

**create
space**
and never
forget



EXPANDABLE
movable spaces

User manual
TOUCHDOWN
44FT

Table of contents

1. Description	2
1.1 "Touchdown" Trailer	3
2. Control Panel	7
2.1 Control Panel	8
3. Preparation for Use	10
3.1 Preparing for Use	11
4. Commissioning	18
4.1 Operation of Electrically Operated Sliding Doors	19
4.1.1 Button Functions for Sliding Doors with "GEZE" Control	20
4.2 Switching off the Power	21
5. Preparation for Transport	23
5.1 Preparing for Transport	24
6. Emergency Operation	32
6.1 Access to the "Touchdown" in case of malfunction	33
7. Periodic Maintenance	34
7.1 Maintenance Schedule	35
7.2 Oil Level	36
7.2.1 Refilling Oil	39
7.3 Emergency Operation Ball Valve Check	41
8. Safety & Environment	42
8.1 Environment	43
8.2 Safety During Use	43
9. General Information	44
9.1 Cleaning	45
9.2 Vehicle registration and delivery	46
9.3 Terrain Conditions	47
9.4 Access to the Technical Area	49
9.5 Checking and Recharging Battery Voltage	51
9.6 Stickers	52
9.6.1 VIN plate and ALR Plate	54
9.7 Trailer Specifications	56

9.8 Oil Specifications

57

9.8.1 Oil Properties

57

9.9 Properties and Specifications of Lubricant

58

9.10 Specifications of Electrical Components

59

9.11 Pictograms

60

Foreword

 This manual is intended for drivers and/or other users of the Expandable Touchdown Semi Trailer and contains the necessary information for its use. This user manual must always be kept with the vehicle. For service technicians, a separate maintenance and repair manual is available via the website: www.expandable-trailers.com.

Effective Use:

A Expandable Touchdown Semi Trailer is designed for independent use. Modifications of any kind can affect the safety of the system. Both the warranty on products from Expandable b.v and the homologation will be void if these products are modified without written permission from Expandable B.V.. If the Expandable Touchdown Semi Trailer is not used according to the instructions provided by Expandable B.V., all warranty claims against Expandable B.V. or suppliers of the Expandable Touchdown Semi Trailer will be declared invalid.

Before the system is put into use, it must be established that the trailer complies with national road traffic legislation. The system may only be used in accordance with the manuals of the tractor and the trailer.

The images in this manual are for example purposes only and are not intended for any other use. The images shown may differ slightly from the delivered system.



All safety information is described in the relevant chapter (See "Safety & Environment on page 42"). In the remaining chapters, safety risks are symbolised using pictograms.

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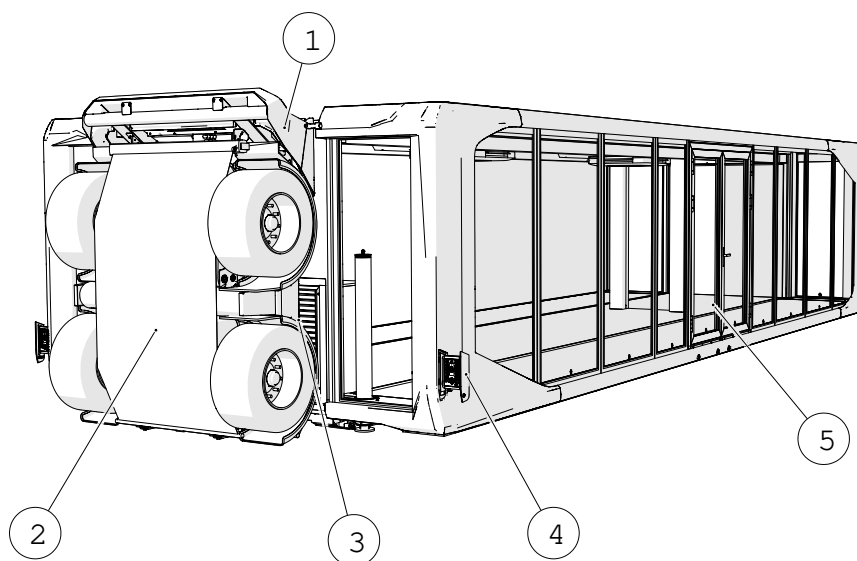
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Date of issue: 19/11/2024 Original version: 1.0

1. Description

This chapter describes the Expandable Touchdown Semi Trailer. Here you will find information about the naming of components and their functions.

1.1 "Touchdown" Trailer

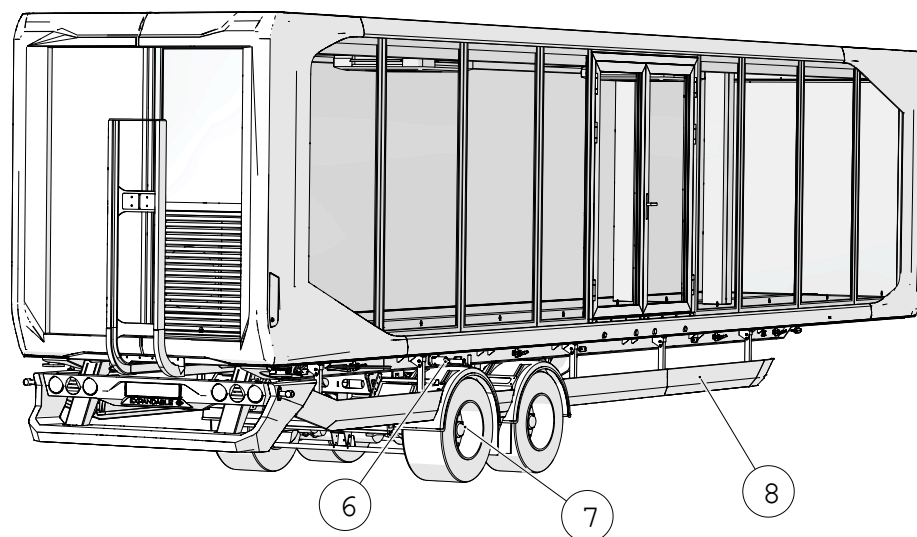
Main Components



E13H_90

Fig. 1-1

- | | |
|-------------------------------------|--|
| 1 Bumper | 4 Control panel |
| 2 Cover | 5 Slide out (extendable and retractable) |
| 3 Ventilation grille technical area | |



E13H_91

Fig. 1-2

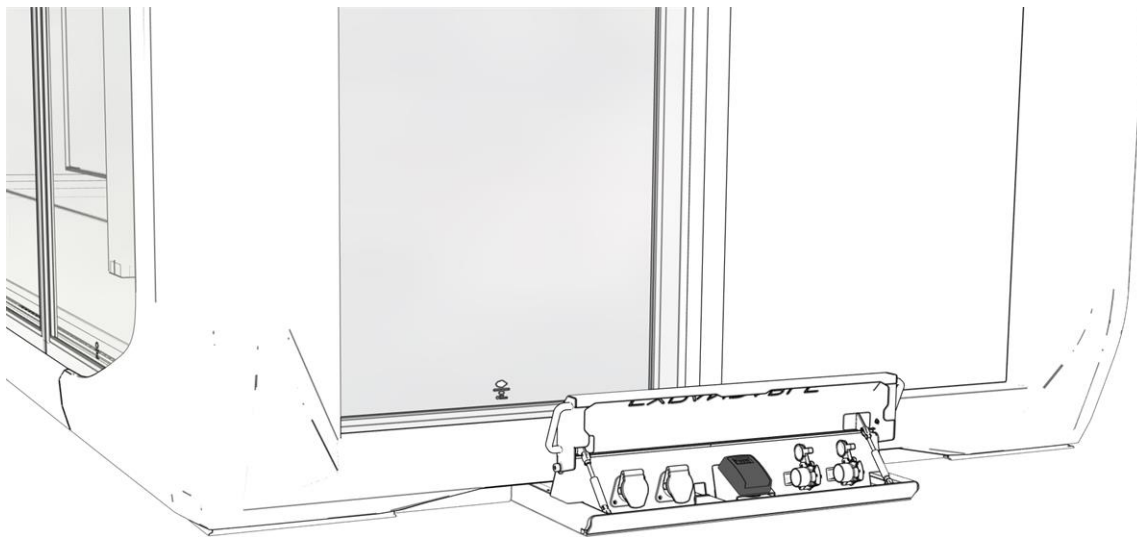
- | | |
|-----------------------------------|-----------------------|
| 6 Unlocking mechanism tandem axle | 8 Underrun protection |
| 7 Tandem axle | |

Usage

During normal use of the Expandable Touchdown Semi Trailer, the power is supplied via a shore power connection. The extension cord available for this purpose is located in the technical area and is accessible from inside the "Touchdown" through a door. The extension cord can be led outside through the floor section at the left rear and then connected to the shore power. Depending on the chosen configuration, the Expandable Touchdown Semi Trailer is equipped with lashing eyes to secure the load on board. The number of built-in wall sockets and floor sockets also depends on the chosen configuration. The possible RGB LED lighting can be set to the desired colour display using a rotary knob.

Key Safe

The Expandable Touchdown Semi Trailer is equipped with a key safe. This is located under the cover at the front of the trailer (see "Fig. 1-3"). The key safe is secured with a configurable code. The keys to the access doors are stored in the key safe, so the keys are always kept near the trailer.



E13H_105

Fig. 1-3

Technical area

The technical area is located inside the Expandable Touchdown Semi Trailer and contains the control system for the hydraulics and the air conditioning condenser. The technical area is accessible via a door on the inside of the Expandable Touchdown Semi Trailer (see "Fig. 1-4") or by removing the grill on the outside at the back of the Expandable Touchdown Semi Trailer.

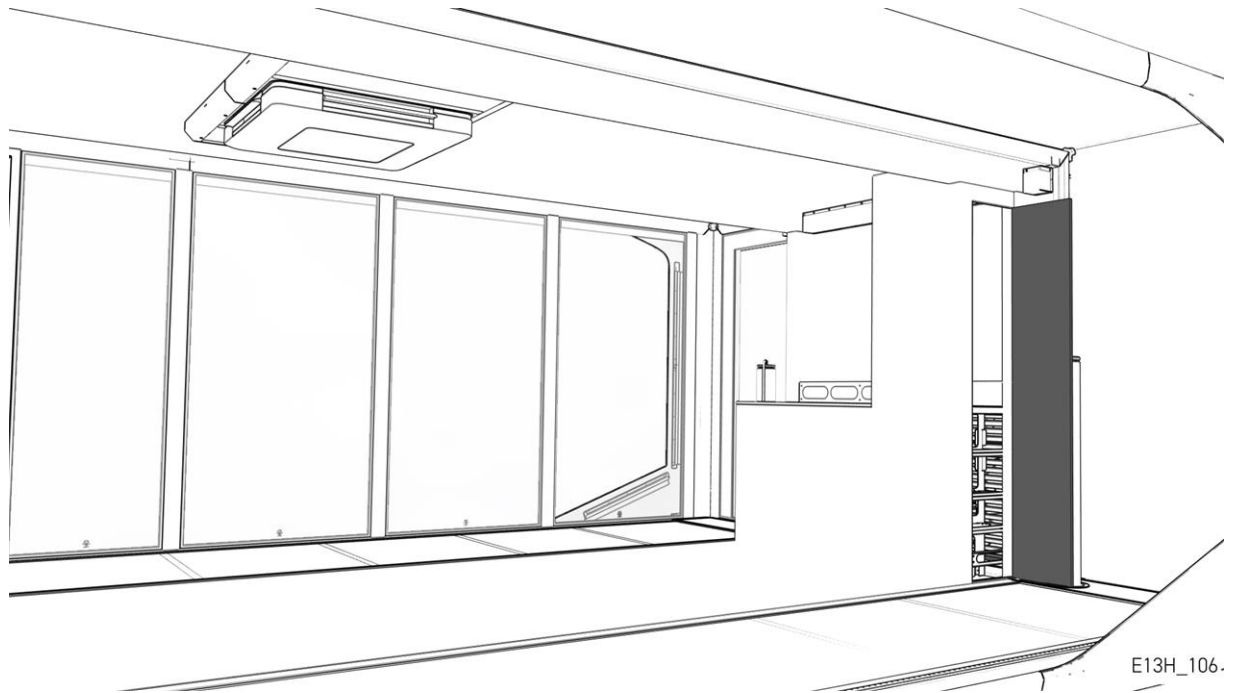


Fig. 1-4

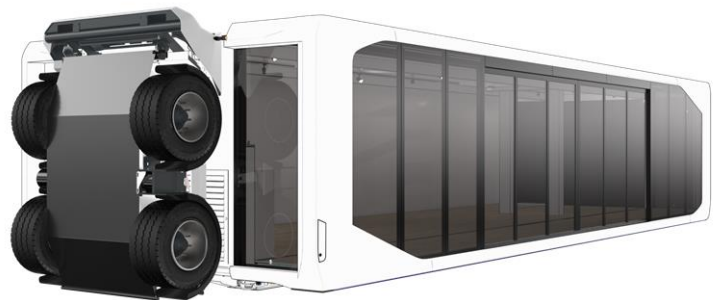
Patented tandem axle

The Expandable Touchdown Semi Trailer is a container with a unique patented tandem axle that can be moved from under the container to the rear using a hydraulic cylinder. This allows the container to be completely lowered to the ground.

Low entry

After the Expandable Touchdown Semi Trailer has been disconnected from the tractor, the "Touchdown" is lifted off the ground using 4 lifting cylinders. After the tandem axle has been moved to the rear of the "Touchdown", it is lowered to the ground. The "Touchdown" can be automatically levelled. Even on sloping terrain, provided the requirements set by Expandable B.V. regarding **terrain conditions** are met.

The "Touchdown" can be brought from the transport position to the operational position and vice versa using intuitive control panels. The control panels are located at the left and right rear on the outside of the "Touchdown". This way, you always have a clear view when the slide outs are being extended. The control panels can be easily slid out after the locks of the slides, on which the control panels



are mounted. After unlocking the control panels, they can be slid out easily. Only one control panel can be operated at a time. This prevents unwanted movements.

Options and accessibility

The Expandable Touchdown Semi Trailer is available as standard in multiple configurations regarding panel choice. The container has 9 zones, 8 of which can be equipped with panels ranging from closed panels to swing doors and electrically and manually operated sliding doors to tinted and non-tinted "premium" glass walls. The doors can be locked with a key, electronically or using a combination lock.

The mechanical sliding doors provide a passage of approximately 6 meter. These can be mechanically locked for transport. The electrically operated sliding doors, applicable to both the front and long sides, provide a passage of approximately 2 meter.

The Expandable Touchdown Semi Trailer is always accessible in the event of a hydraulic malfunction by using the hand pump to move the slide outs outwards.

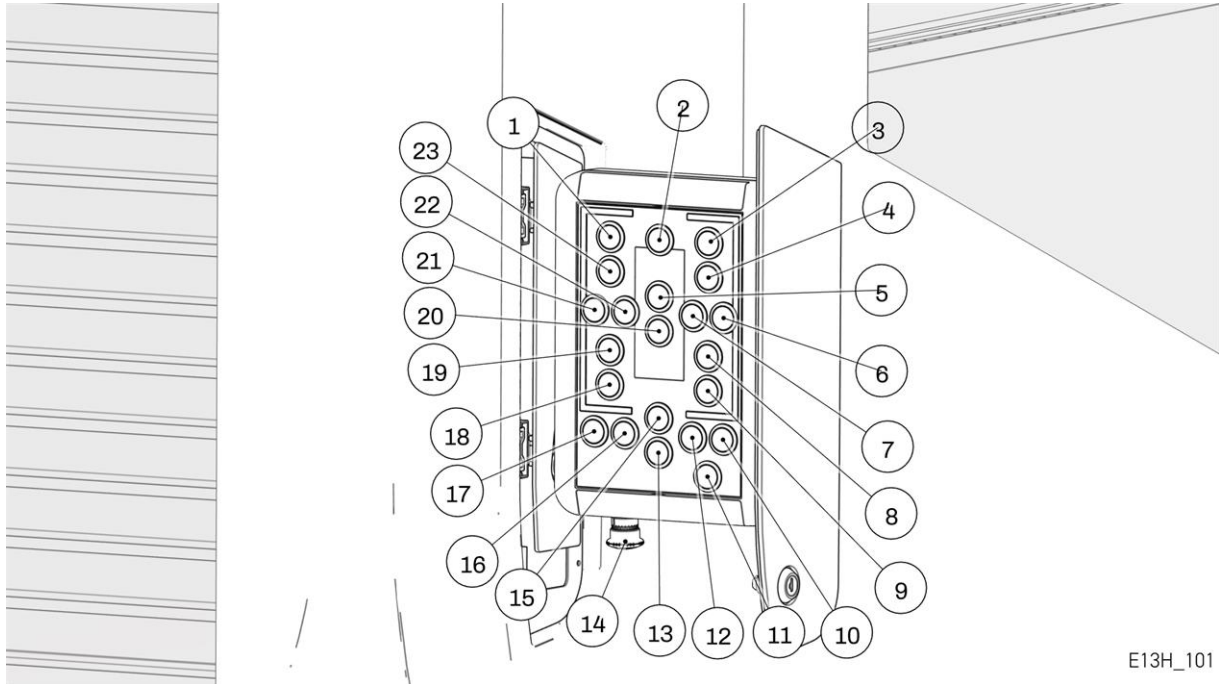
2. Control Panel

This chapter describes the control panel and the functions of the buttons.

2.1 Control Panel

The Expandable Touchdown Semi Trailer is equipped with two control panels. These are located at the left and right rear. As soon as one of the control panels is operated, operation of the other panel is not possible. This prevents unwanted movements caused by two people operating both panels simultaneously.

The control panels can be slid out from the left and right rear sides after they have been unlocked using the key. **Always first check that the emergency stops are pulled out** before using the panels.



E13H_101

Button	piston rod movement	"Touchdown" movement
1	Front left piston rod In	Front left "Touchdown" Down
2	Automatic Levelling	
3	Front right piston rod In	Front right "Touchdown" Down
4	Front right piston rod Out	Front right "Touchdown" Up
5	All pistons In	"Touchdown" Down
6	Right slide out piston rod out	Right slide out out
7	Right slide out piston rod In	Right slide out in
8	Rear right piston rod In	Rear right "Touchdown" down
9	Rear right piston rod out	Rear right "Touchdown" up
10	Auxiliary cylinder rear right out	Lifting cylinder rear right out
11	On / Off	
12	Auxiliary cylinder rear right In	Lifting cylinder rear right in
13	Tandem axle piston rod out	Tandem axle moves to the rear of the "Touchdown"

Button	piston rod movement	"Touchdown" movement
14	Emergency stop	
15	Tandem axle piston rod in	Tandem axle moves to transport position
16	Auxiliary cylinder rear left in	Lifting cylinder rear left in
17	Auxiliary cylinder rear left out	Lifting cylinder rear left out
18	Rear left piston rod out	Rear left "Touchdown" up
19	Rear left piston rod In	Rear left "Touchdown" down
20	All pistons out	"Touchdown" up
21	Left slide out piston rod out	Left slide out out
22	Left slide out piston rod in	Left slide out in
23	Front left piston rod out	Front left "Touchdown" up

Table 2-1 Control Panel Buttons

As soon as the Expandable Touchdown Semi Trailer is in operating position, both control panels must be slid in and the cover caps locked.



