

**create
space**
and never
forget



EXPANDABLE
movable spaces

User manual
TOUCHDOWN
53FT

Table of contents

1. Description	2
1.1 Expandable Touchdown Semi Trailer	3
2. Control panel	7
2.1 Control panel location and operation	8
3. Preparation for Use	10
3.1 Preparation for Use	11
4. Commissioning	18
4.1 Operation of Electrically Operated Sliding Doors	19
4.1.1 Button functions for sliding doors with "Assa Abloy" control.	20
4.2 Power Disconnect	22
5. Preparation for Transport	24
5.1 Preparing for Transport	25
6. Emergency Operation	32
6.1 Accessibility "Touchdown" in Case of Malfunction	33
7. Periodic Maintenance	34
7.1 Maintenance Schedule	35
7.2 Oil level check	36
7.2.1 Oil refill	39
7.3 Control ball valve emergency operation	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 Site Conditions	47
9.4 Access to the Technical Room	49
9.5 Checking battery voltage and recharging	51
9.6 Stickers	52
9.6.1 Type Sticker and ALR Plate	55
9.7 Trailer Specifications	57

9.8 Oil Specifications

9.8.1 Oil Properties

9.9 Lubricant Properties and Specifications

9.10 Electrical Component Specifications

9.11 Pictograms

58

58

59

60

62

Preface

 This manual is intended for drivers and/or other users of the Expandable Touchdown Semi Trailer and contains the necessary information about 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/na.

Proper use:

A Expandable Touchdown Semi Trailer is designed to be used as-is without modifications. Modifications of any kind can affect the safety of the system. Warranty on products from Expandable LLC will void if these products are modified. If the Expandable Touchdown Semi Trailer is not used according to the instructions provided by Expandable LLC, all warranty claims against Expandable LLC or suppliers of the Expandable Touchdown Semi Trailer will be declared invalid.

Before the system is put into operation, it must be established that the trailer complies with national road traffic legislation. The system may only be operated 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 purpose. The shown images may differ slightly from the delivered system.

		<i>All safety information is described in the relevant chapter (see "Safety & Environment" on page 1). In the remaining chapters, safety risks are symbolized using pictograms.</i>
--	--	---

Contact information

Expandable LLC
7021 Augusta road
Piedmont
(864)-400-5095
www.expandable-trailers.com
info@expandable-usa.com

Validity and copyright:

No part of this document may be reproduced and/or published by printing, photocopying, microfilm, or any other means without written permission from Expandable LLC. The images and specifications have been compiled with great care, but we cannot accept any liability for any deviations. Expandable LLC reserves the right to make technical changes to parts without prior notice. For information on this subject, please contact Expandable LLC.

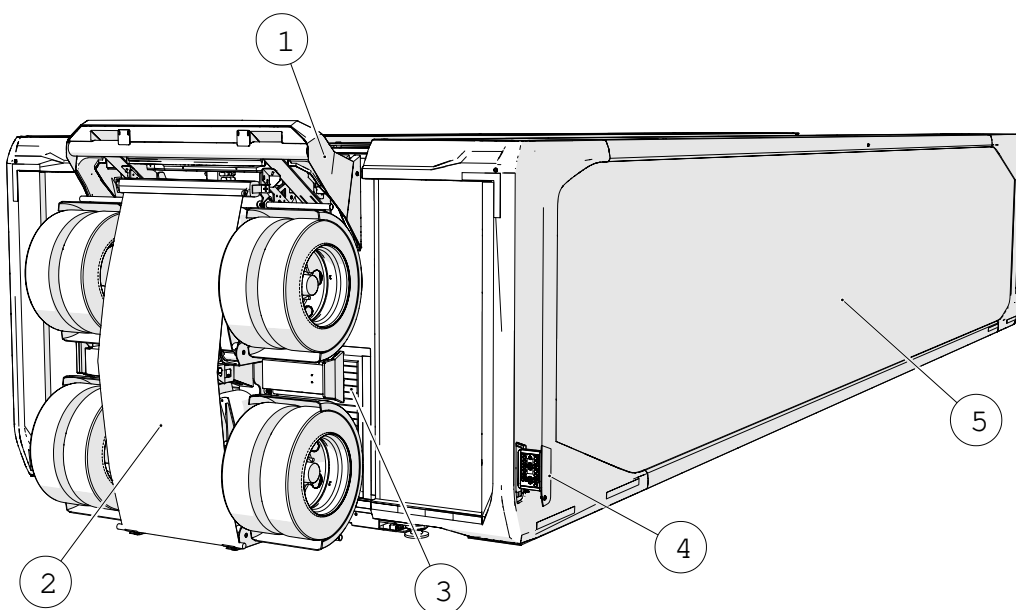
© Copyright Expandable LLC, Piedmont, United States of America
Date of issue: 8/29/2024 Original version: 1.0

