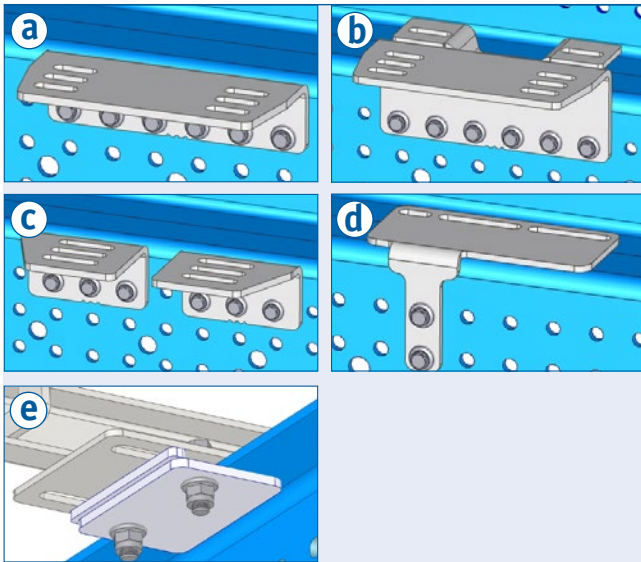
**Attention:** With MB Actros the front stop is placed on consoles that were positioned and assembled beforehand. Please note the instructions for assembly of consoles (see below).

- Please set the clearance of the front stop to the driver's cab according to the vehicle manufacturer's installation guidelines.
- Align the traverse consoles correctly so that the traverses can be screwed together with them. Thereby the dimensions from the middle of the twist lock opening to the front stop support area according to container size, are as follows:
  - 648.5 mm for C 715
  - 798.5 mm for C 745
  - 983.5 mm for C 782

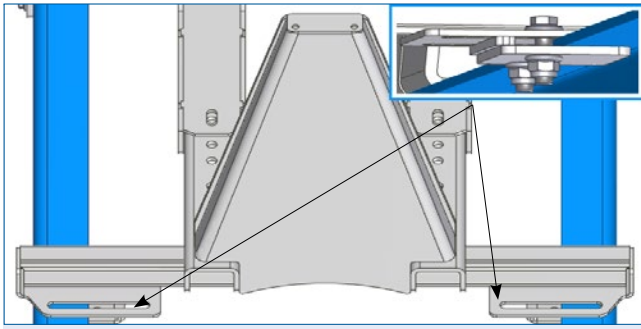


With hinged front stops, the depicted dimensions correspond to the larger intended swap body. **With double locks**, the C 745 dimension is used until the first twist lock.



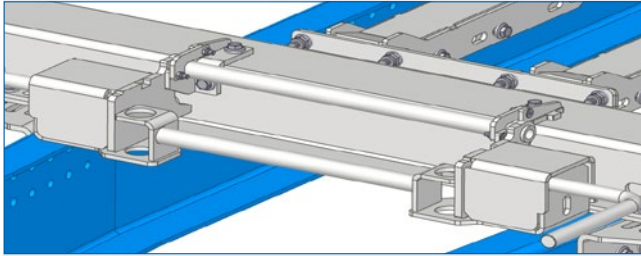


- For the assembly, your kit contains, depending on the version:
  - Complete consoles
  - Complete consoles with elevation/spacer
  - Divided consoles (are assembled at the front)
  - Consoles for the front stop with MB Actros
  - Clamping plate for the front stop
- Now assemble the consoles. **Please note:**
  - The entire screw-on surface must lay completely on the other surface.
  - All console holes intended for the chassis must be used.
  - The support surface must lay in line with the chassis surface.
  - Versions with elevation/spacer lay on the chassis.
  - The edge of the consoles must point outwards.
  - The counterpiece of every console is situated precisely on the opposite side.
  - The bevel of the divided consoles always faces outwards.
- Now assemble the front consoles.
- Lay the traverses on the consoles in such a way that the depicted hole pattern faces the driver's cab.
- Align the support centrally on the consoles.  
The traverse must be evenly supported on both sides.
- Assemble the two asymmetrical twist lock housings on the sides in the direction of the front stop with each 6 screws.
- Place four reinforcement plates over the elongated holes in the traverse until these correspond to the holes in the consoles.
- Set the clearance to the driver's cab and the axles on both sides.
- Screw together the traverse, the reinforcement plates and the consoles. Use at least two screws per reinforcement plate (for consoles with elevation three screws).
- Connect the front stop with the front traverse via the connections.
- For individual locking** (one twist lock on the traverse) use a Z profile between the connections and the traverse.
- Insert the profile until the hole patterns coincide. Check the clearances to be adhered to and correct them as necessary.
- Screw the components together. Use at least 5 screws per connection and 4 for the Z profile.
- With double locking** the Z profile is omitted, thus the connection is in direct contact with the front traverse.
- Secure the connections with 7 screws each. To do so, use 2 screws on the traverse and 5 screws on the front stop.