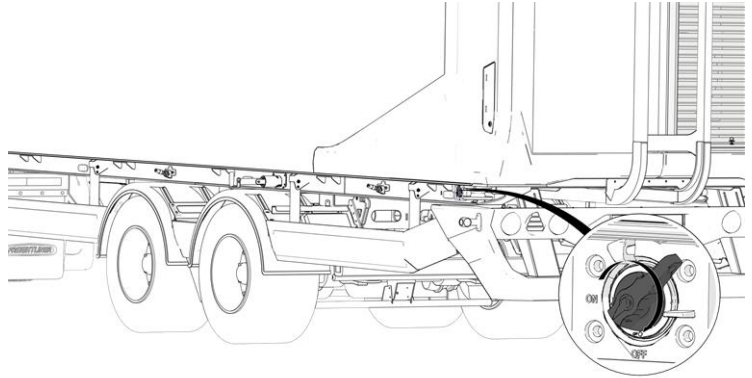
3. Preparation for Use

In this chapter, you will find information on disconnecting and making the Expandable Touch-down Semi Trailer ready for use.

3.1 Preparing for Use

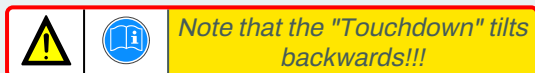
Follow the procedure below.

1. Turn the main switch to the "ON" position.

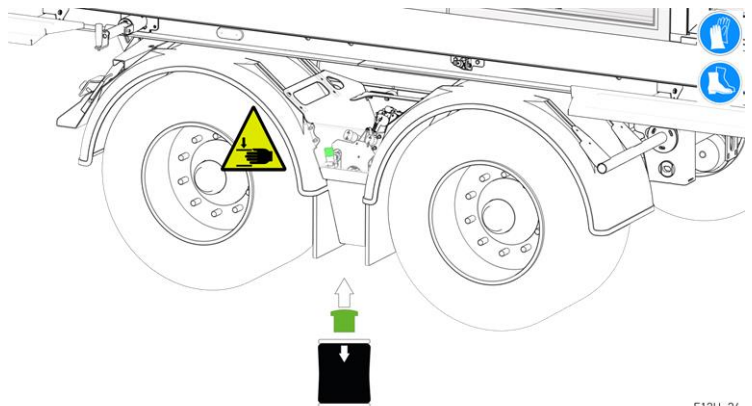


E13H_31

2. Pull the green button up to release the pressure in the bellows.



Note that the "Touchdown" tilts backwards!!!



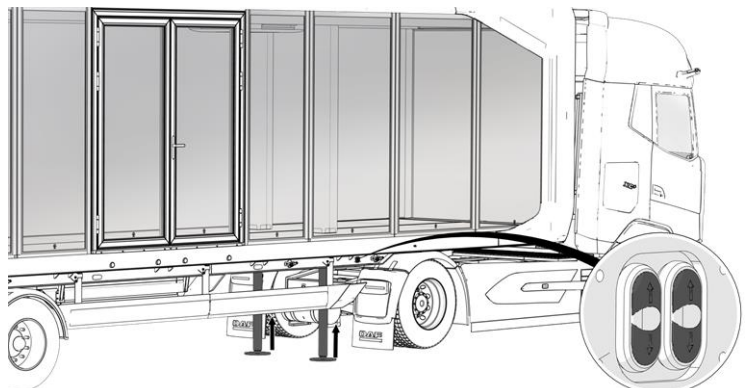
E13H_34

3. Briefly deactivate the parking brake from the tractor cab to release the tension on the Expandable Touchdown Semi Trailer and then activate it again.



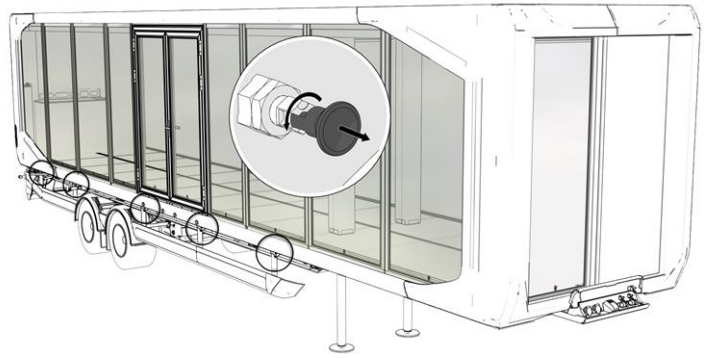
E13H_103

4. Press the buttons with the downward arrow simultaneously to extend the piston rods of the front side lifting cylinders and remove the tractor from the semi trailer.



E13H_32

5. Unlock the underride guards on both sides.



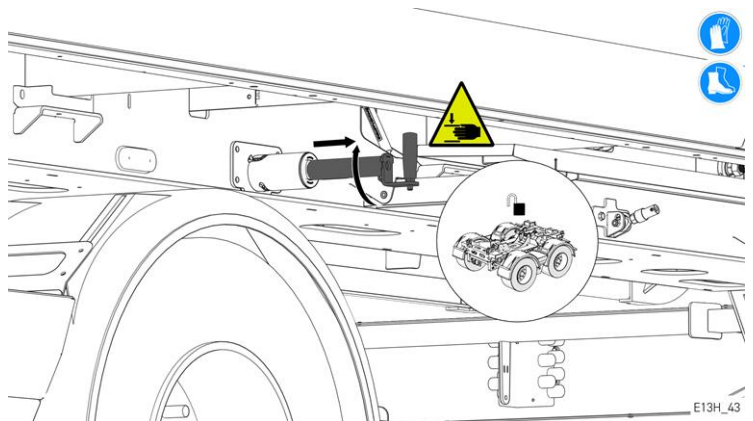
E13H_108

6. Tilt the underride guards upwards on both sides.



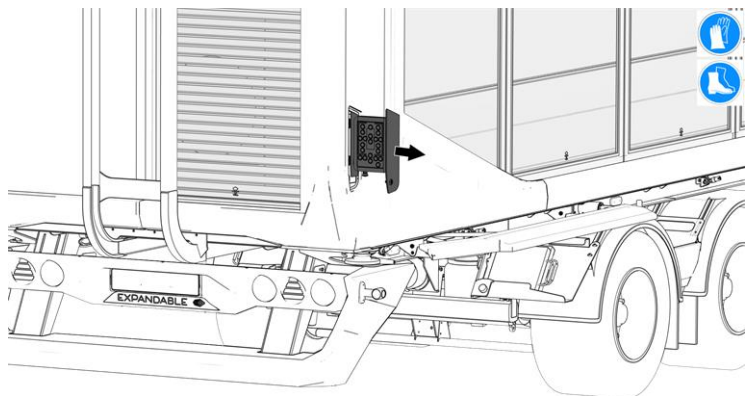
E13H_33

7. On both sides, pull the lock of the tandem axle outwards and turn it clockwise to unlock the tandem axle.



E13H_43

8. Unlock the slide with the control panel on both sides with the key and pull it out.

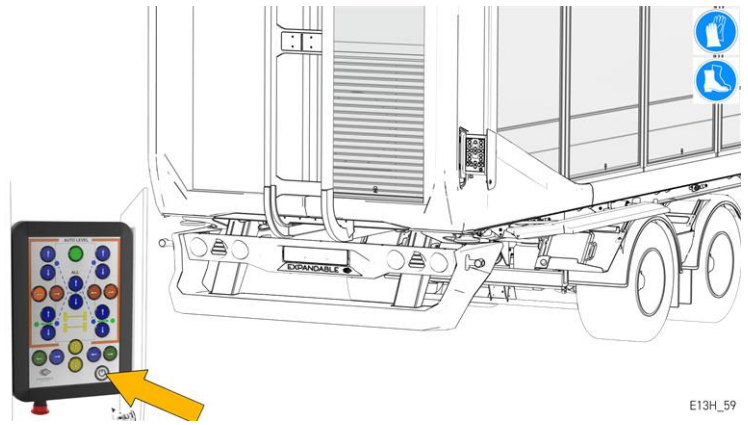


E13H_35

9. Press the on/off switch to start the control panel.

 The control panels must be switched on and off separately.

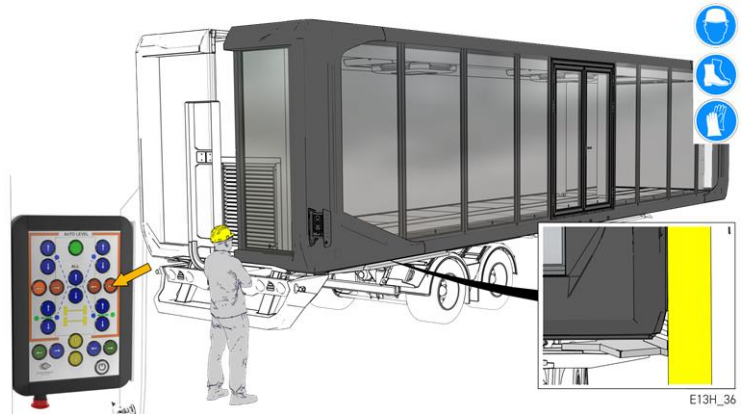
 Check that the emergency stop at the bottom of each control panel is pulled out.



E13H_59

10. Press the indicated button and extend the right slide out until the outside is flush with the underride guard.

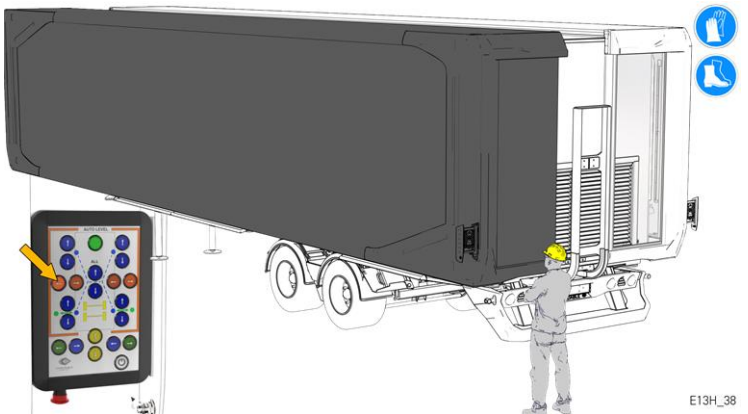
  While the right slide out is moving pay close attention to the sound and movement. If the slide is moving unevenly, or there are any deformations in the slide out, or the hydraulic pump is binding, stop immediately and fix the cause of the problem.



E13H_36

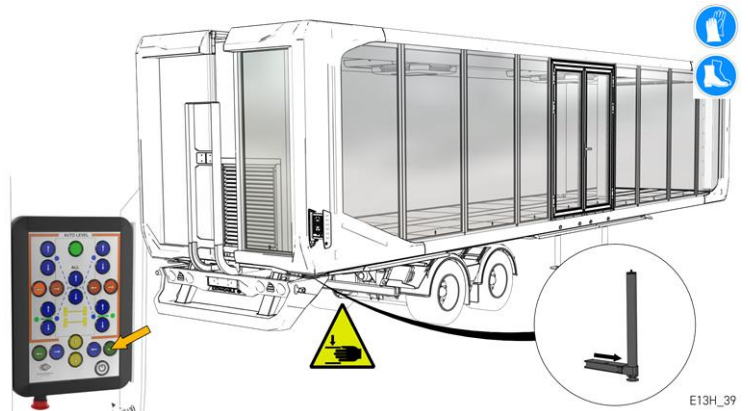
11. Press the indicated button and extend the left slide out until the outside is flush with the under-ride guards.

  While the left slide out is moving pay close attention to the sound and movement. If the slide is moving unevenly, or there are any deformations in the slide out, or the hydraulic pump is binding, stop immediately and fix the cause of the problem.



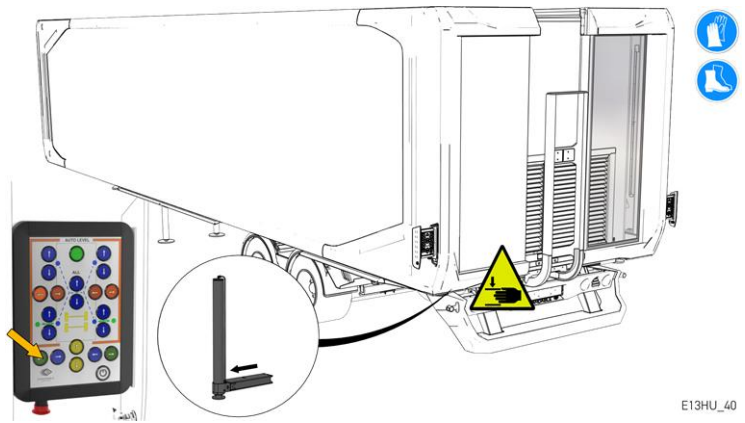
E13H_38

12. Press the indicated button to push the rear right lifting cylinder unit out to the maximum.



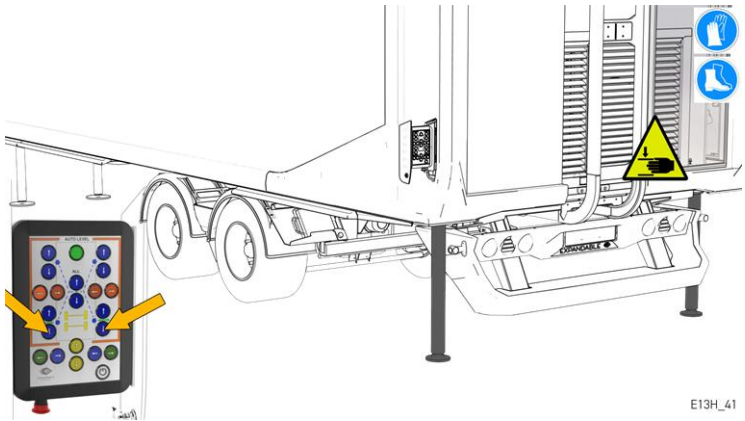
E13H_39

13. Press the indicated button to push the rear left lifting cylinder unit out to the maximum.



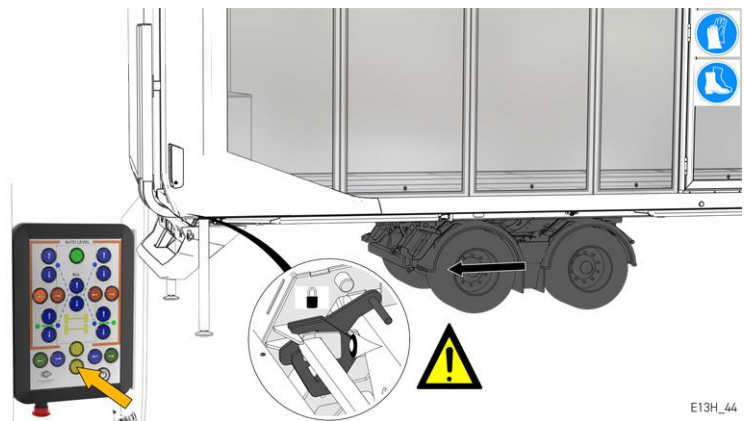
E13HU_40

14. Press the indicated buttons until the wheels hang 5 cm (approx. 2") off the ground.



E13H_41

15. Press the indicated button to move the tandem axle to the rear until the lock point.

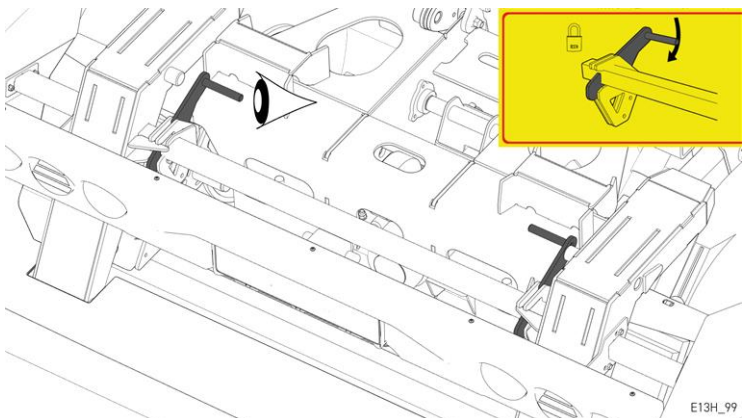


E13H_44

16. Visually check and ensure that the bumper is locked to the tandem axle on both sides.



Manually push the lever down if necessary.

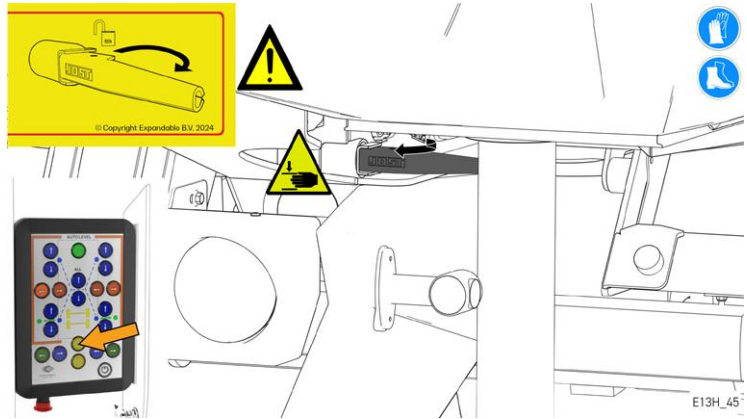


E13H_99

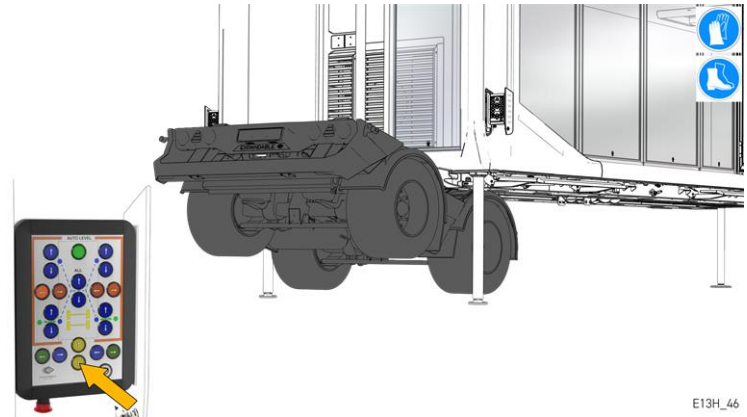
17. Unlock the bumper on both sides.