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 Expandable Touchdown Semi Trailer

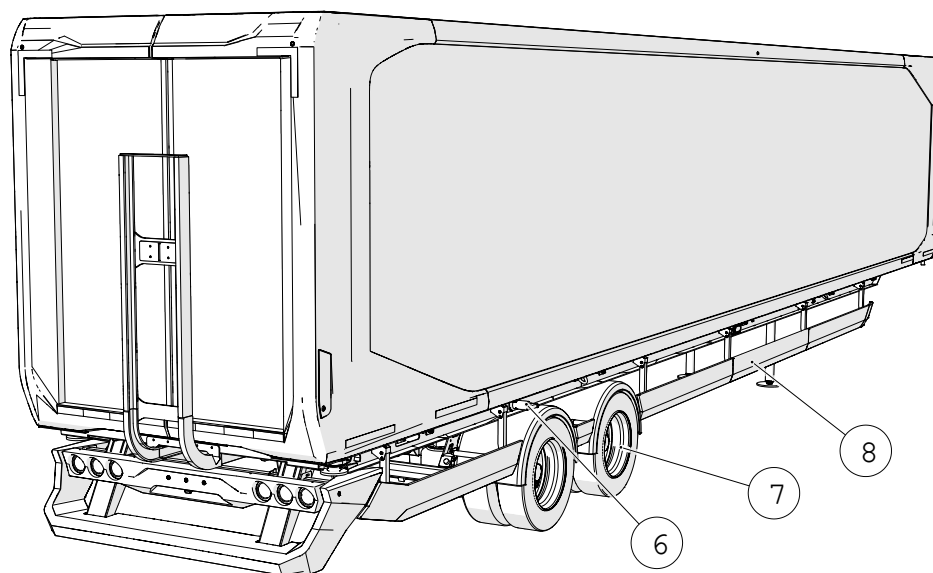
Main Components



E16HU_48

Fig. 1-1

1	Bumper	4	Control panel
2	Tarp	5	Slide-out (extendable and retractable)
3	Ventilation grille technical room		



E16HU_49

Fig. 1-2

6	Tandem set release mechanism	8	Underrun protection
7	Tandem set		

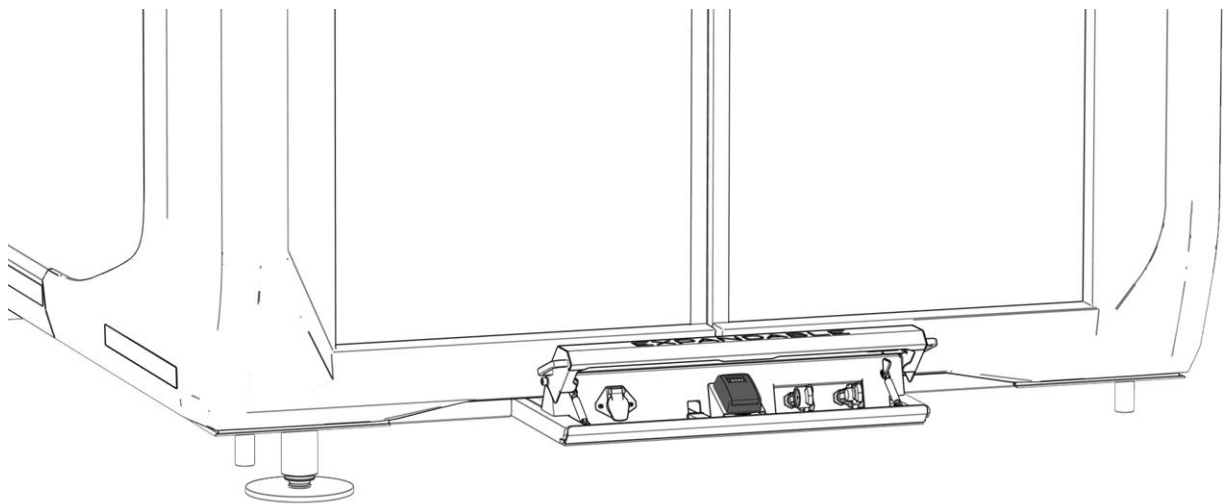
Usage

During normal use of the Expandable Touchdown Semi Trailer, power is supplied via a shore power connection. The available extension cable for this is located in the technical room (See "Technical room below") and can be accessed from inside the "Touchdown" via a door. The extension cable can be routed through the floor section on the left rear side and then connected to shore power.