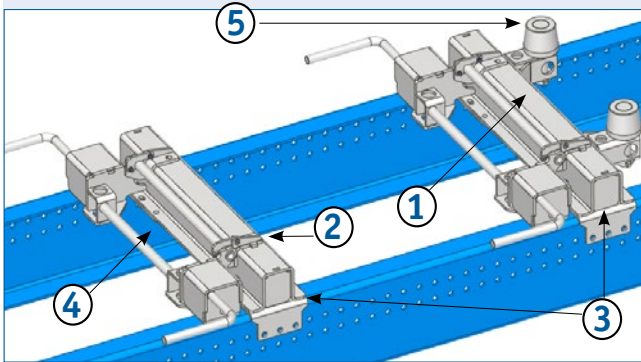


- Using clamping plates on both sides, secure the front stop on the upper belt of the chassis' longitudinal beam. For protection, grease the contact areas or place a thin, soft material between them.
- Moderately tighten the screws (*The connection does not serve for securing but for avoiding rattling noises.*)

**Attention:** With the MB Actros, screw the stopper onto consoles.



- Assemble the hinged middle support with 4 screws on the free side of the traverse.



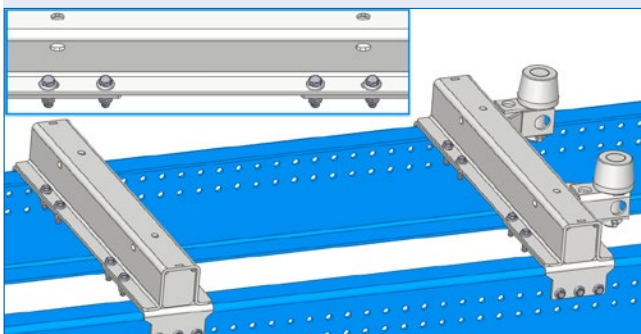
### 3.2 Assembly of middle supports

Generally, the assembly consists of:

- [1] The clearance beam with holder for the guide roller (1x)
- [2] A clearance beam (1x)
- [3] The consoles for the clearance beams (4x)
- [4] The hinged middle supports (2x)
- [5] The guide rollers (2x)

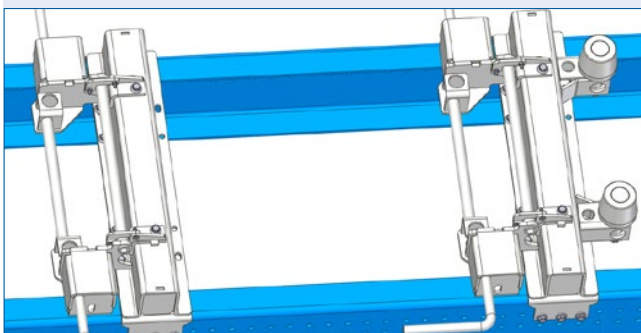


- Position four consoles in the middle of the chassis' longitudinal beam. While doing so, please ensure that:
  - The consoles directly lie on the longitudinal beam
  - The edge of the consoles faces inwards
  - The opposite consoles are aligned in parallel