Press the button indicated by the arrow to relieve the latch if it is stuck.



18. Hold the indicated button until the movement of the tandem axle stops automatically.



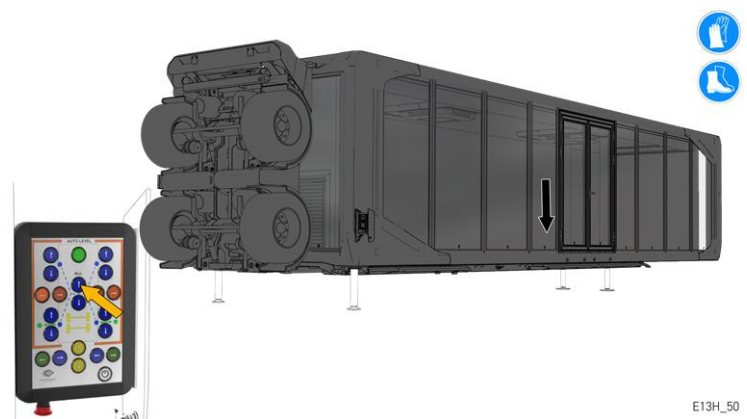
19. Press the indicated button until the "Touchdown" just touches the ground. Release the button immediately for easy levelling.



check that the parking spot is free of protruding objects such as rocks.



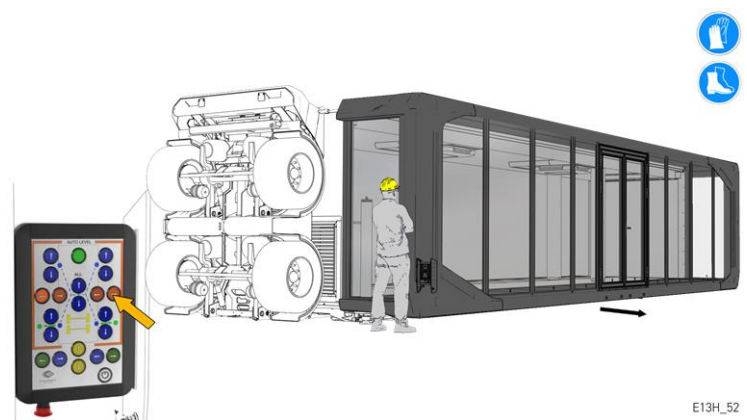
On sloping terrain, the "Touchdown" often touches the ground first at one point (See "Terrain Conditions on page 47").



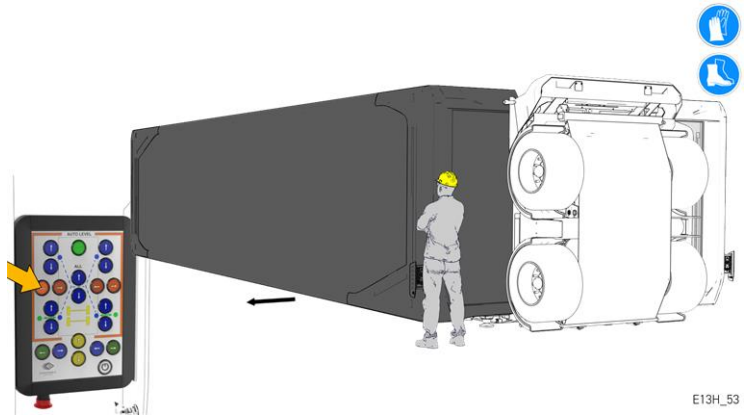
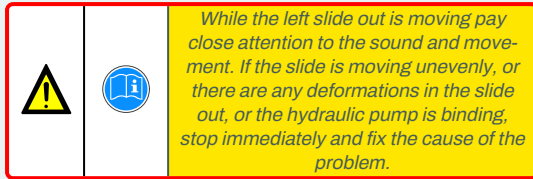
20. Press the indicated button to extend the right slide out.



While the right slide out is moving pay close attention to the sound and movement. If the slide is moving unevenly, or there are any deformations in the slide out, or the hydraulic pump is binding, stop immediately and fix the cause of the problem.

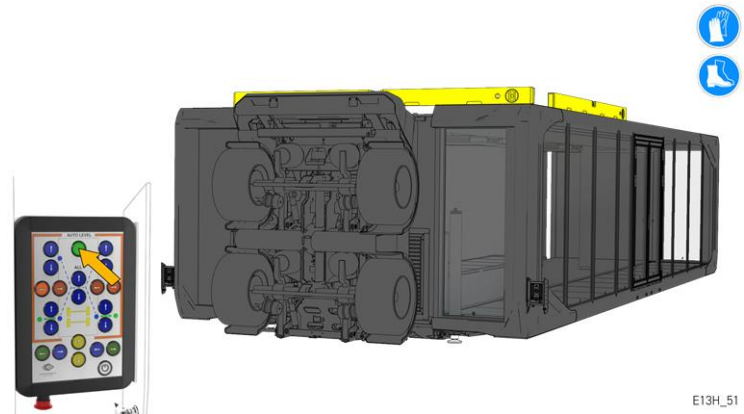
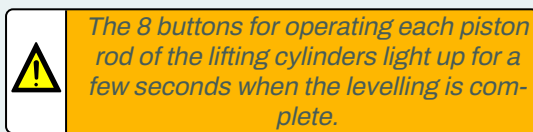


21. Press the indicated button to extend the left slide out.



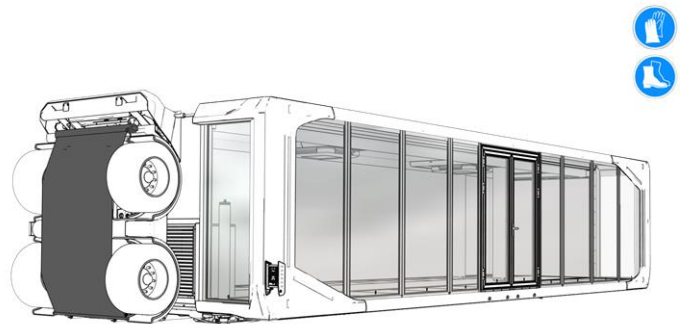
E13H_53

22. Press the indicated button ("AUTO LEVEL") so that the "Touchdown" levels itself in two directions.



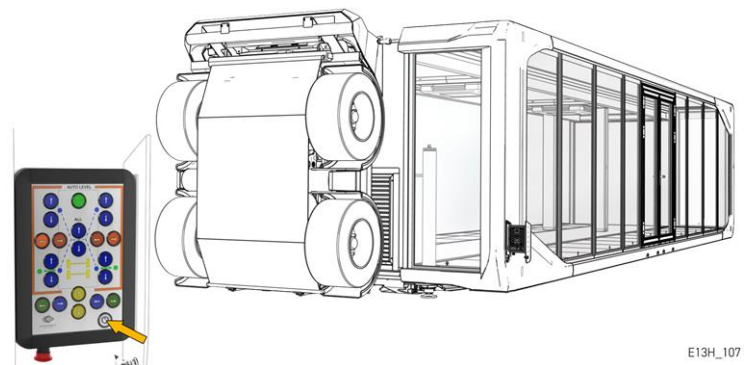
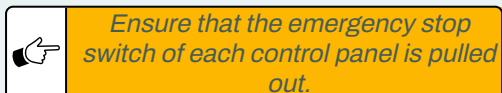
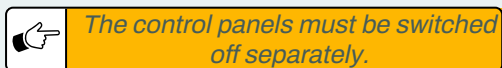
E13H_51

23. Roll out the tarpaulin at the rear using the crank and hook the tarpaulin into the tandem axle at the bottom.



E13H_54

24. Press the ON/OFF switch to switch off the control panel.

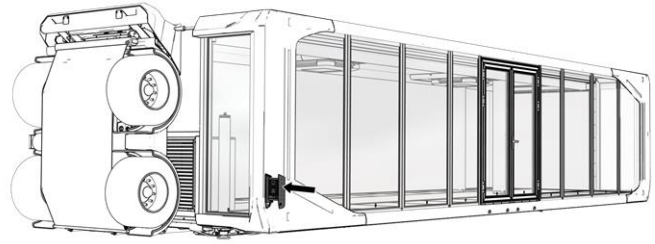


E13H_107

25. Slide the control panels in on both sides and then lock them with the key.

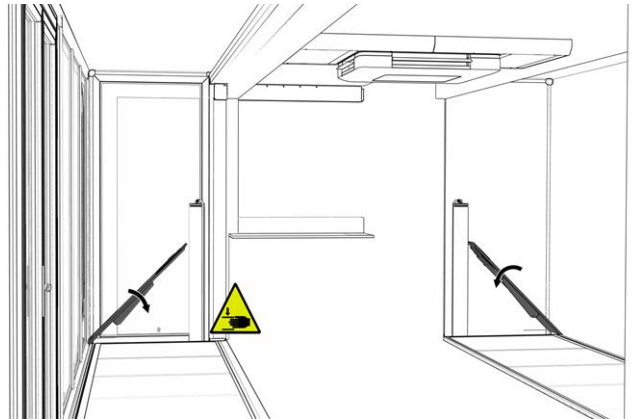


*Store the key in its designated location.
(See "Key Safe on page 4")*



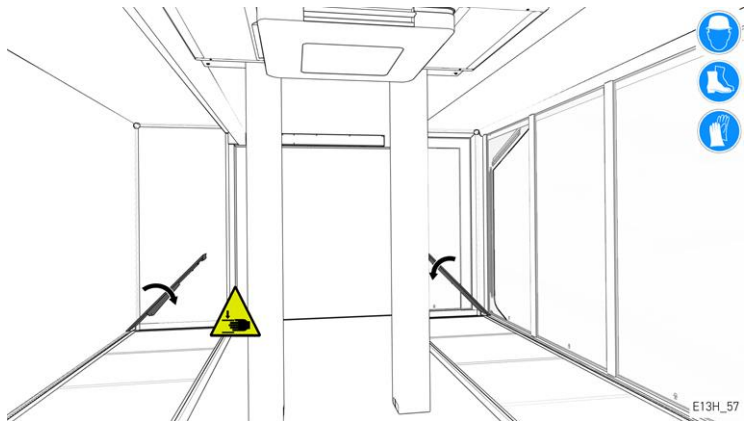
E13H_55

26. Tilt both rear floor sections downwards.



E13H_56

27. Tilt both front floor sections downwards.



E13H_57

4. Commissioning

This chapter describes the operation of electrically operated accessories such as electrically operated access doors, access to a roof terrace, etc.

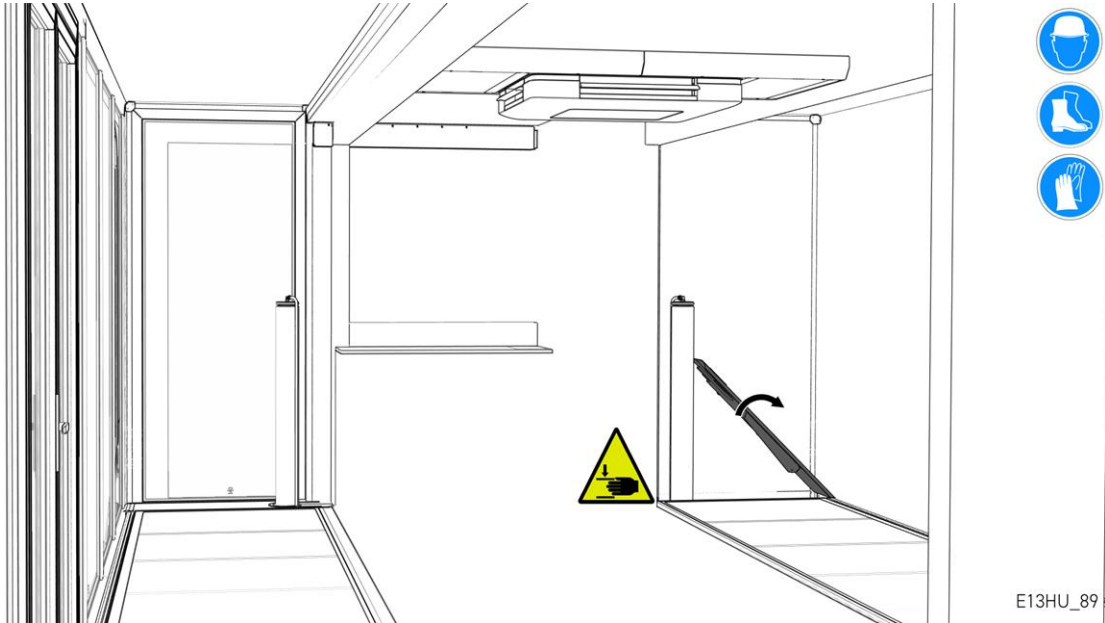
4.1 Operation of Electrically Operated Sliding Doors

Follow the procedure below to open the sliding doors.

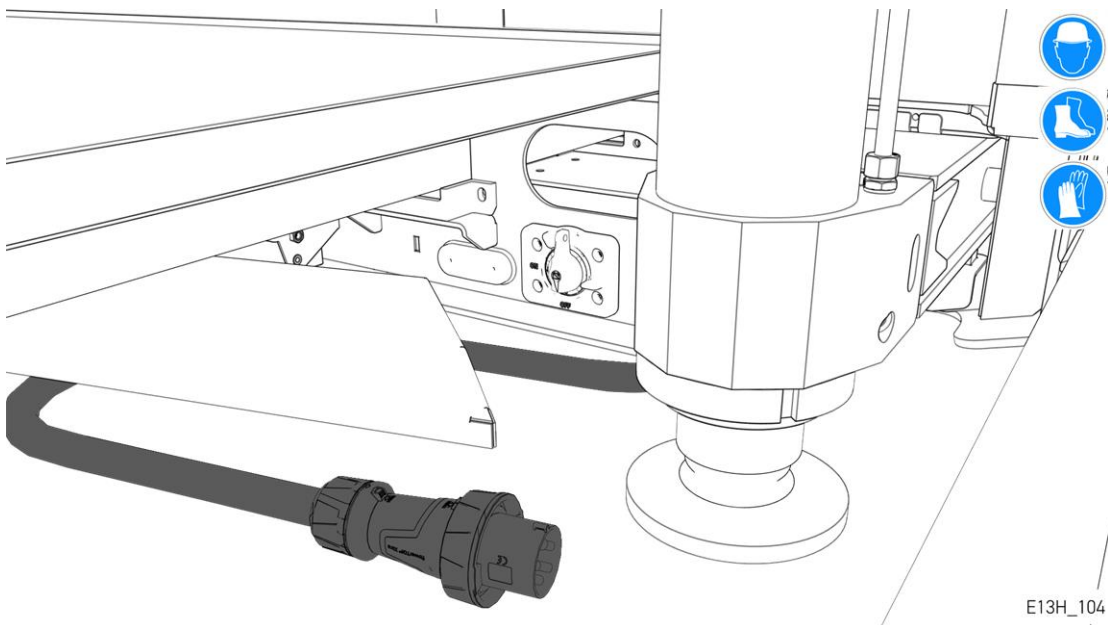
1. Open one of the doors at the rear or front.
2. ↴ Tilt the floor section at the left rear upwards.



The following steps are only necessary if the power has been switched off.



3. ↴ Lay the cable for shore power outside and connect it.

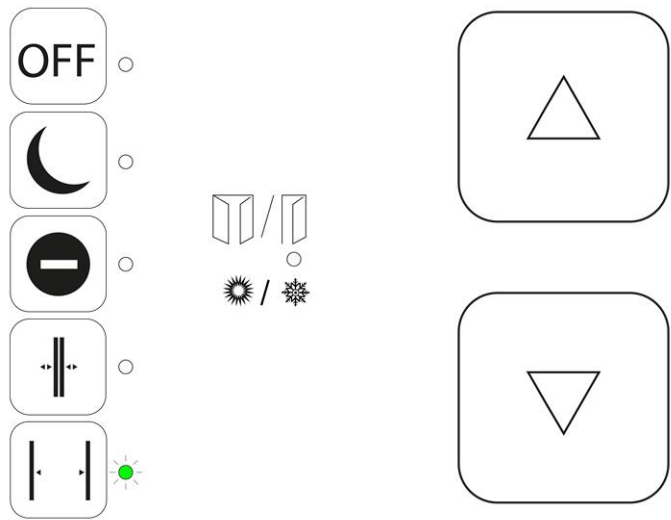


4. Tilt the floor section at the left rear downwards.



Ensure that the floor sections are always tilted downwards during use to prevent accidents.

4.1.1 Button Functions for Sliding Doors with "GEZE" Control



C-2000-A_56

Button Functions	
	Press this button to select one of the above electronic functions.
	Press this button to select one of the below electronic functions.
	Press this button to activate the "Electronically Lock Sliding Doors" function: A click is audible as the sliding doors lock. Note: the plug must be connected to the power supply. (When leaving the trailer unattended for a longer period, we recommend installing mechanical locks for additional safety).
	Press this button to activate the "Restrict Passage" function (you can only exit the container. Access through the sliding doors from outside is not possible).
	Press this button to activate the "Automatic Opening or Closing" function. As soon as someone enters or leaves the detection zone, the sliding doors open or close. For setting limited or full opening, Expandable B.V. refers to the GEZE manual.
	Press this button to permanently open the sliding doors.
	No electronic functions available. The door can be manually opened.