Depending on the chosen configuration, the Expandable Touchdown Semi Trailer is equipped with lashing eyes to secure the cargo on board. The number of built-in wall sockets and floor sockets also depends on the chosen configuration. The optional RGB LED lighting can be set to the desired color display using a rotary knob.

Key safe

The Expandable Touchdown Semi Trailer is equipped with a key safe. It is located under the flap at the front of the semi trailer (see "Fig. 1-3"). The key safe is secured with an adjustable code. The key safe stores the keys to the access doors so that the keys can be kept near the trailer at all times.



E16HU_50

Fig. 1-3 Flap front side

Technical room

The technical room is located in the interior of the Expandable Touchdown Semi Trailer and contains the control system for the hydraulics and the condenser of the air conditioning system. The technical room is accessed through a door on the inside of the Expandable Touchdown Semi Trailer or by removing the grilles on the outside at the rear of the Expandable Touchdown Semi Trailer (see "Fig. 1-4"). An allen key is used to remove the grilles

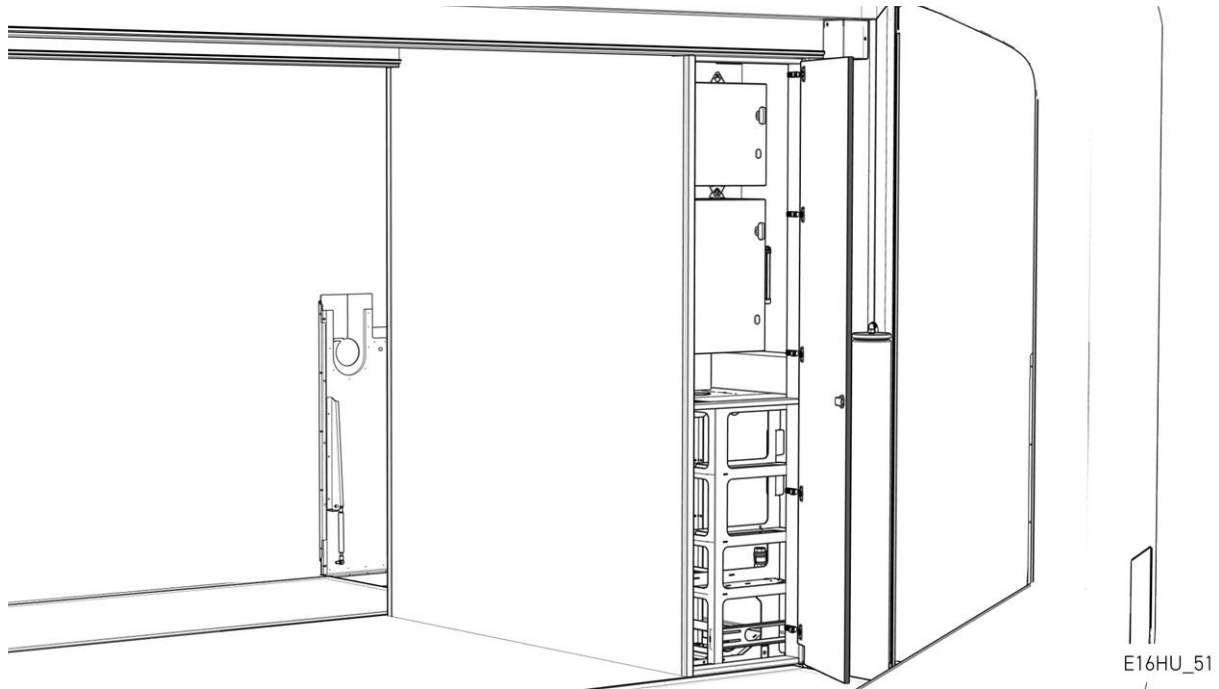


Fig. 1-4 Technical room

Patented tandem set

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

Low Entry

After the Expandable Touchdown Semi Trailer is disconnected from the tractor, the "Touchdown" is lifted off the ground using 4 lift cylinders. Once the tandem set is moved to the rear of the "Touchdown", the "Touchdown" lowers to the ground. The "Touchdown" can be automatically leveled. Also on sloping terrain, provided the terrain conditions set by Expandable LLC are met.