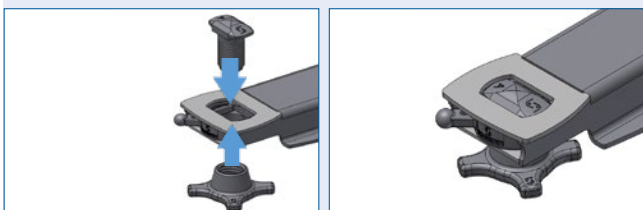
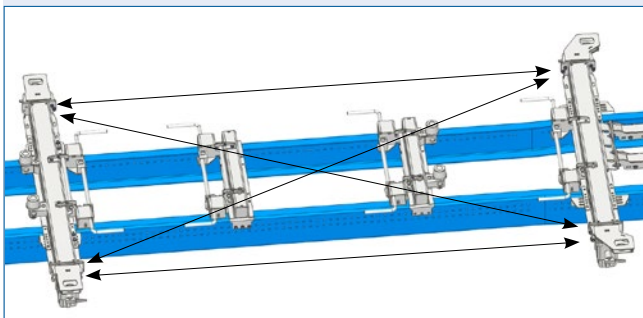
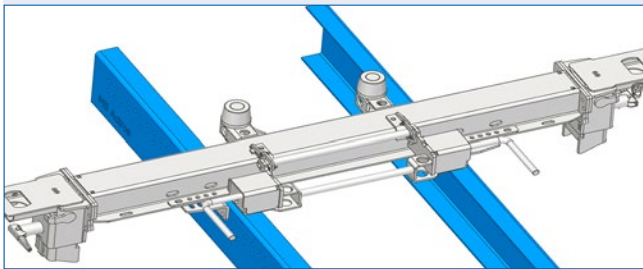
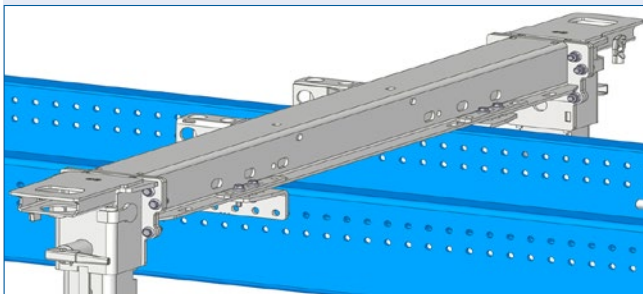
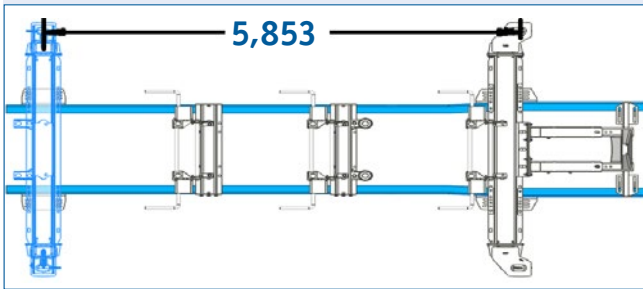
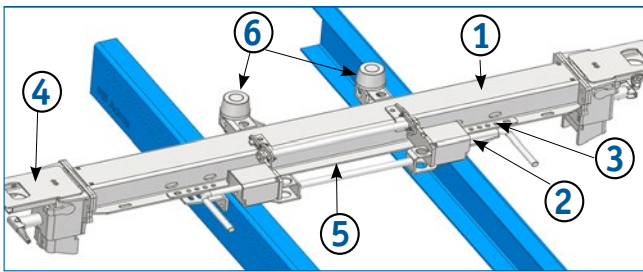
- Keep an appropriate clearance between the two clearance beams (e.g. clearance between consoles 1,500 mm) and screw the consoles and longitudinal beams with 3 screws each.
- Lay the **clearance beams centrally on the consoles** in such a way that the depicted hole pattern faces the vehicle rear. Screw them on with 4 screws each per console. Now insert and secure the guide rollers into the holders.

**Tip:** With system heights from 200 mm, apply the screws into the holes from below for simplification of assembly.



- Now assemble the hinged middle supports onto the clearance beams. The fold-down support surfaces point backwards.
- **For attachment of additional screw-on holders for guide rollers** (item no.: 2x 411.610.265), assemble these with two screws each on the free side of the clearance beam at the 4 holes.