Table 4-1 Button functions GEZE



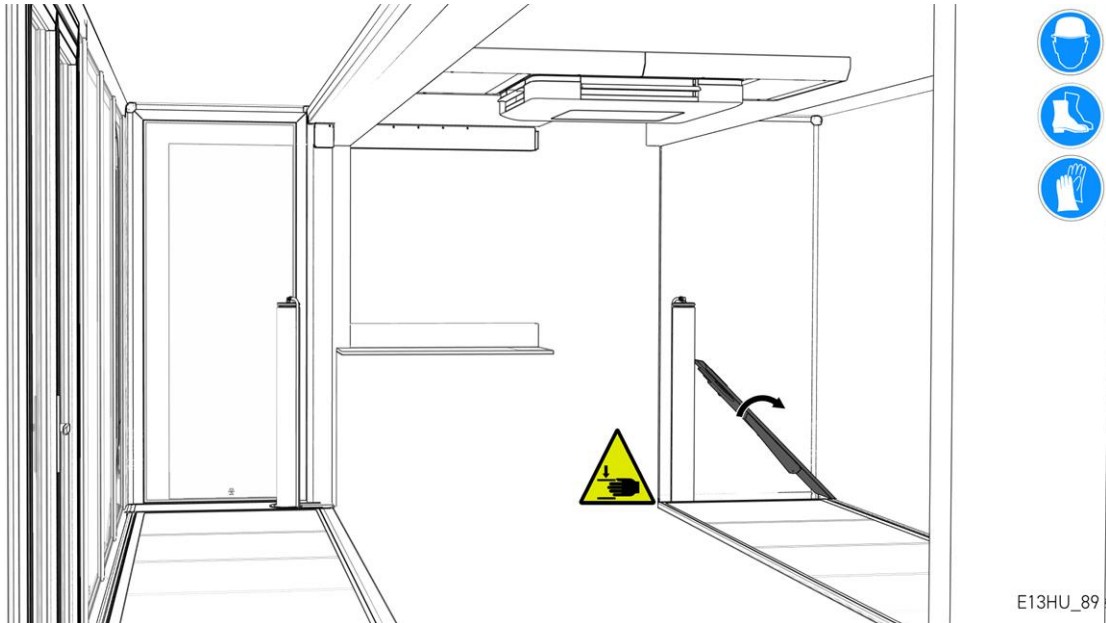
Expandable B.V. always refers to the user manual of "GEZE" for correct operation. What is described in it always supersedes anything related in this manual.

4.2 Switching off the Power

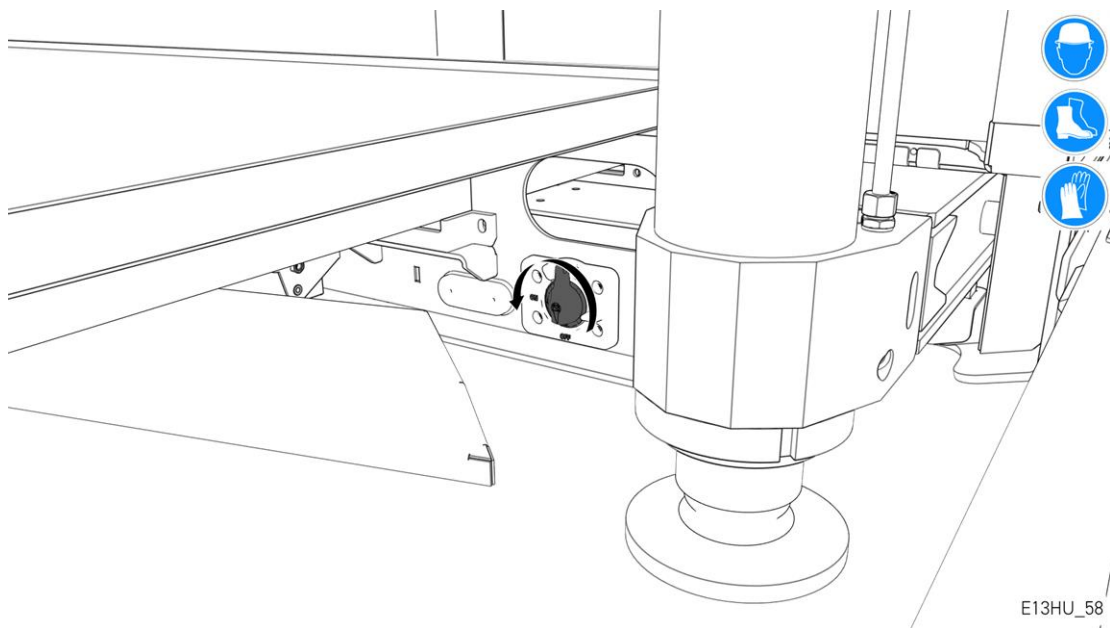
Expandable B.V. recommends that users of the Expandable Touchdown Semi Trailer switch off the power temporarily if it is left on site for an extended period. This applies solely to the Expandable Touchdown Semi Trailer. All hydraulic equipment can be switched off with the main switch. All other equipment is connected to the mains power. If external devices are connected to the Expandable Touchdown Semi Trailer such as refrigerators or electronic equipment, it is up to the user to decide whether the power to these devices may be switched off.

Follow the procedure below.

1. ⚡ Tilt the floor section at the left rear upwards.



2. ⚡ Turn the main switch to the "OFF" position to switch off the power.



If necessary, lock the main switch with a padlock.

-
-
3. Tilt the floor section at the left rear downwards.



5. Preparation for Transport

In this chapter, you will find information on making the Expandable Touchdown Semi Trailer ready for transport and coupling it.

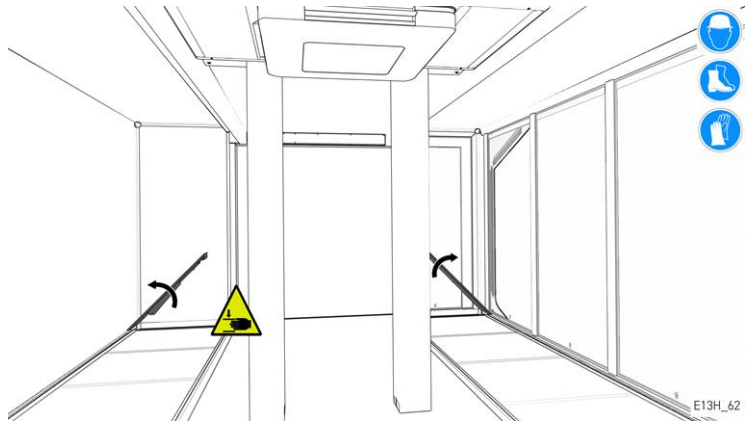
5.1 Preparing for Transport



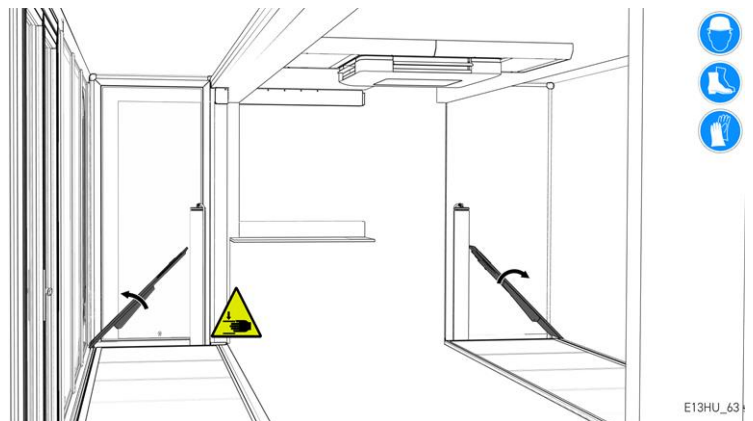
Move the load that remains in the "Touchdown" to the centre floor. No load should be placed on the movable floors.

Follow the procedure below.

1. Raise both front floor sections.



2. Raise both rear floor sections.



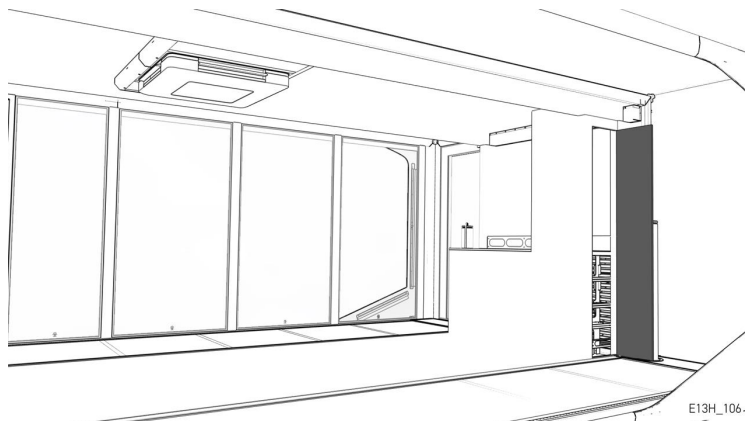
3. Disconnect the extension cord from the shore power and store the cable in the technical area through the access door on the inside.



Close the door of the technical area



Close all access doors and place the keys in the key safe (See "Key Safe on page 4")

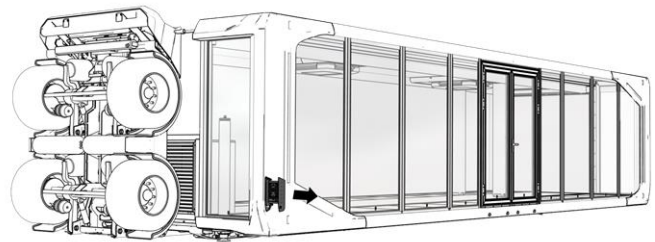


4. Roll up the tarpaulin at the rear using the crank.



E13H_86

5. Unlock the slides on both sides with the key and pull them out.



E13H_64

6. Press the on/off switch to start the control panel.



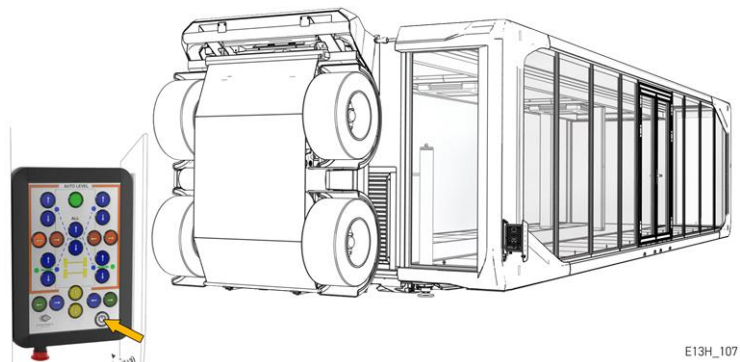
The control panels must each be turned on and off separately.



Check on both sides that the emergency stop is pulled out.



The emergency stop is NOT an on/off switch.

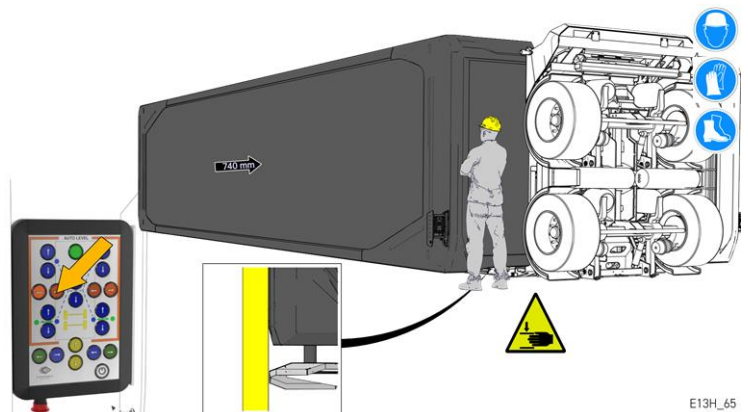


E13H_107

7. Press the indicated button and slide the left slide out so that it is approximately flush with the underride guard.

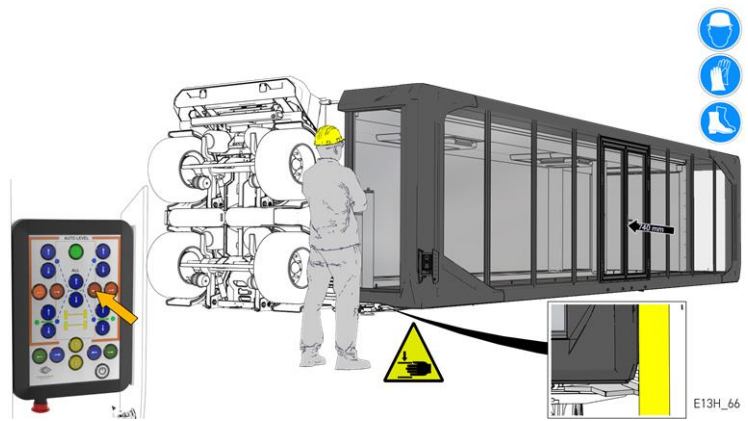
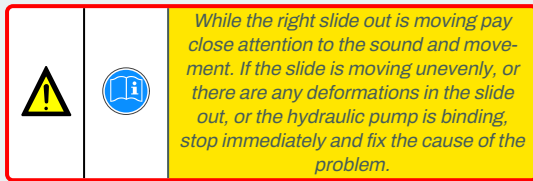


While the left slide out is moving pay close attention to the sound and movement. If the slide is moving unevenly, or there are any deformations in the slide out, or the hydraulic pump is binding, stop immediately and fix the cause of the problem.

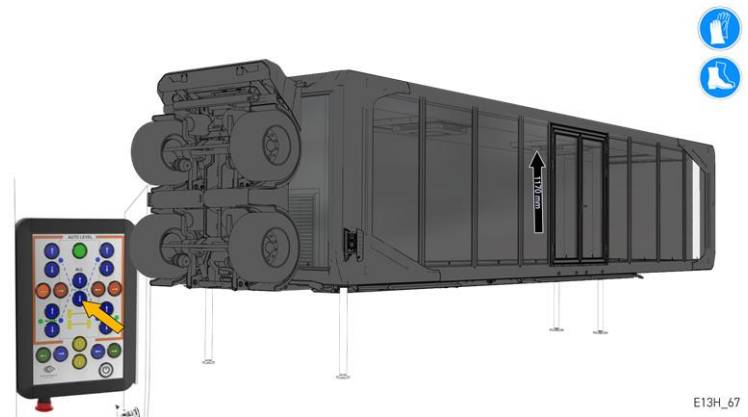


E13H_65

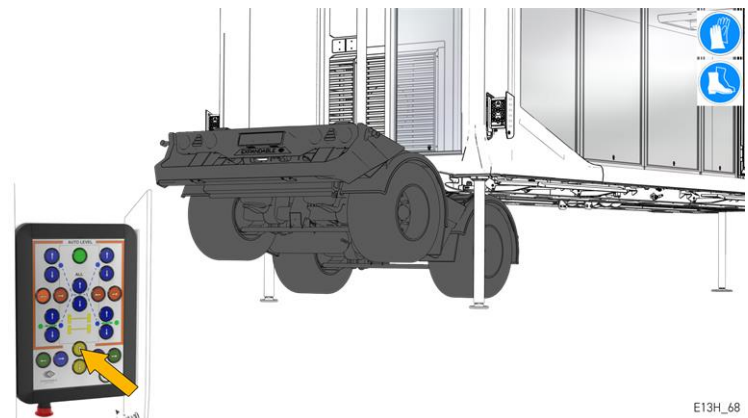
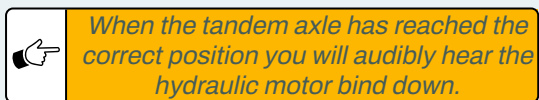
8. Press the indicated button and slide the right slide out so that it is approximately flush with the underide guard.



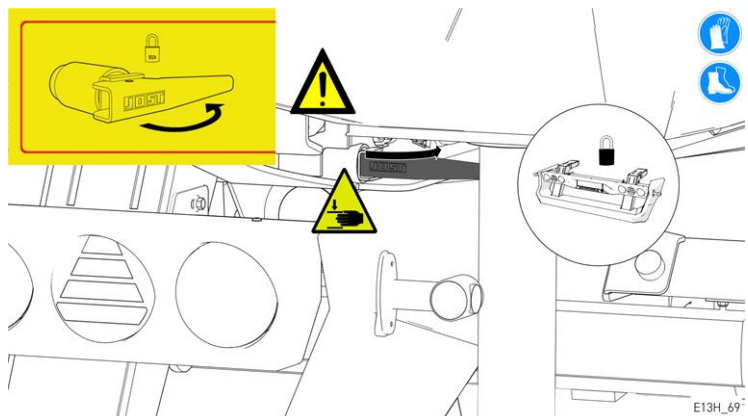
9. Press the indicated button and release it when the "Touch-down" stops moving upwards.



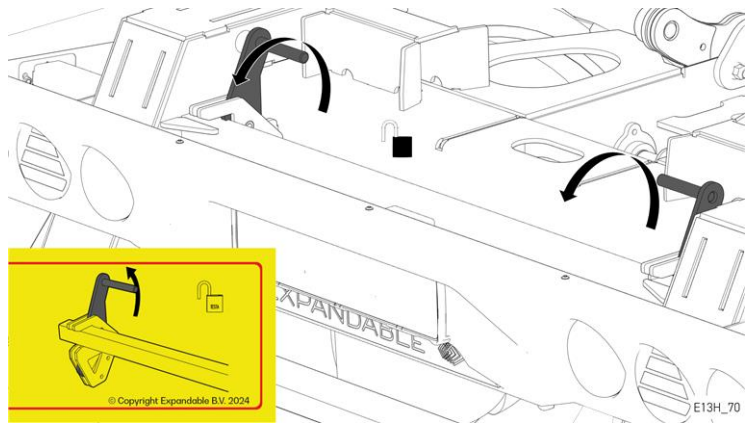
10. Press the indicated button until the tandem axle stops. Release the button.



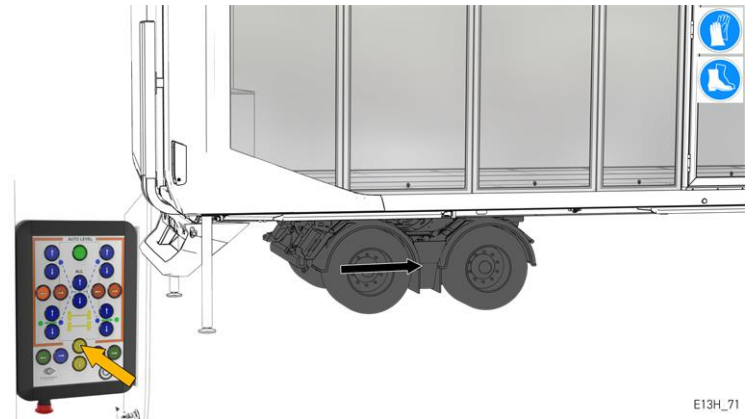
11. Lock the bumper on both sides.



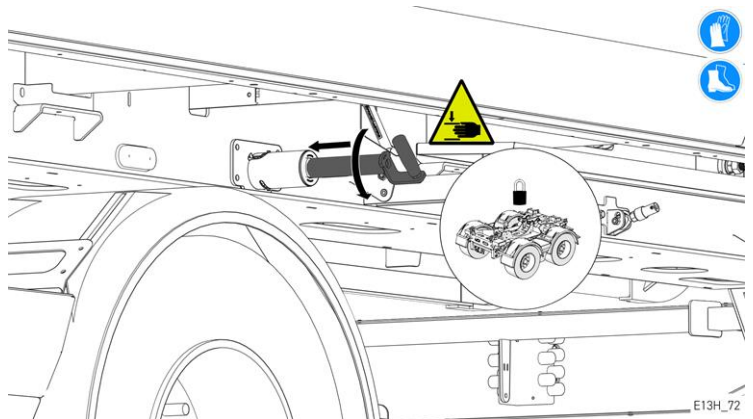
12. Unlock the tandem axle on both sides of the tandem axle.