The "Touchdown" can be moved from transport position to operational position and vice versa using intuitively designed control panels. The control panels are located on the left and right rear outside the "Touchdown," providing an overview when the slide outs are extended. The control panels can be easily slid out after the locks of the slides, on which the control panels are mounted, are unlocked with a key.



Only one control panel can be operated at a time, preventing unwanted movements.

Options and Accessibility

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

The mechanical sliding doors offer a passage of approximately 236" and can be mechanically locked for transport. The electrically operated sliding doors, applicable to both the front and long sides, offer a passage of up to approximately 79".

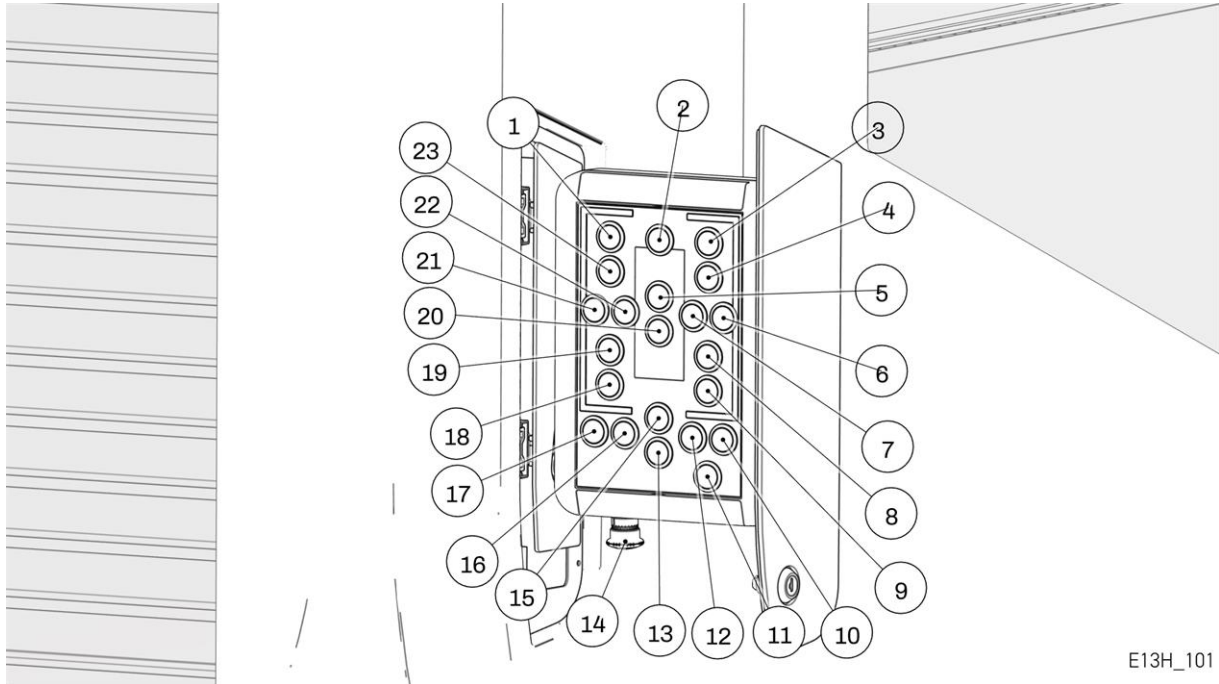
The Expandable Touchdown Semi Trailer has a backup mechanism in the event of malfunction. Located on the right side near the rear of the unit is a mechanical hand pump (See "Emergency Operation on page 32") that can be used to operate the unit. The handle is stored under the flap at the front of the Expandable Touchdown Semi Trailer.

2. Control panel

This chapter describes the control panel and button functions.

2.1 Control panel location and operation

The Expandable Touchdown Semi Trailer is equipped with two control panels. These are located at the left and right rear. Once one of the control panels is operated, operation of the other panel is not possible. This prevents unwanted movements by two people operating both panels simultaneously. The control panels can be slid out from the left and right rear moldings after the cover flaps are unlocked with the key. Always first check that the emergency stops are pulled out before starting the panels.