### 3.3 Assembly of rear traverses

Generally, the assembly consists of:

- [1] Traverse with welded-on holder for guide roller (1x)
- [2] Consoles for the traverse (2x)
- [3] Reinforcement plates (4x)
- [4] Symmetrical locking housings (2x)
- [5] Hinged frame support (1x)
- [6] Guide rollers (2x)

- Align the traverse consoles [2] correctly so that the rear traverse can be screwed together with them. The **clearance of the two traverses** that must be adhered to amounts to 5,853 mm from the middle of the twist lock holes
- Secure the consoles. It is paramount you follow the notes for the assembly of the consoles under 3.1 while doing so.
- During assembly of the rear traverse [1] it is imperative you adhere to the required clearances. The holders for guide rollers must face backwards. Again, use the reinforcement plates for the elongated holes in the traverses. Screw together the traverse, the reinforcement plates and the consoles.
- Secure the twist lock housings [4] with 6 screws each.
- Assemble the hinged frame support [5] on the free side of the traverse.
- Insert the guide rollers [6] and secure them using linchpins.
- If required, assemble the diagonal cross (item no. 410.610.595 or 410.610.585) behind the axle according to the chassis manufacturer.

**Tip:** With the multi support beam (item no. 410.610.290 or 410.610.295) attachment components such as storage compartments are easy to attach.

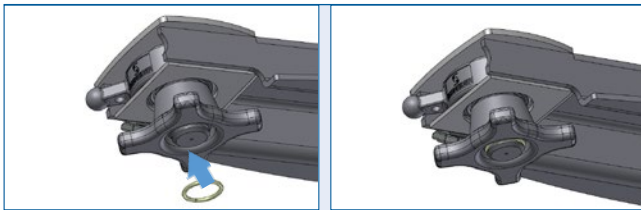
### 3.4 Finishing steps

Ensure the assemblies are in the right positions:

- Check the clearance to the driver's cab.
- Set a clearance of 5,853 mm measured from the middle of the front locking to the middle of the rear locking.
- Please ensure a right-angular and parallel alignment. For this reason, set the diagonals until they coincide. If required, correct the clearances using the elongated holes of the consoles. For adjustment work, a tolerance of 2 mm is permissible.

Now assemble the inner parts of the twist lock.

- Insert the locking pin guides into the outer guides.
- Push the outer guides into the locking housing integrated into the traverse.
- Insert the locking pin from above. Screw it together with the locking nut from the bottom until the end.



- Apply the locking ring at the end of the locking pin.

**Tip:** *The Schneider driver tool (item no. 905.100.001 or 905.100.002) makes this work even easier.*



**Attention:** Paints, solvents and dust can endanger health. Protect yourself!

**Final note:** In principle, all components are galvanised, screws, nuts are Geomet® coated. Paint coating is not required. If you want a paint coating, ensure a secure adhesion of the primer and all other conditions with the paint supplier. Take care with add-on parts fitted retrospectively or with changes to Schneider components with regard to corrosion protection. In particular, ensure there is no contact corrosion due to use of different materials.

#### 4. Maintenance, service, disposal of worn out assemblies



**For the maintenance of the system** inspect all screws for tight fit at regular intervals, and at least once a year. While doing so, check for the required torque. **Furthermore, regularly check the function of the twist locks.**

##### **Our service:**

You will receive fast support for questions regarding assembly:

**Phone:** +49 (0) 521-41 73 12-20

**Email:** [j.bauer@schneider-fc.de](mailto:j.bauer@schneider-fc.de)

Spare parts can be ordered either from your designated sales representative or:

**Phone:** +49 (0) 521 - 41 73 10

**Email:** [info@schneider-fc.de](mailto:info@schneider-fc.de)

All components can be disposed of **via the scrap trade.**



#### 5. Scope of delivery



Please understand that we must reserve the right to make changes in the scope of delivery with regard to form, equipment and technology. All components are generally delivered galvanised.

##### **Included in the scope of delivery of the kit:**

- 1 x Traverse (front)
- 1 x Traverse with welded-on holder for guide roller (rear)
- 1 x Front stop (depending on version: fixed or collapsible)
- 1 x Clearance beams
- 1 x Clearance beam with welded-on holder for guide roller
- 4 x Console for traverse
- 4 x Console for clearance beam
- 8 x Reinforcement plate for elongated holes on traverse
- 2 x Clamping plate/console front stop
- 2 x Connection for the front stop
- 4 x Inner part kit
- Flange head screws and lock nuts according to MBN
- 2 x Asymmetrical locking housings
- 2 x Symmetrical locking housings
- 4 x Height-adjustable frame supports
- 0-1 x Z profiles for connection (required with individual twist locks)
- *optional:* Diagonal cross and/or Schneider multi support beam
- *optional:* screw-on holders for guide rollers