13. Hold the indicated button until the movement of the tandem axle stops.



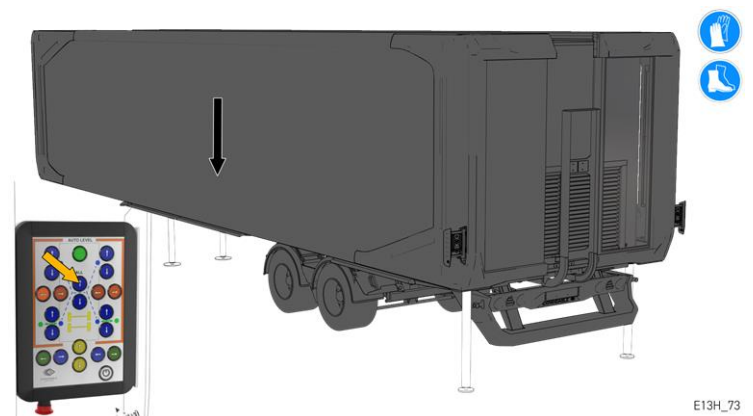
14. Lock the tandem axle on both sides.



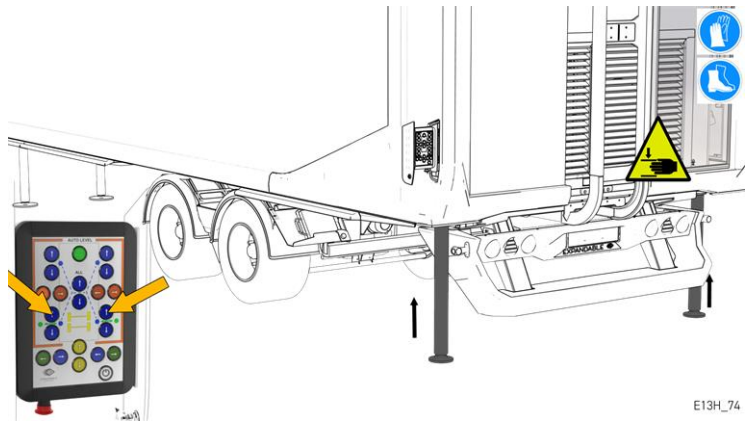
15. Press the indicated button and lower the container onto the wheels. Release the button immediately.



If you hold the button for too long, the trailer will tilt forward.

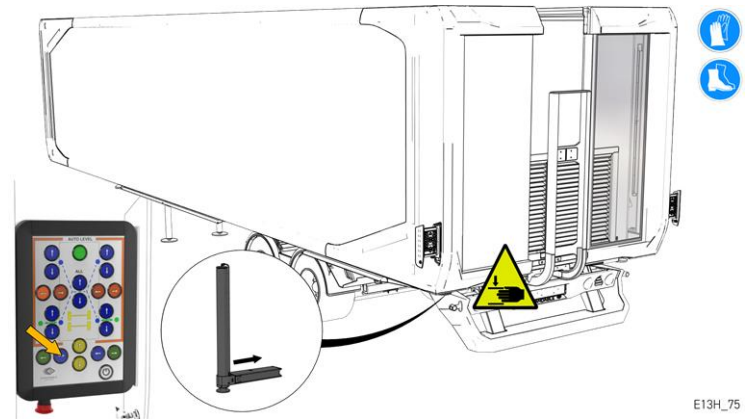


16. Press both indicated buttons to retract the piston rods of the rear lifting cylinders.



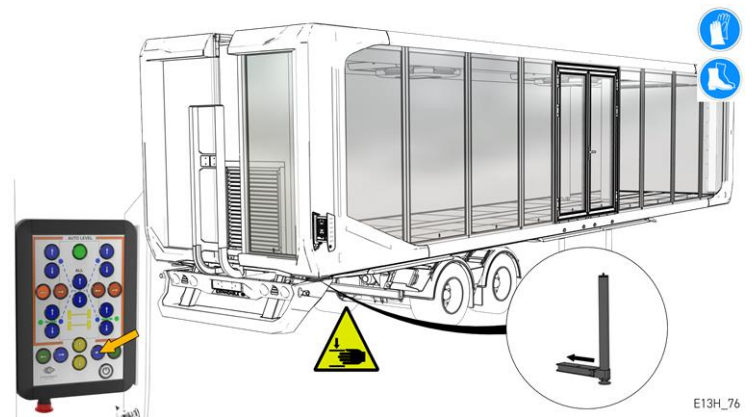
E13H_74

17. Press the indicated button to fully retract the left lifting cylinder.



E13H_75

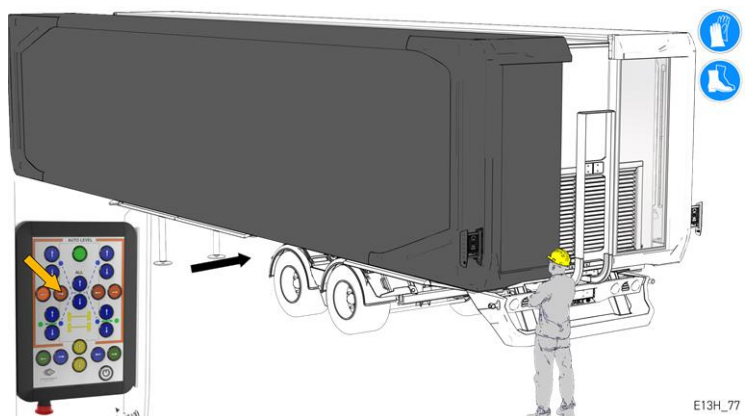
18. Press the indicated button to fully retract the right lifting cylinder.



E13H_76

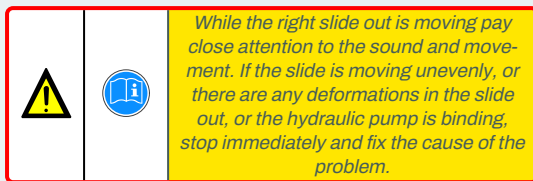
19. Press the indicated button to fully retract the left slide out.

		While the left slide out is moving pay close attention to the sound and movement. If the slide is moving unevenly, or there are any deformations in the slide out, or the hydraulic pump is binding, stop immediately and fix the cause of the problem.
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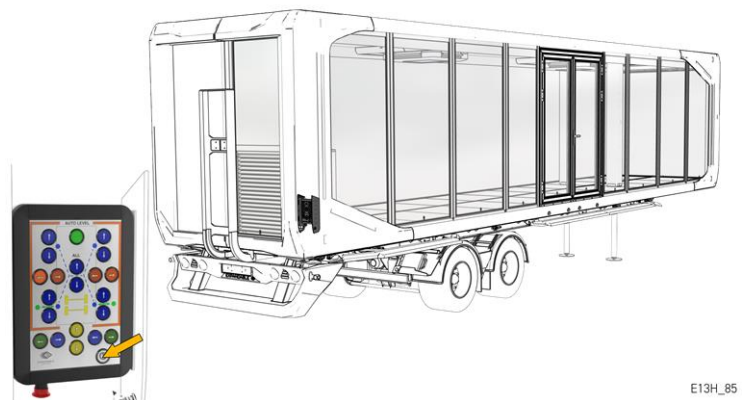
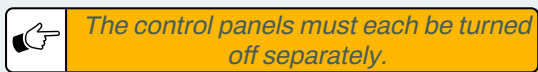


E13H_77

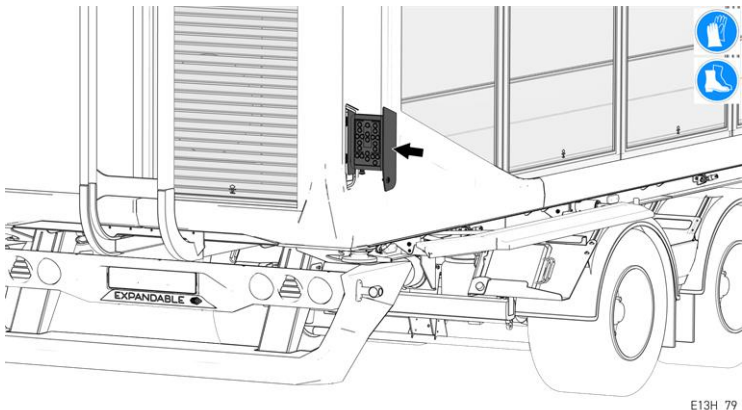
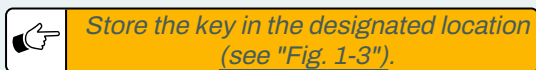
20. Press the indicated button to fully retract the right slide out.



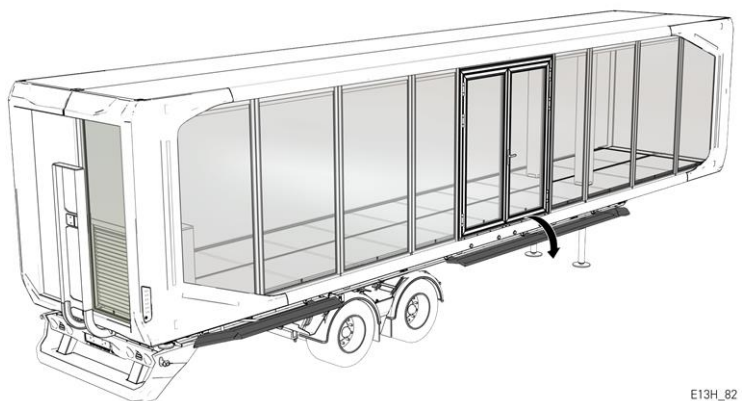
21. Press the indicated buttons to turn off the control panels.



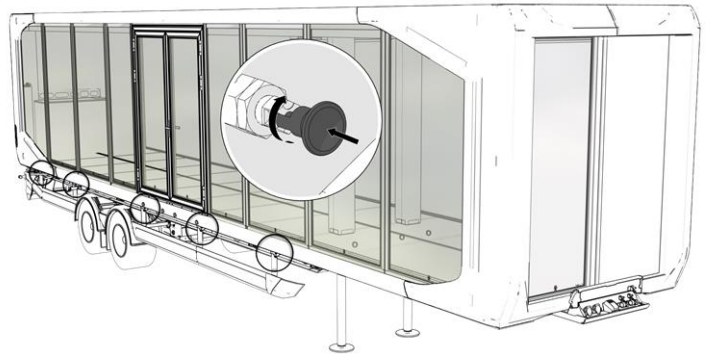
22. Push the control panel both left and right inwards and lock the locks with the key.



23. Tilt the underride guards on both the right and left sides.

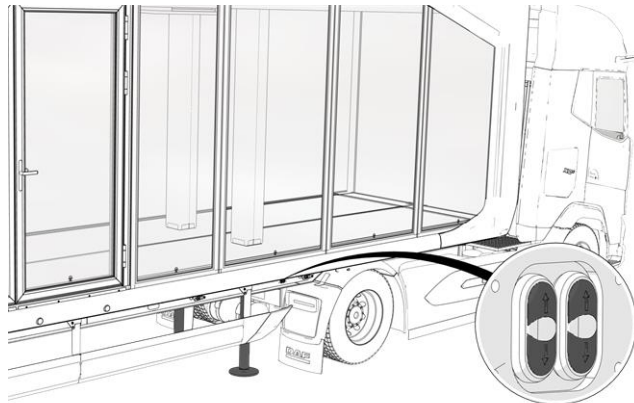


24. Lock the underride guards on both sides by turning the rotary knobs to the lock position.



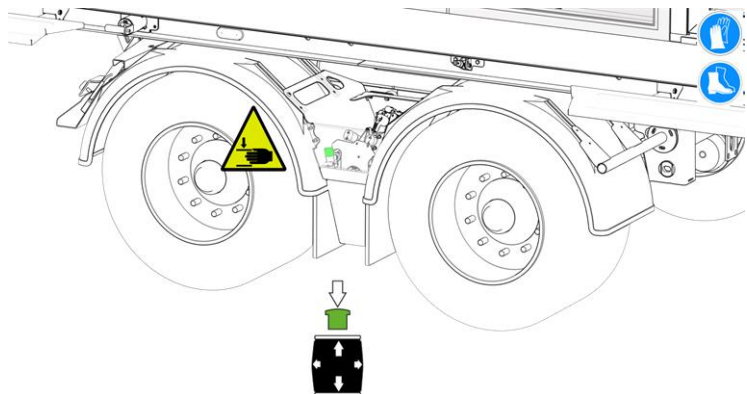
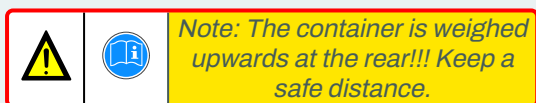
E13H_109

25. Attach the "Touchdown" and use the push buttons to fully raise the piston rods of the front lifting cylinders.



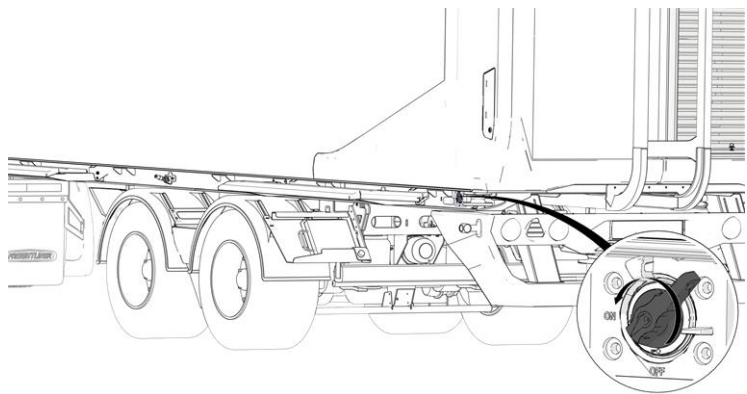
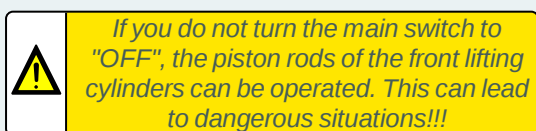
E13H_88

26. Press the green button down.



E13H_80

27. Turn the main switch to "OFF".

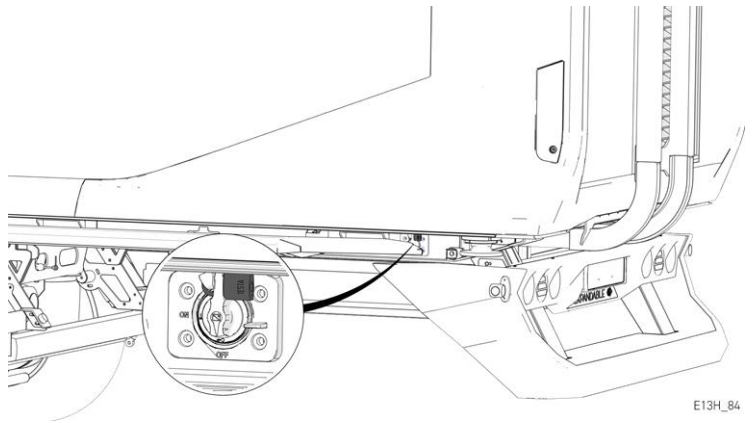


E13H_83

28. Lock the main switch with a pad-lock.



Prevent the trailer from being operated unintentionally.



6. Emergency Operation

In this chapter, you will find information on how to access the Expandable Touchdown Semi Trailer in case of a technical malfunction.

6.1 Access to the "Touchdown" in case of malfunction

The Expandable Touchdown Semi Trailer is accessible in most cases even in the event of a technical malfunction. To enable this, the "Touchdown" is equipped with a hydraulic hand pump. This is located at the rear right under the chassis floor.

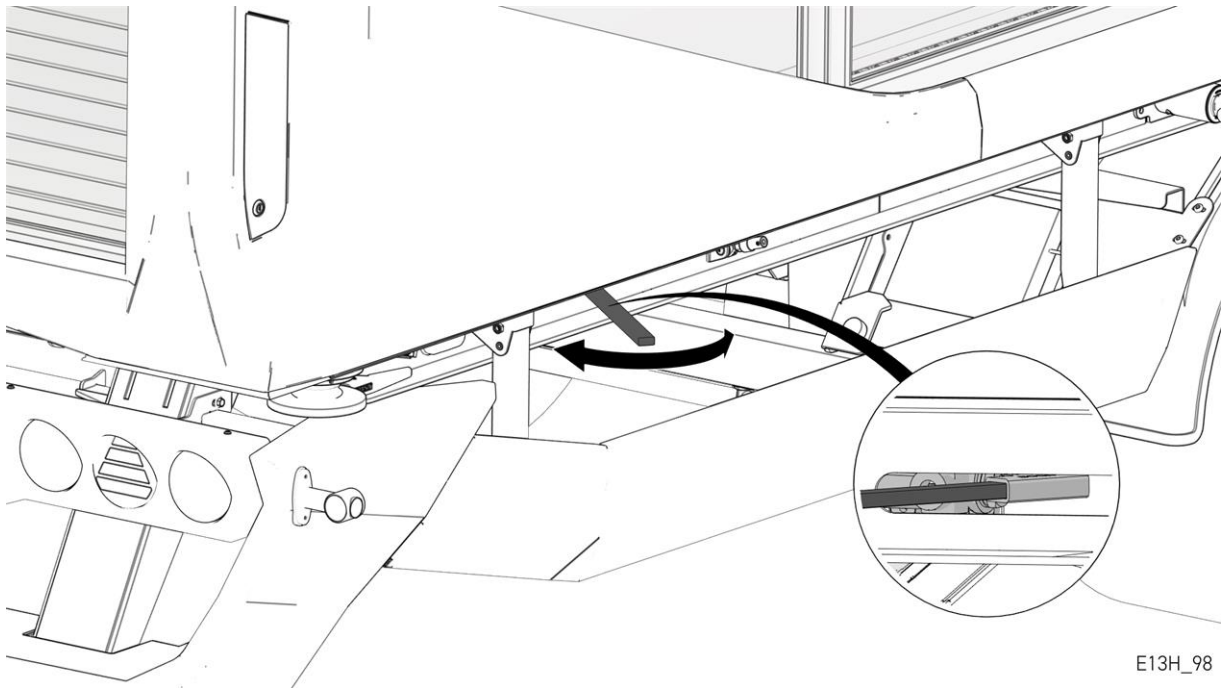


Fig. 6-1

With this hand pump, the left slide out of the "Touchdown" can be moved outwards, providing access to one or more doors (if present).