E13H_101

Button		
1	Piston front left in	"Touchdown" front left down
2	Automatic leveling	
3	Piston front right in	"Touchdown" front right down
4	Piston front right out	"Touchdown" front right up
5	All pistons in	"Touchdown" down
6	Piston right slide out out	Right slide out out
7	Piston right slide in	Right slide out in
8	Piston rear right in	"Touchdown" rear right down
9	Piston rear right out	"Touchdown" rear right up
10	Auxiliary cylinder rear right out	Lift cylinder rear right out
11	On / Off	
12	Auxiliary cylinder rear right in	Lift cylinder rear right in
13	Piston tandem set out	Tandem set moves to the rear of the "Touchdown"

Button		
14	Emergency stop	
15	Piston tandem set in	Tandem set moves to the transport position
16	Auxiliary cylinder rear left in	Lift cylinder rear left in
17	Auxiliary cylinder rear left out	Lift cylinder rear left out
18	Piston rear left out	"Touchdown" rear left up
19	Piston rear left in	"Touchdown" rear left down
20	All pistons out	"Touchdown" up
21	Piston left slide out out	Left slide out out
22	Piston left slide out in	Left slide out in
23	Piston front left out	"Touchdown" front left up

Table 2-1 Control Panel Buttons

Once the Expandable Touchdown Semi Trailer is in the deployed, or travel position, both control panels must be slid in and the cover flaps must be locked.



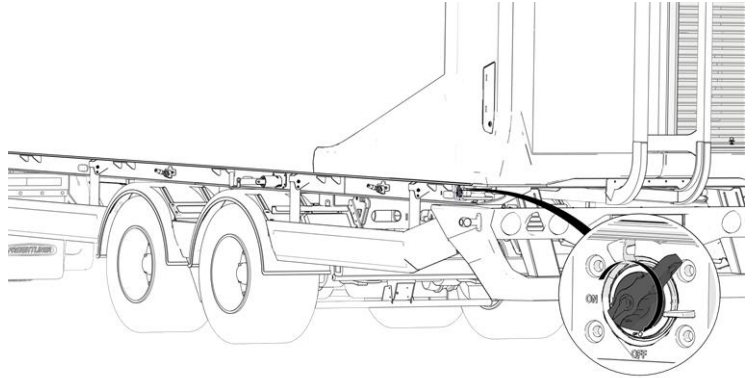
3. Preparation for Use

In this chapter, you will find information about disconnecting and preparing the Expandable Touchdown Semi Trailer for use.

3.1 Preparation for Use

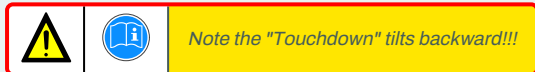
Follow the procedure below.

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

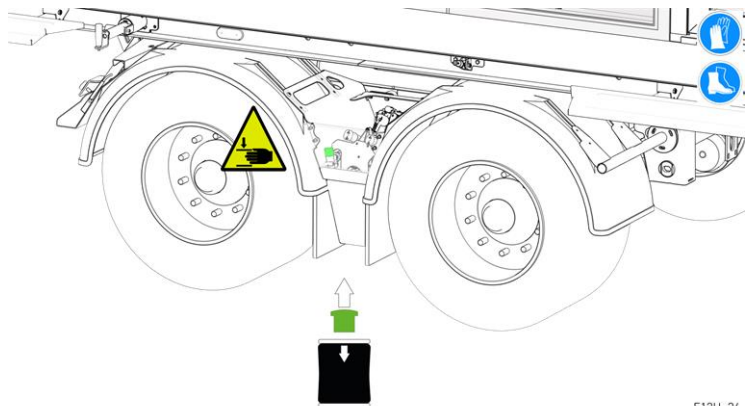


E13H_31

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



Note the "Touchdown" tilts backward!!!