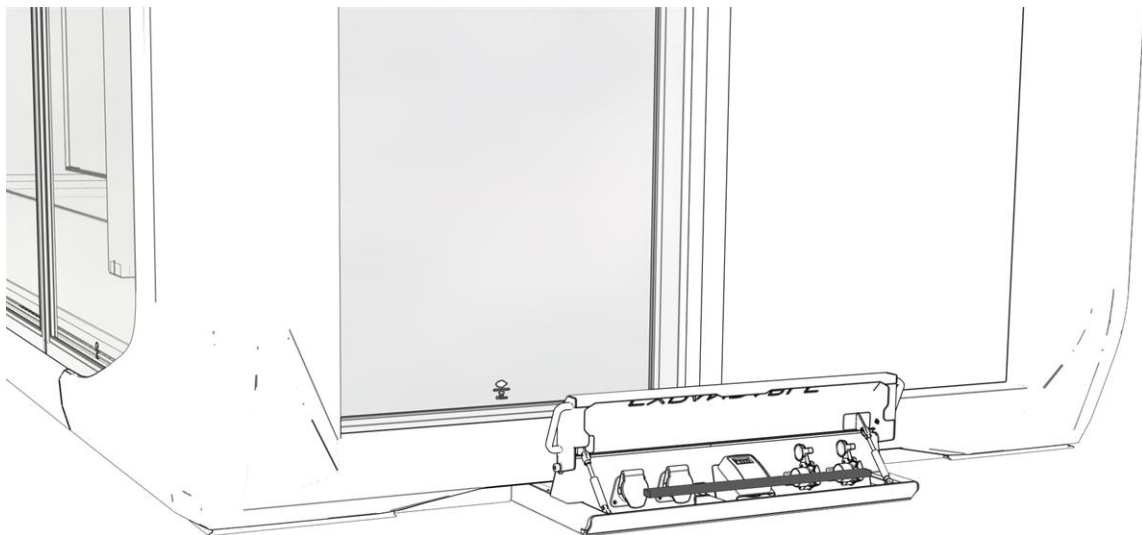
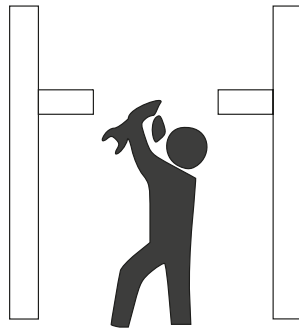


Fig. 6-2

The handle is located in the junction box at the front of the "Touchdown".



7. Periodic Maintenance

In this chapter, you will find information about the maintenance you need to perform on your Expandable Touchdown Semi Trailer. You will also find information about ordering parts.

7.1 Maintenance Schedule

In the table below, the components that require periodic maintenance are listed.

Expandable B.V. advises adhering to the maintenance intervals indicated in the table and using only products with the specified specifications. Order your required products from Expandable B.V. +31 (0)85 890 21 88 in a timely manner.

Component	Interval	Product	Specifications	Responsible Party
Sliding sleeves	Every 6 months	Berulub PALfluid	(See "Properties and Specifications of Lubricant on page 58")	Maintenance workshop
Hydraulic filter	Every 2 years	Donaldson P171602		Maintenance workshop
Oil level	Weekly	QHaydn 32		Driver/operator (See "Oil Level on the next page")
Oil	Every 2 years*	QHaydn 32	(See "Oil Specifications on page 57")	Maintenance workshop
Tyre pressure	Daily		827 KPA/8.27 Bar	Driver/operator
Battery voltage	Weekly		24V (See "Specifications of Electrical Components on page 59")	Driver/operator
Exterior lighting	Daily			Driver/operator
Emergency operation ball valve	Monthly			Driver/operator (See "Emergency Operation Ball Valve Check on page 41")

Table 7-1 Maintenance

* 1 year from first commissioning.

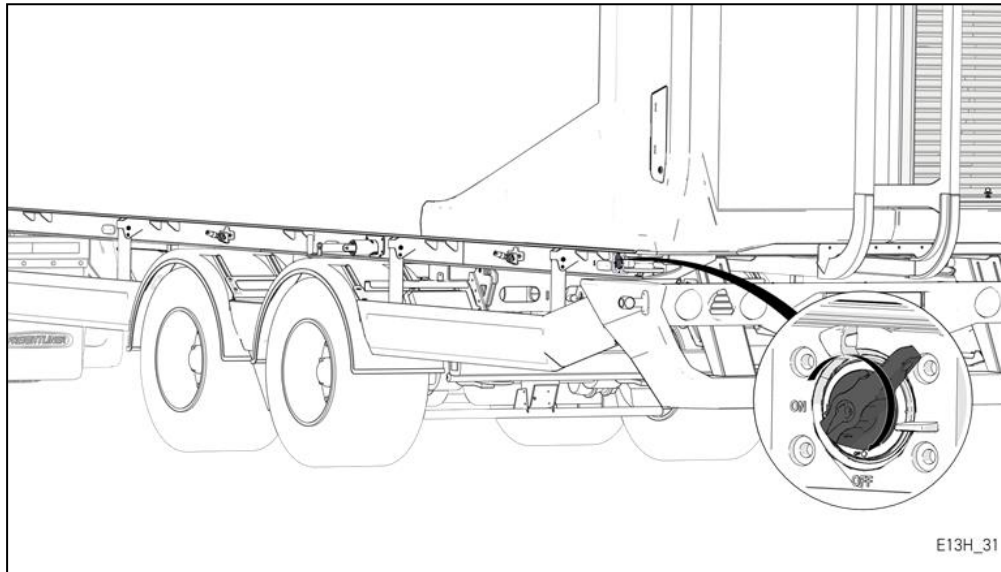
7.2 Oil Level

For proper functioning of the hydraulic system, it is essential that the oil is always at the correct level. To properly check the oil level, the following conditions must be met;

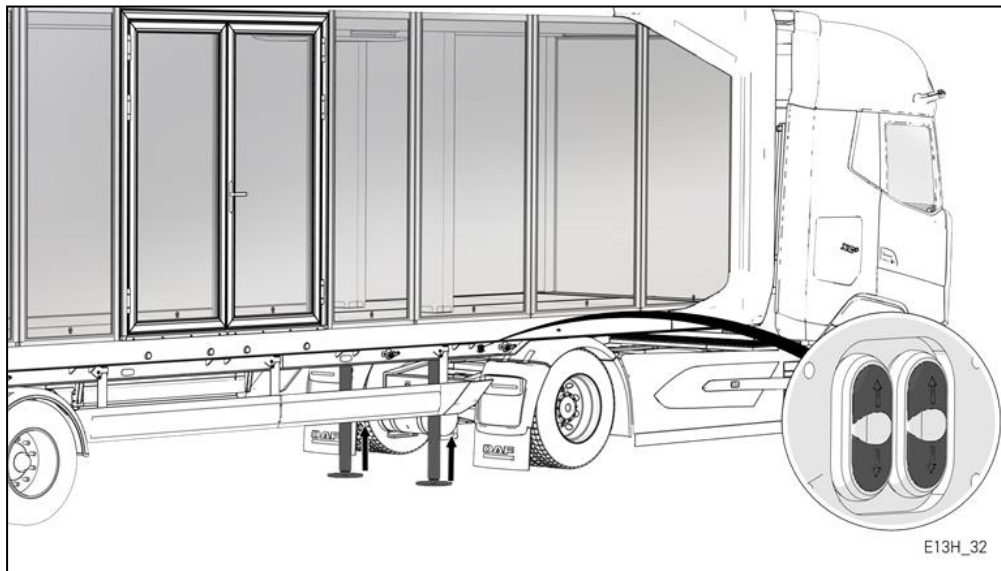
- *Connect the "Touchdown" to the tractor.*
- *Ensure that the truck combination is level.*
- *Ensure that the piston rods of the lifting cylinders are retracted.*
- *Ensure that the right slide out is fully retracted.*

Procedure

Follow the procedure given below.



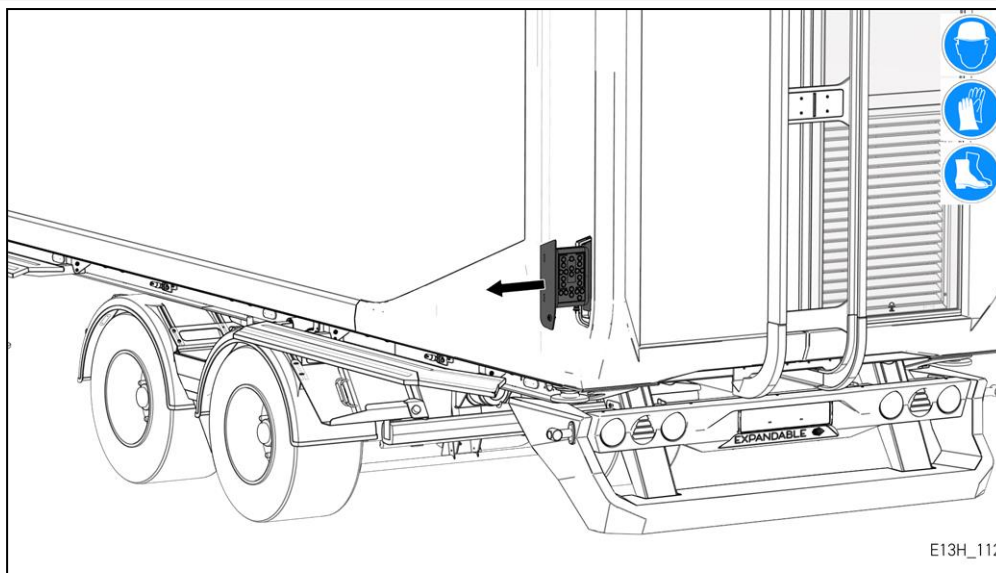
1. ⬆ Turn the main switch to the "ON" position.



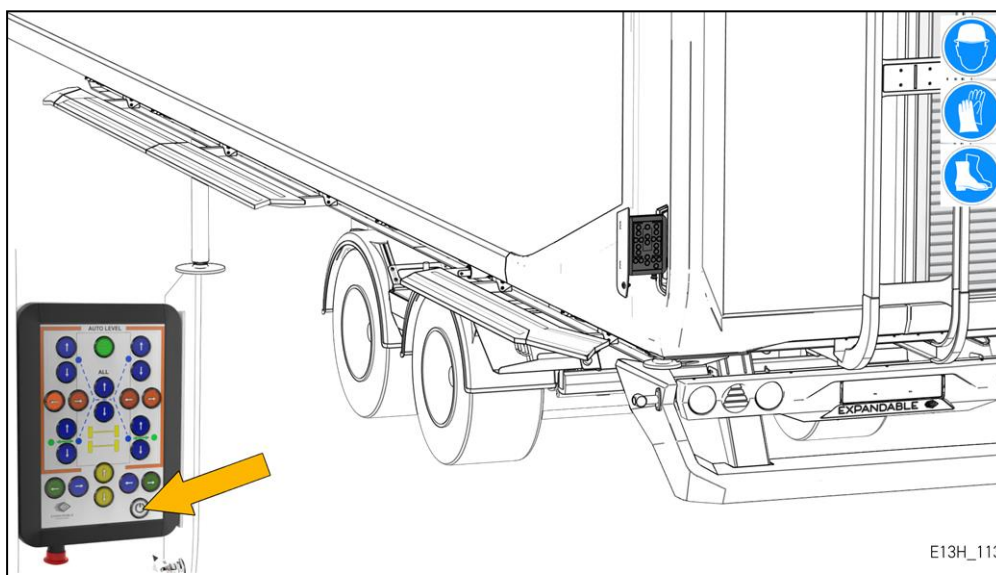
2. ⬆ Connect the Expandable Touchdown Semi Trailer and retract the piston rods of the lifting cylinders completely.



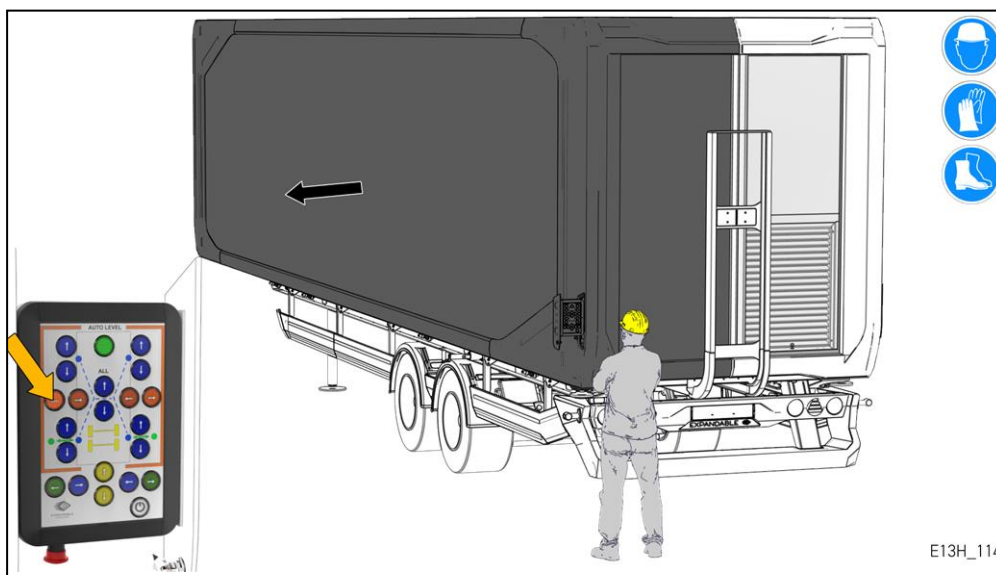
Ensure that the truck combination is level.



3. ⬆️ Unlock the left control panel and pull it out.



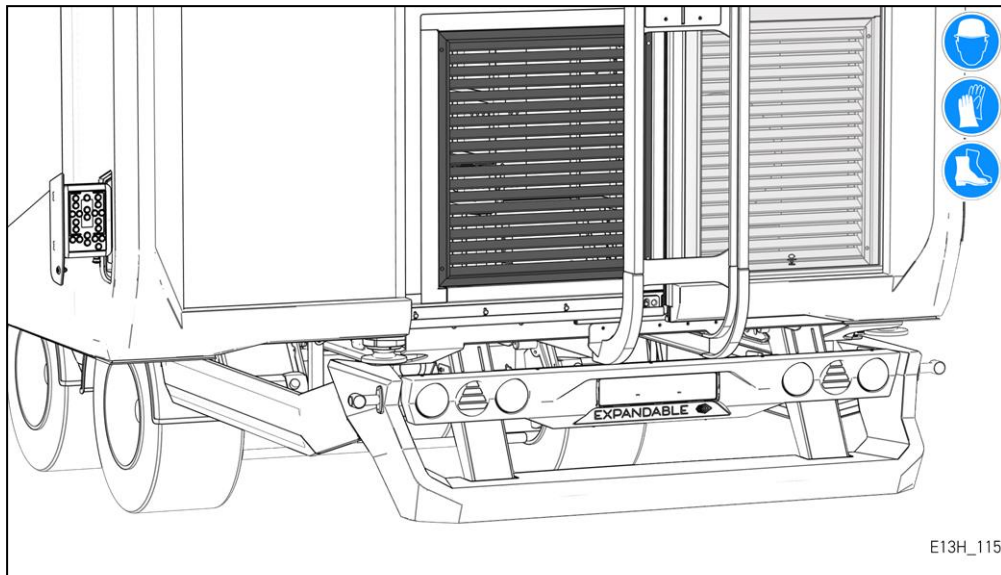
4. ⬆️ Switch on the control panel.



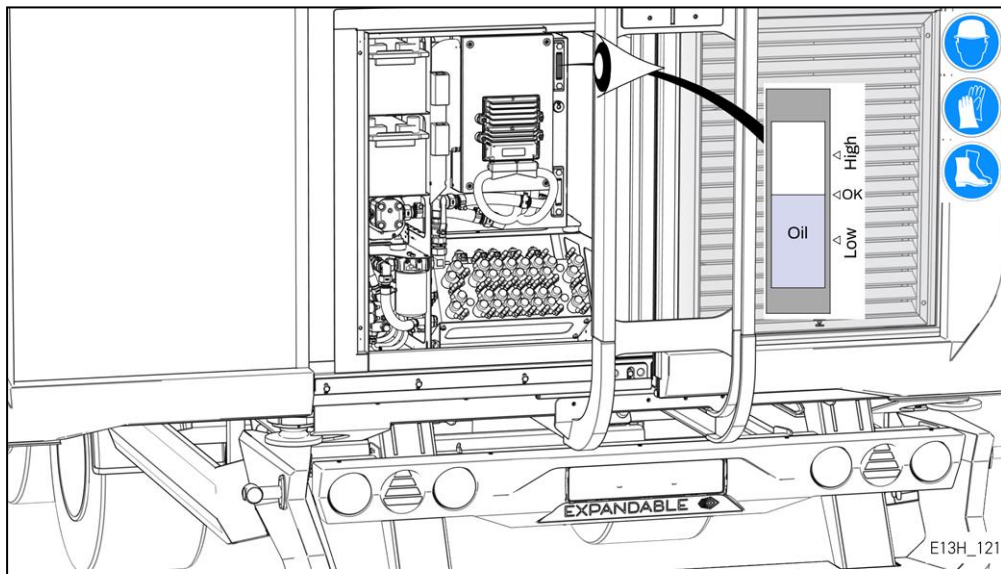


While the left slide out is moving pay close attention to the sound and movement. If the slide is moving unevenly, or there are any deformations in the slide out, or the hydraulic pump is binding, stop immediately and fix the cause of the problem.

5. ⬆ Fully extend the left slide out.



6. ⬆ Remove the rear grid.



7. ⬆ Ensure that the oil level is halfway up the sight glass, otherwise refill hydraulic oil (See "Refilling Oil on the next page").
8. Reinstall the grid.
9. Fully retract the left slide out.
10. Switch off the control panel.
11. Slide the control panel in and lock it.
12. Turn the main switch to the "OFF" position and lock it with a padlock.

7.2.1 Refilling Oil

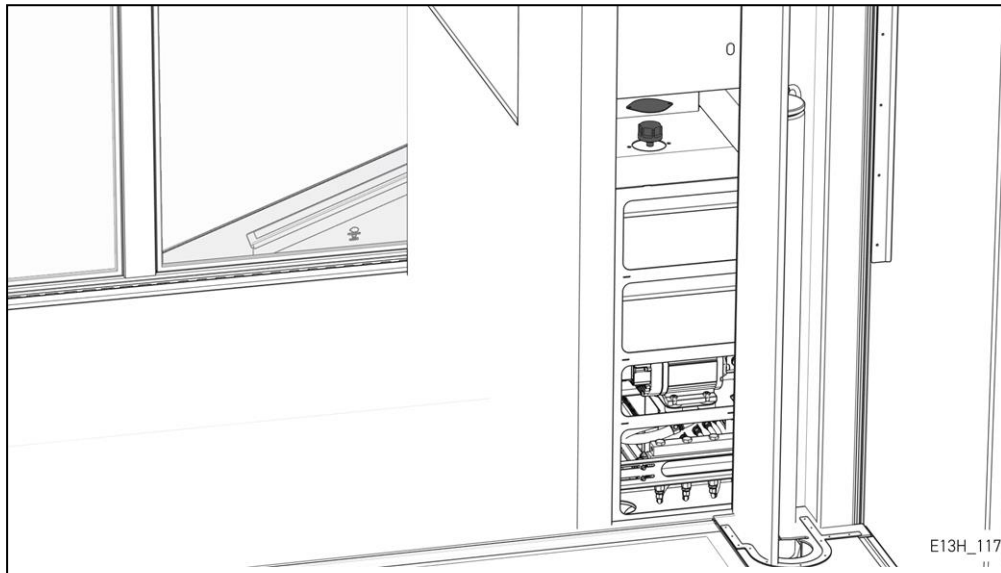
When the hydraulic oil level is too low, it must be refilled.



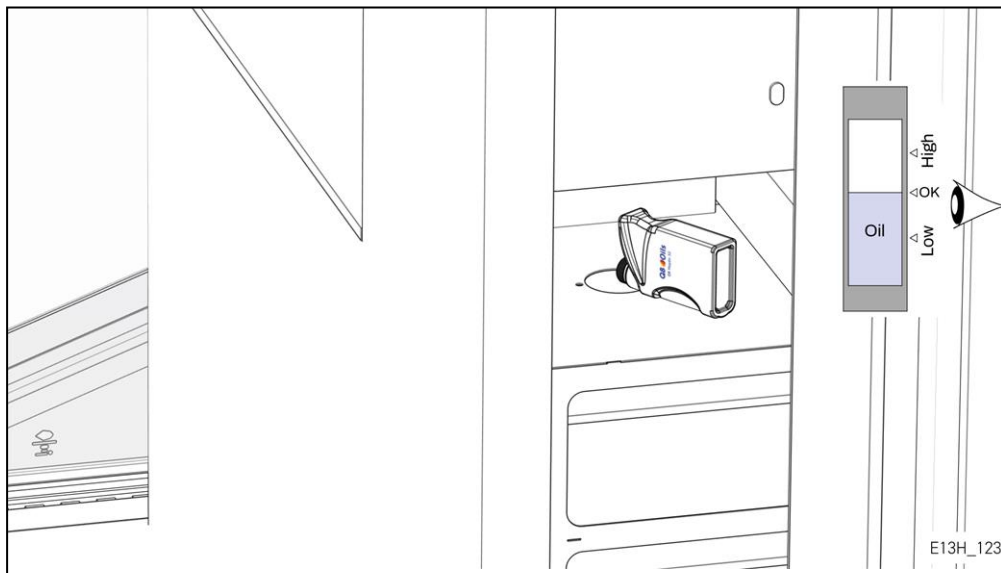
Hydraulic oil can only be refilled through the access door of the technical area inside the Expandable Touchdown Semi Trailer

Procedure

Follow the procedure given below.



1. ↑ Remove the cover cap and the tank cap.



2. ↑ Refill oil and check the level through the top sight glass.



To prevent damage to the hydraulic system and potential leaks, Expandable B.V. recommends making an appointment with the service workshop as soon as the hydraulic oil level is "High".

3. Replace the cap and cover, and remove any spilled hydraulic oil.



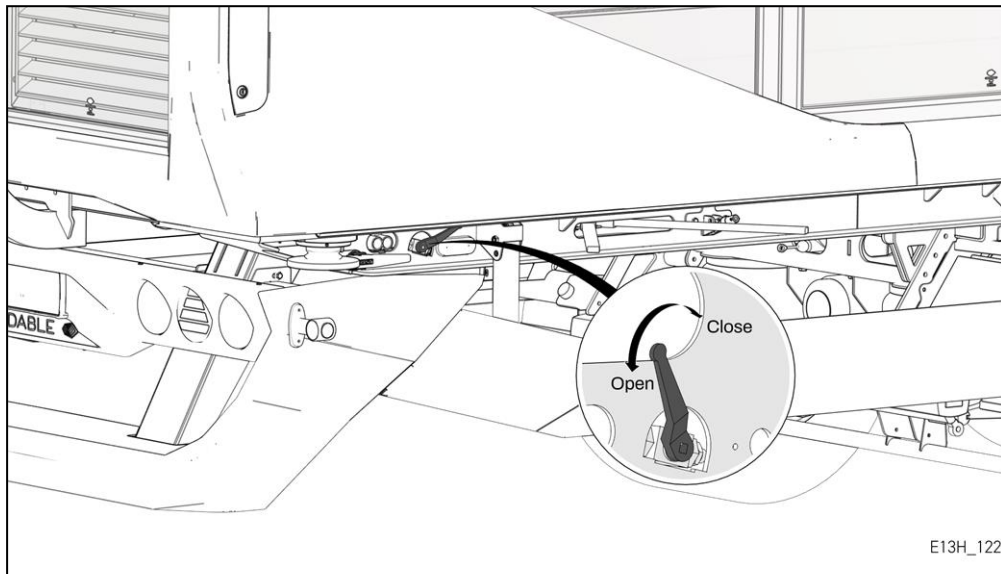
Close the door of the technical area to prevent damage when sliding in the left slide out.

7.3 Emergency Operation Ball Valve Check

To ensure that the emergency operation is always available, the ball valve must always be operable. It is therefore important to periodically check this valve for operability (See "Maintenance Schedule on page 35").

Procedure

Follow the procedure given below.



1. ↑ Open and close the ball valve to check if it is operable.
2. Check for any leakage and replace the ball valve if necessary.



Ensure that the ball valve is always closed, otherwise it is not possible to slide in the left slide out using the control panel

8. Safety & Environment

The following sections contain information on the safe use of the Expandable Touchdown Semi Trailer. Also described is how to act when the has reached the end of its service life.

8.1 Environment

 Once the Expandable Touchdown Semi Trailer has reached the end of its lifespan for any reason, it must be dismantled and disposed of in accordance with local and/or national regulations.

Contact the local or national government service, waste service, or the supplier where you purchased the product for more information on the locations where the materials are collected for recycling.

8.2 Safety During Use

 The use of a Expandable Touchdown Semi Trailer may involve risks.

Always consult the relevant regulations (e.g., traffic laws, company procedures, safety and health regulations) applicable in the country where the Expandable Touchdown Semi Trailer is being used.

General instructions for using a Expandable Touchdown Semi Trailer:

- *Never set up the Expandable Touchdown Semi Trailer on terrain that exceeds the allowable slope values.*
- *Never use or place a Expandable Touchdown Semi Trailer on public roads unless it has been established that the entire trailer complies with national road traffic legislation.*
- *Read the user manual **BEFORE** coupling and/or using a Expandable Touchdown Semi Trailer.*
- *Perform the daily inspection **BEFORE** coupling and/or using a Expandable Touchdown Semi Trailer.*
- *During transportation the driver of the semi truck is responsible for safe travel and operation of the Expandable Touchdown Semi Trailer.*
- *Only manoeuvre the Expandable Touchdown Semi Trailer when **NO** people or animals are in the immediate vicinity of the moving parts of the trailer.*

The nature of potential hazards and limitations during use are symbolised by the pictograms below.



9. General Information

In the following paragraphs, you will find general information regarding this User manual and the product manufactured by Expandable B.V..

9.1 Cleaning

Use a mild detergent and remove the detergent with water from the hose at low pressure. Expandable B.V. recommends NOT cleaning the 'Touchdown' with aggressive or corrosive detergents. Using a pressure washer or cleaning in a car wash is strongly discouraged. This is to avoid loosening the film from wrapped parts of the Expandable Touchdown Semi Trailer.

9.2 Vehicle registration and delivery

 When a Expandable Touchdown Semi Trailer is handed over to the customer, all accompanying documentation regarding the Expandable Touchdown Semi Trailer must be provided to the customer.

- *The vehicle must not be used until it has been established that the trailer on which the Expandable Touchdown Semi Trailer is mounted complies with national road traffic laws.*
- *National road traffic laws are specific to each country. Contact the national inspection authority in the respective country for the required information.*

Subject	Action
Warning sticker	Check that the warning stickers are placed in such a way thatthey are clearly visible to the users.
User manual	The user manual of the Expandable Touchdown Semi Trailer is handed over to the customer upon delivery. Inform the customer that the user manual should be kept with the trailer.
Warranty	Warranty on products from Expandable B.V. can be found in the delivery terms.

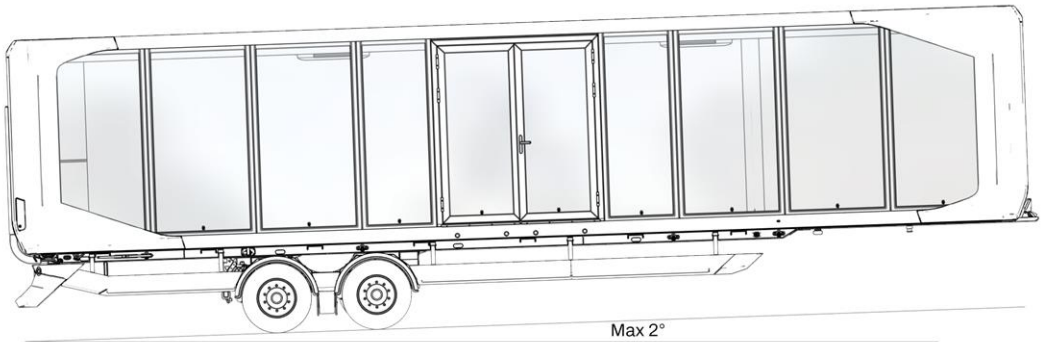
Table 9-1 Delivery Documents

9.3 Terrain Conditions

Your Expandable Touchdown Semi Trailer should preferably be made ready for use and transport on terrain that is level both longitudinally and laterally. Some slope of the terrain is allowed as long as the slope angles do not exceed the maximum allowable values shown in Table (see "Table 9-2"). The maximum allowable slope angles both longitudinally and laterally are shown below:

	Slope Angle
Longitudinal	2°
Lateral	3°

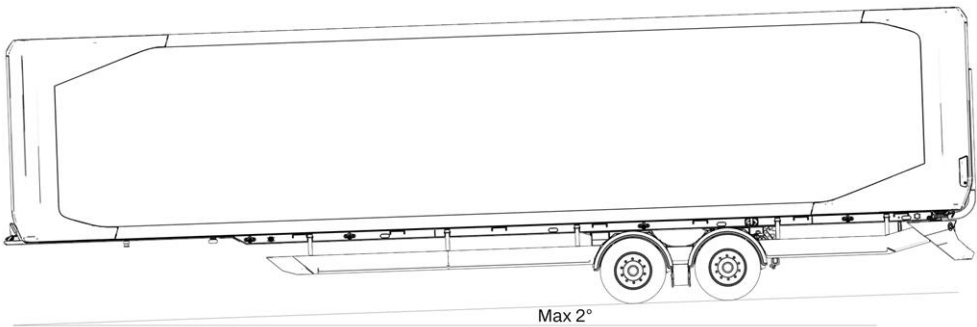
Table 9-2 Slope Angles



E13H_92

Maximum longitudinal slope angle

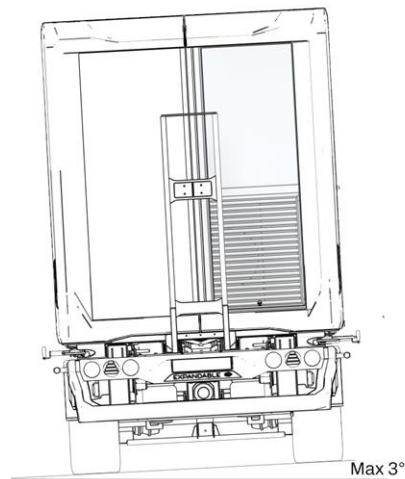
Fig. 9-1



E13H_93

Maximum longitudinal slope angle

Fig. 9-2



E13H_94

Maximum lateral slope angle

Fig. 9-3

Always determine before making the Expandable Touchdown Semi Trailer ready for use whether the terrain is sufficiently load-bearing to support the weight of the Expandable Touchdown Semi Trailer plus the interior and use the supplied stabilising plates under the lifting cylinders.

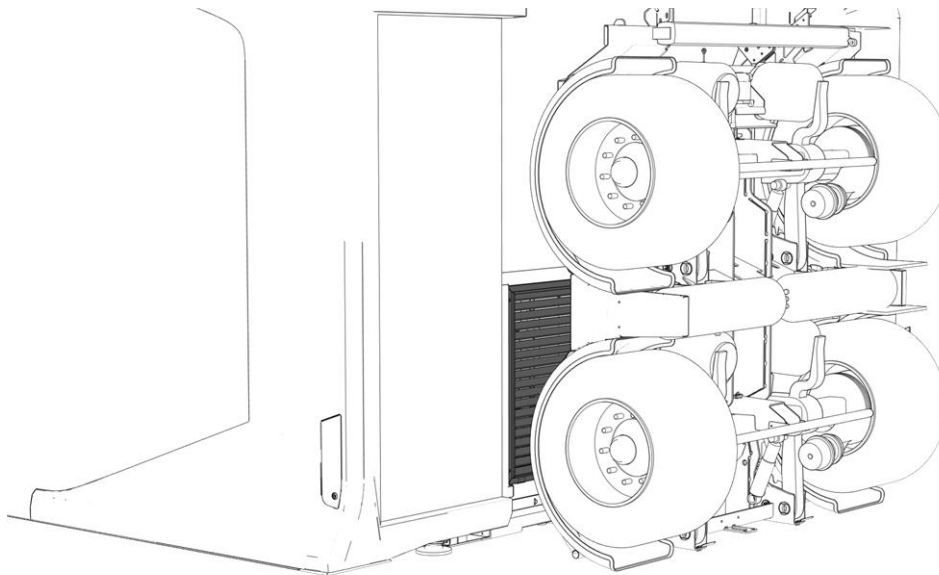
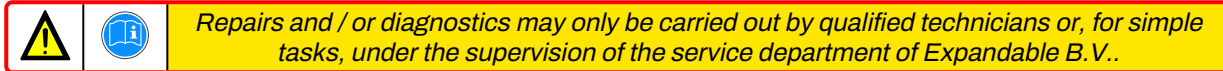
9.4 Access to the Technical Area

The technical area is located at the rear of the Expandable Touchdown Semi Trailer and is normally accessible in both the transport and usage positions for small repairs or diagnostics. In such cases, the grilles at the rear can be removed after they have been unlocked with a key.

For larger repairs, a panel inside the Expandable Touchdown Semi Trailer must be removed.

In the technical area, you will find:

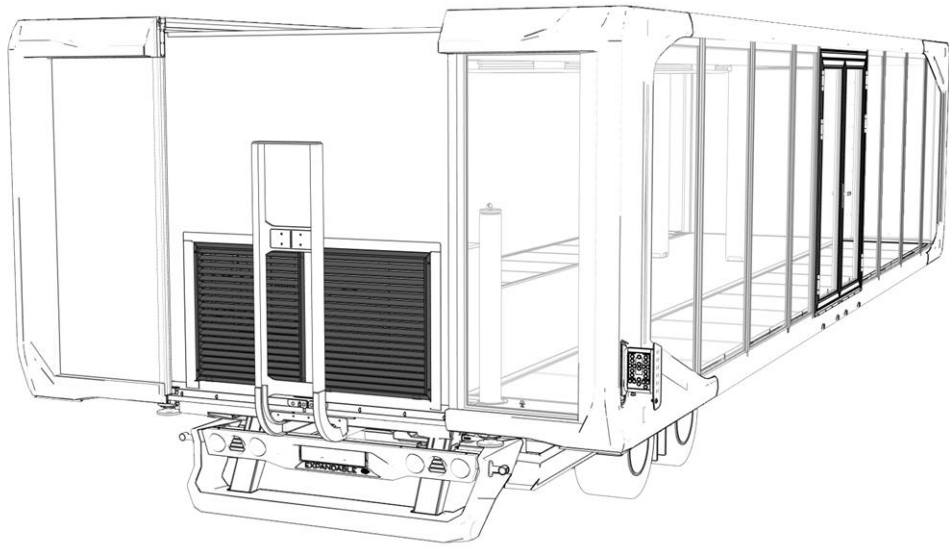
- *the air conditioning system*
- *the electrical system with the batteries*
- *the hydraulic control system with the pumps, tank, and filter*



E13H_95

Access to the technical area in usage mode

Fig. 9-4



E13H_96

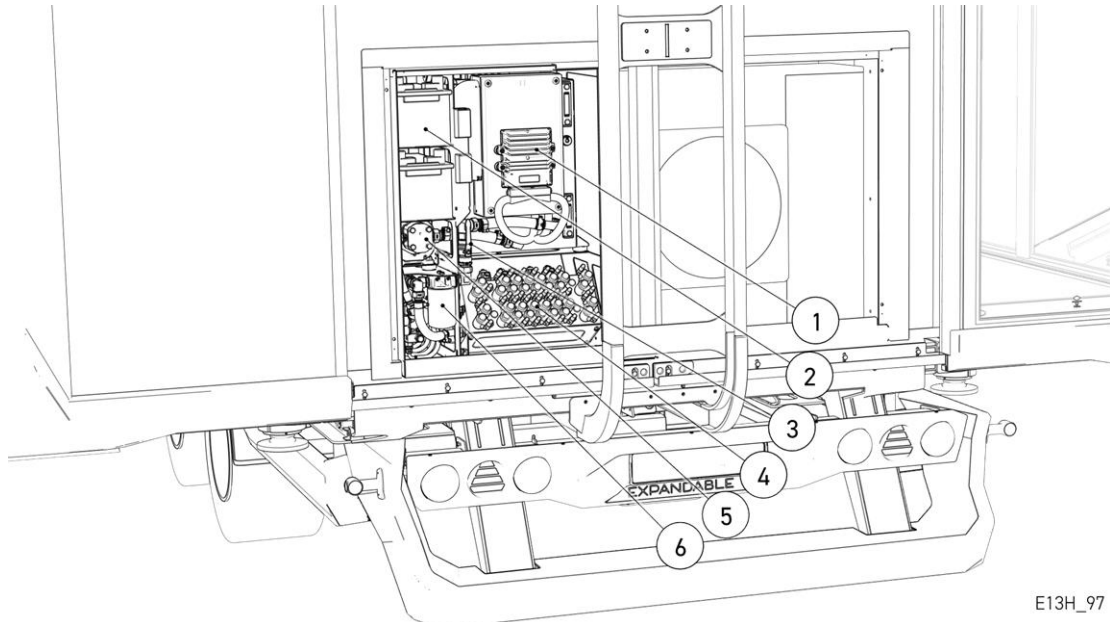
Access to the technical area in transport mode with extended slide outs

Fig. 9-5

In the image below, the positions of some of the main components in the technical area are shown.