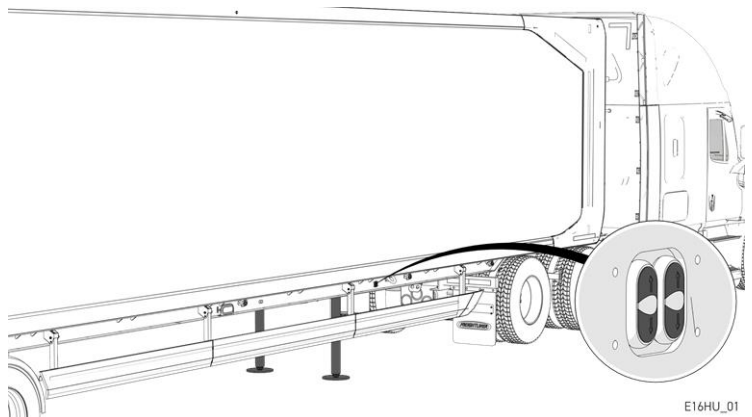
E13H_34

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



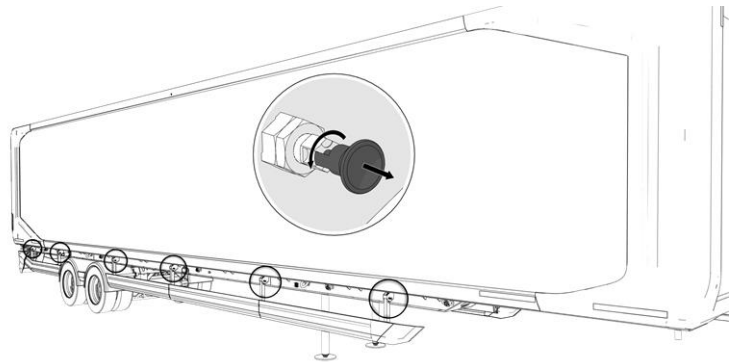
E16HU_23

4. Press one or both down buttons to extend the landing gear legs as needed to properly support the Expandable Touchdown Trailer. Once the trailer is fully supported by the landing gear legs you may remove the Semi Tractor from the trailer.



E16HU_01

5. Unlock the side underrun protection as shown on both sides.



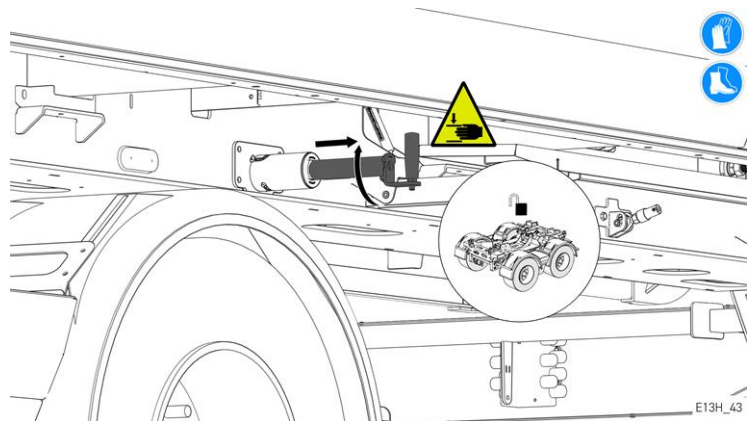
E16HU_02

6. Tilt the side underrun protection upward on both sides.



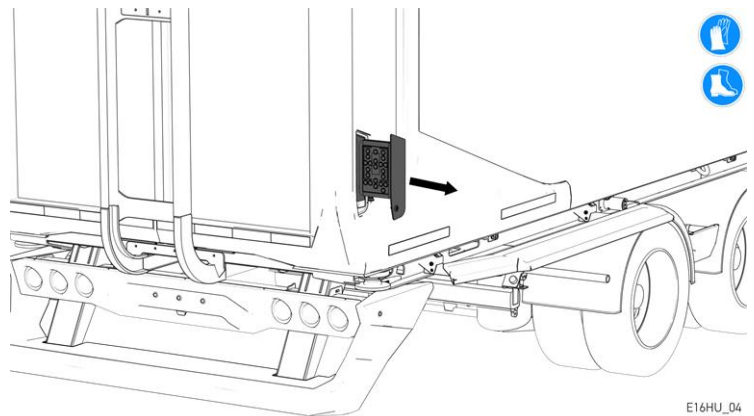
E16HU_02

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



E13H_43

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



E16HU_04

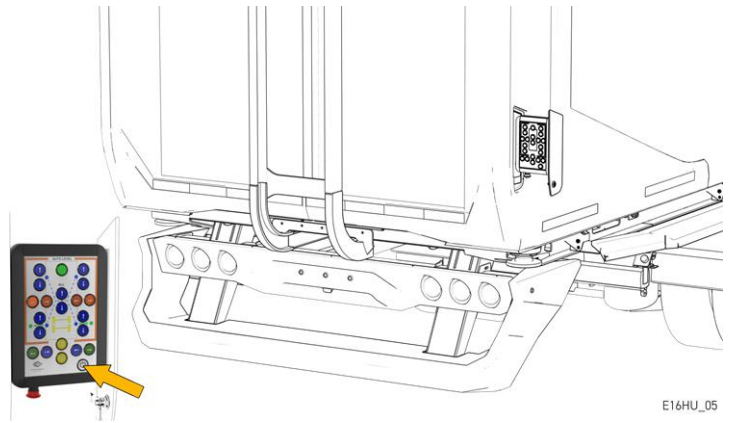
9. Press the on/off switch to start the control panel.



The control panels do not turn on at the same time, you must turn each one on separately.



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

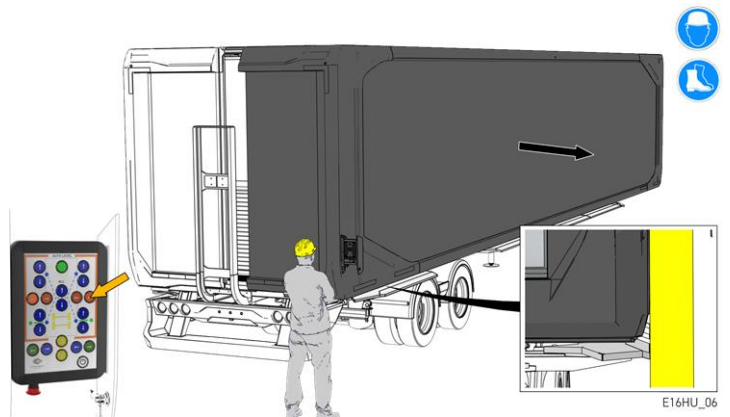


E16HU_05

10. Press the indicated button and begin moving the right slide out until the outer side is level with the side underrun protection.



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.

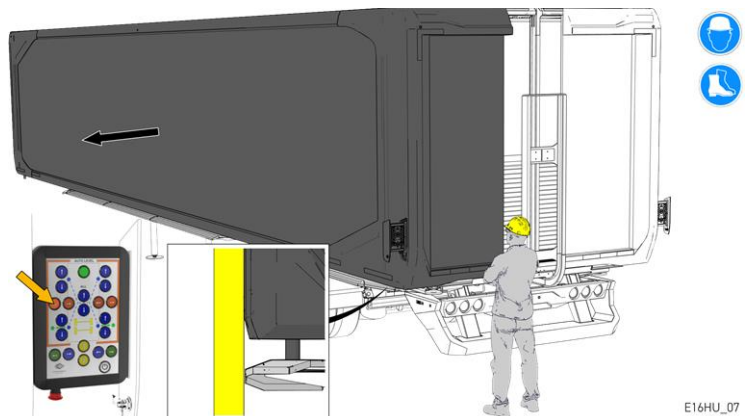


E16HU_06

11. Press the indicated button and begin moving the left slide out until the outer side is level with the side underrun protection.

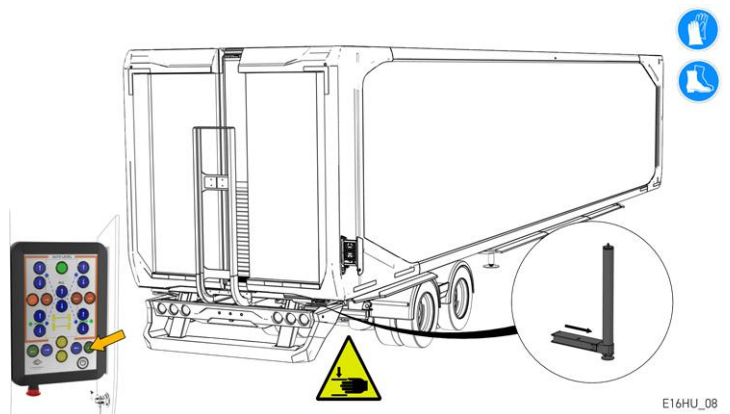


While the left slide out is moving pay close attention to the sound and movement. If the slide is moving unevenly, or there are any deformations in the slide out, or the hydraulic pump is binding, stop immediately and fix the cause of the problem.