The hydraulic filter must be replaced periodically.



E13H_97

Fig. 9-6

- 1. Control unit.
- 2. Batteries
- 3. Main valve hydraulic system

- 4. Valve block
- 5. Hydraulic pump
- 6. Hydraulic filter

9.5 Checking and Recharging Battery Voltage

The batteries are normally recharged via the built-in trickle charger as soon as the wall power is connected. The battery voltage can be checked via the REMA connector located at the rear right of the Expandable Touchdown Semi Trailer chassis.

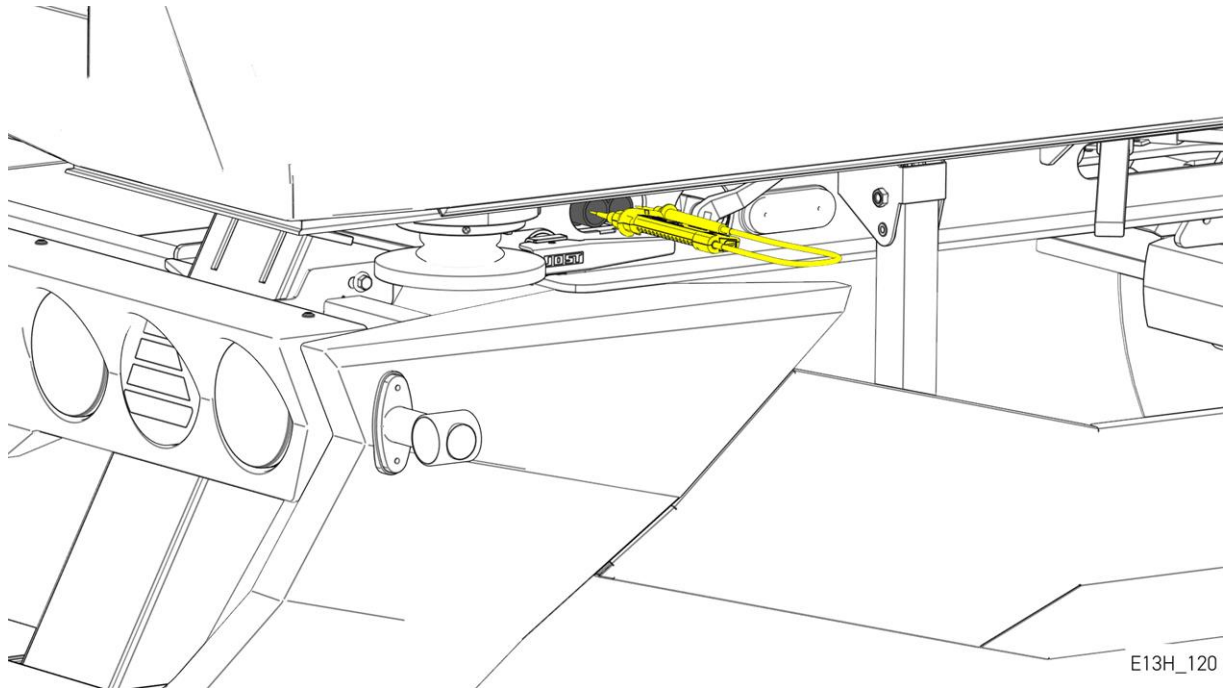


Fig. 9-7

The battery voltage (24V) can be measured at the REMA connector. If for some reason the voltage is too low, a charger can be connected to the REMA connector.

9.6 Stickers

On your Expandable Touchdown Semi Trailer various stickers have been applied by Expandable B.V.. Never ignore these stickers. The stickers clarify the function of components or warn against improper use of the Expandable Touchdown Semi Trailer.

Below is the meaning of the stickers.

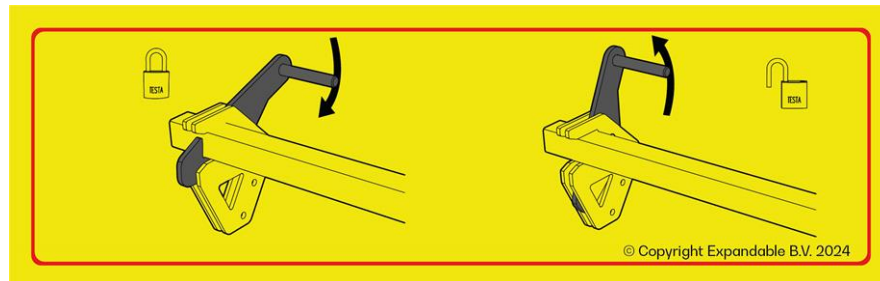


Fig. 9-8

The sticker shown above indicates the position of the latch in which the bumper is or is not locked to the tandem axle. The bumper automatically locks onto the tandem axle as soon as the tandem axle contacts the bumper, ensuring that the bumper always follows the tandem axle in both upward and downward movements.

		<i>Normally, the bumper will automatically lock onto the tandem axle when it contacts the bumper. However, it is possible that this sometimes does not occur. In such cases, the bumper must be manually locked. ALWAYS visually check that the bumper is locked!!!!</i>
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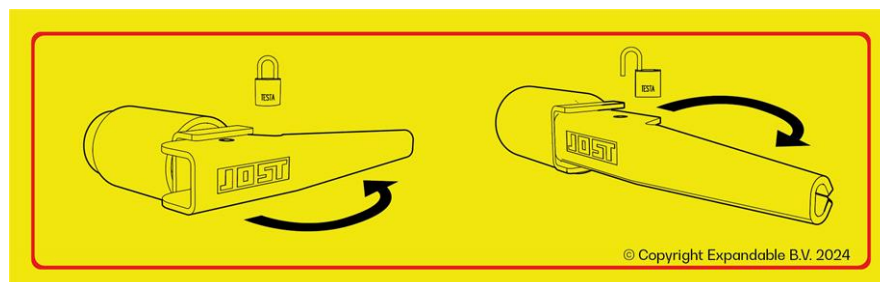


Fig. 9-9

The sticker shown above indicates the position of the latch in which the bumper is or is not locked in the chassis of the Expandable Touchdown Semi Trailer.

In the transport position of the Expandable Touchdown Semi Trailer, the bumper must always be locked on both sides.

		<i>Ensure that the bumper is locked in the chassis in the transport position. This prevents the Expandable Touchdown Semi Trailer from losing the bumper during transport. ALWAYS visually check that the bumper is locked!!!</i>
--	--	--

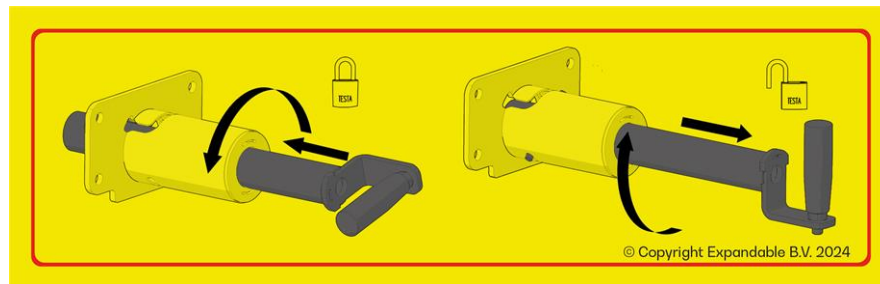


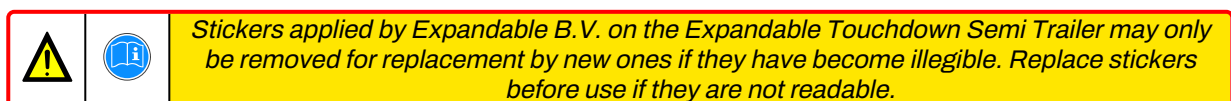
Fig. 9-10

When the tandem axle is in the transport position or when the tandem axle needs to be moved to the rear of the Expandable Touchdown Semi Trailer, the tandem axle must be locked or unlocked. In the first image on the sticker above, the latch is turned to the left. The latch pin is then pushed into the tandem axle under spring pressure. In the second image on the sticker, the latch is pulled out of the tandem axle against the spring pressure and then turned to the right. These actions must be performed on both sides of the tandem axle.



Fig. 9-11

If your Expandable Touchdown Semi Trailer is equipped with an optionally available roof terrace, you will find the sticker shown above on the door to the roof terrace. This indicates that the maximum load of the roof terrace may be 2000 kg (4400 lbs). This corresponds to 17 people with an average weight of 84 kg (185 lbs) plus any tables, chairs, and parasols, etc. that may be placed.



9.6.1 VIN plate and ALR Plate

On the chassis of the Expandable Touchdown Semi Trailer, the VIN plate shown below is affixed. This sticker provides information on:

- the maximum load per axle
- the total weight
- the VIN number
- the type of trailer
- the production date

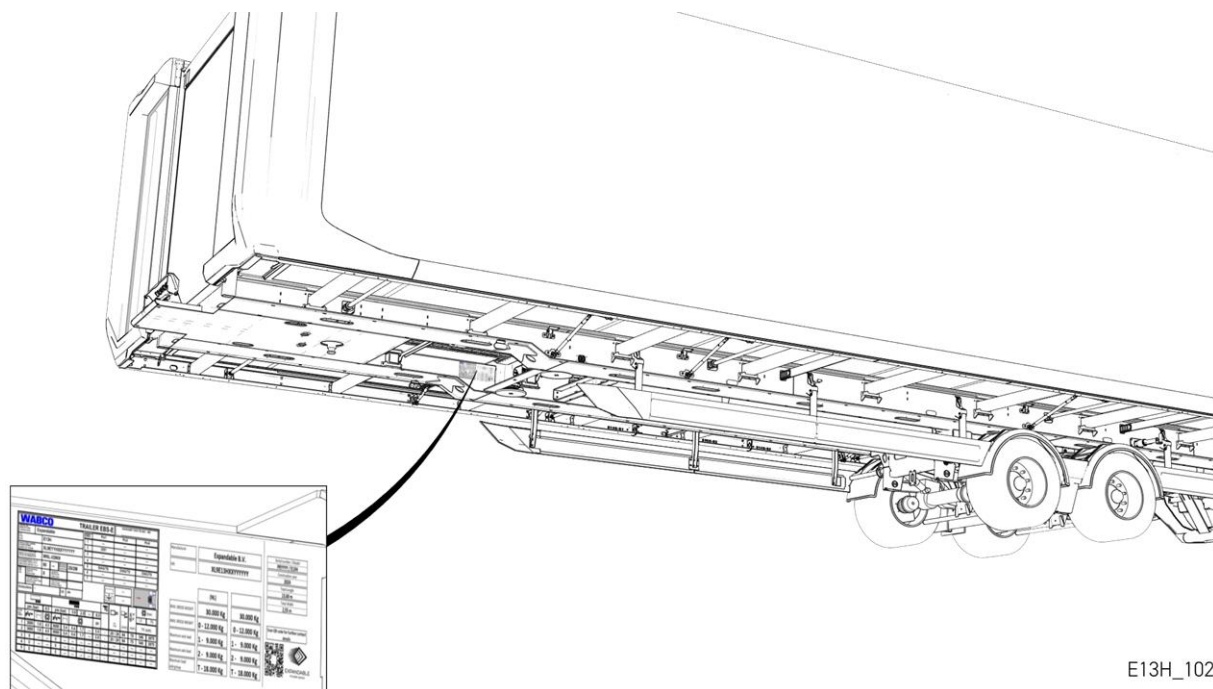
Manufacturer	Expandable B.V.		Serial number / Model	PRYYYY / E13H
VIN	XL9E13HXXYYYYYY		Construction year	2024
			Total Length	13,60 m
			Total Width	2,55 m
	(NL)		Scan QR code for further contact details	
MAX. GROSS WEIGHT	30.000 Kg	30.000 Kg		
MAX. GROSS WEIGHT	0 - 12.000 Kg	0 - 12.000 Kg		
Maximum axle load	1 - 9.000 Kg	1 - 9.000 Kg		
Maximum axle load	2 - 9.000 Kg	2 - 9.000 Kg		
Maximum load axle group	T - 18.000 Kg	T - 18.000 Kg		

Fig. 9-12



The type sticker must always be legible. Replace the sticker as soon as it becomes illegible. In such a case, contact Expandable B.V.+31 (0)85 890 21 88 to order a new sticker. The sticker must not be replaced by a sticker made by third parties without written permission from Expandable B.V..

The ALR plate and type sticker are affixed to the inside of the right chassis beam.



E13H_102

Fig. 9-13



No changes may be made to the ALR plate and the type sticker. Contact Expandable B.V. if the sticker or the ALR plate has become illegible.

9.7 Trailer Specifications

In the table below, the specifications for the "Expandable Touchdown Semi Trailer" type 44 ft are listed.

	44 ft
Maximum weight	27000 Kg (59524 lbs)
Load capacity	12000 Kg (26455 lbs)
Axle load	9000 Kg (19841 lbs)
Rim size	22.5"
Tyre size	435/50/R22.5
Tyre pressure (cold)	800 KPA
External length	13.6 m (approx. 42ft 8")
External width	2.55 m (approx. 6ft 7")
External height	4.00 m (approx. 13ft 1")
Internal surface area in transport position	26.00 m ² (approx. 279.86 sqft)
Internal surface area in usage position	60.00 m ² (approx. 645.83 sqft)
Internal volume in transport position	62.3 m ³ (approx. 670.59 sqft)
Internal volume in usage position	137.5 m ³
Maximum number of people on the roof when used as a roof terrace	17 (average 84 kg (185 lbs) per person)
Maximum load on middle roof	2000 Kg (4400 lbs)

Table 9-3 Trailer Specifications

9.8 Oil Specifications

Bosch Rexroth	RE 90220 notes	Eaton Brochure	03-410-2010
DIN	51517-2 CL	ISO	11158 HM
DIN	51524-2 HLP	MAG IAS	P-68, P-69, P-70
Density	HF-0, HF-1, HF-2	Swedish Standard	SS 115434 AM

Table 9-4 Oil Specifications

9.8.1 Oil Properties

	Method	Unit	Properties
ISO viscosity grade			32
Density, 15°C	D 4052	g/ml	0.87
Kinematic viscosity 40°C	D 445	mm ² /s	32.2
Kinematic viscosity 100°C	D 445	mm ² /s	5.6
Viscosity index	D 2270		111
Acid number TAN	D 974	mg KOH/g	0.3
Pour point	D 97	°C	-30
Flash point, COC	D 92	°C	208
Emulsion, distilled water, 54.4°C	D 1401		40-40-0(10)
Foam, 5 min blowing, seq. 1/2/3	D 892	ml	5/10/5
Foam, 5 min settling, seq. 1/2/3	D 892	ml	0/0/0
Rust prevention test, proc. A and B, 24h	D 665		pass
Copper strip, 3h, 100°C	D 130		1
FZG Test, A/8.3/90	DIN 51354	load stage	10

Table 9-5 The above figures are not specifications. They are typical figures obtained within production tolerances.

9.9 Properties and Specifications of Lubricant

Berulub Lubricant Properties
Suitable for low temperatures
Prevents "stick-slip" (sticking during sliding)
Extended lubrication intervals
Very good adhesion
Does not drip or melt
Resistant to hot and cold water, water vapours, lactic acid, formic acid, acetic acid or fruit acid, as well as aqueous-alkaline and acidic disinfectants or cleaning agents
Contains PTFE

Table 9-6 Berulub Lubricant Properties

	Characteristics
Base oil	Ester
Thickener	Polytetrafluoroethylene (PTFE)
NLGI grade	3
Kinematic viscosity at 40 °C	5000.0 mm²/s
Kinematic viscosity at 100 °C	340.0 mm²/s
Operating temperature range	-15.5 °C to 150 °C
Colour / Appearance	White
Propellant	Dimethyl ether

Table 9-7 Characteristics

9.10 Specifications of Electrical Components

		E13H
Battery	Type	DC250-12 (12V250Ah)
	Capacity	250Ah@10hr rate to 1.80V per cell @25 °C
	Max. Discharge Current	2250A (5 sec)
	Normal Operating Temperature	25° C±5° C
	Recommended Maximum Charge Current	67.5A
Connection Voltage		12 V
Rolling Current Connection		380 V (3 x 32 A)
Socket Voltage		220 V
Light Switches		220 V
Fuses per Group		16 A
Electrical Components Hydraulics		24 V
Main Switch	Maximum Operating Voltage	48V, 32V DC & 12V DC single cycle: 48V DC
	Max. Continuous Current	5A-600 A
	Inrush Current (2 sec)	3,500 A
	Connection Bolt Size	3/8"-16 (accepts M10 connections)
	Moisture Ingress Protection	IP67/IP69K
	Ignition Protection	ISO 8846 & SAE J1171
Spirit Level Sensor	Moisture Ingress Protection	IP67, IP69K (with IP69K mating plug)
	Relative Humidity	0 - 95% (non-condensing, fully encapsulated housing)
	Power Supply Voltage	10 - 32 V dc
	Polarity Protection	Yes
	Power Consumption	50mA For CFM models (CANbus daisy-chained): max. internal T-junction current: 2.5A
	Operating Temperature	-40 .. +80 °C
Inductive Sensor	Operating Voltage	7...30V
	Output Type	NPN
	Output Polarity	DC
	Ambient Temperature	-40 .. +80 °C
	Mass	45 g
	Protection	IP68 / IP69K
Hydraulic Pump	Operating Voltage	16 - 32 V
	Overvoltage	36 V (1 hour) / 48 V (5 min.)
	Reverse Operating Voltage	-16 V (1 hour) / -32 V (10 hours)

Table 9-8 Specifications of Electrical Components



The specifications listed in the table above are a selection from the full specifications of the manufacturer. Expandable B.V. always recommends consulting the supplied documentation from the manufacturer of the electrical components, as it is authoritative.

9.11 Pictograms

The following pictograms are used in this manual:

Description		Description		Description	
	Important notice!		Maximum number of persons/maximum load		Delivery information.
	Danger of entrapment!		Read this information before you start!		Parts information.
	Error		Risk of damage to the system!		Information regarding daily use!
	Wear safety shoes		Wear head protection		Conditions set by Expandable B.V..
	Wear work gloves		Wear safety clothing		Surface treatment
	Wear hearing protection		Wear safety glasses		Good
	Inflate bellows		Deflate bellows		

Table 9-9 Pictograms

any questions?
contact us

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EXPANDABLE
movable spaces

Part no.: 162018 EN (UK)-0
Release: 11/2024

www.expandable-trailers.com