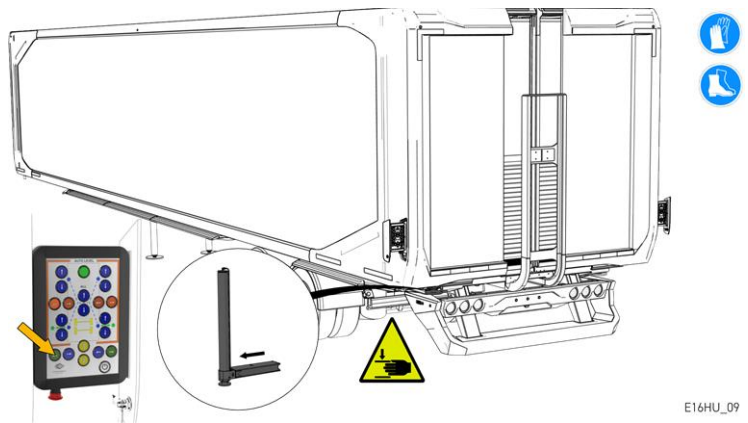
E16HU_07

12. Press the indicated button and push out the rear right lift cylinder unit completely.

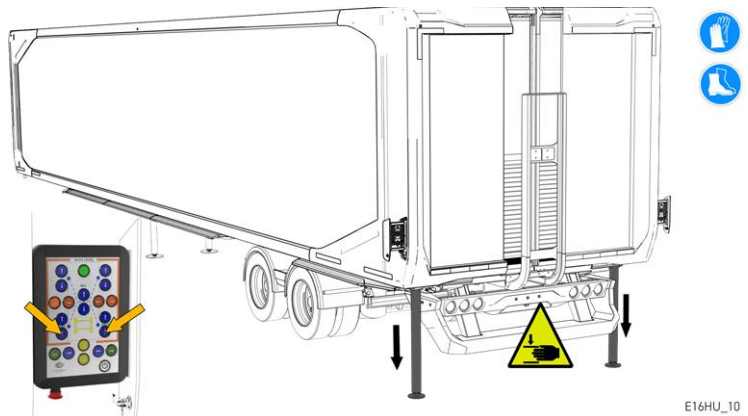


E16HU_08

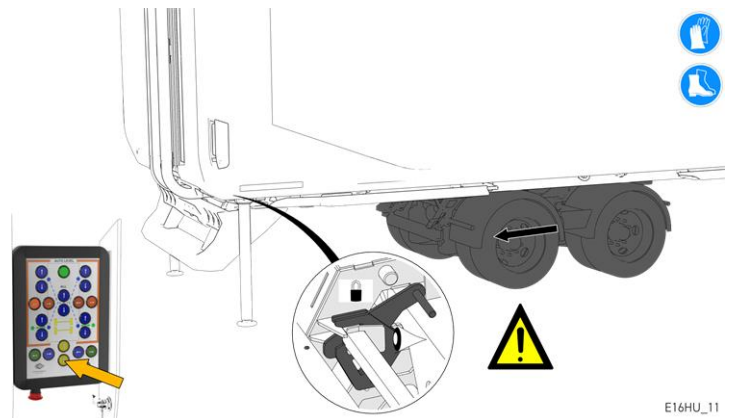
13. Press the indicated button and push out the rear left lift cylinder unit completely.



14. Press the indicated buttons to hang the wheels 2 inches off the ground.

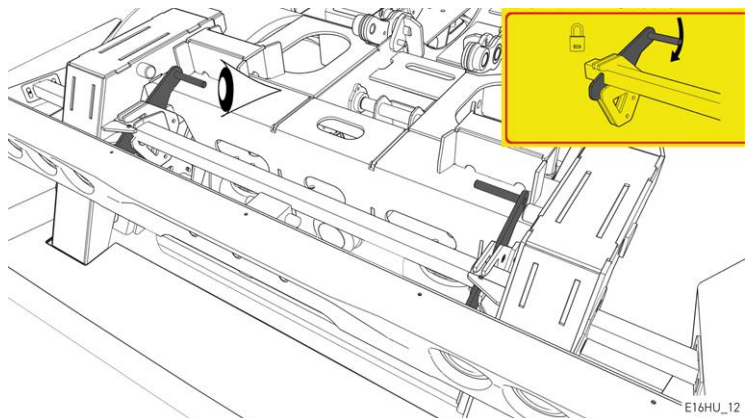


15. Press the indicated button to move the tandem set backwards to the locking point.



16. Visually check and make sure the bumper is locked on both sides to the tandem set.

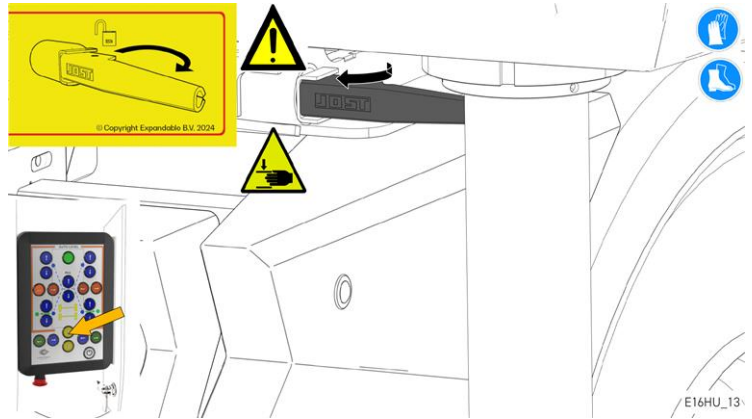
 **Manually push the handle down if necessary.**



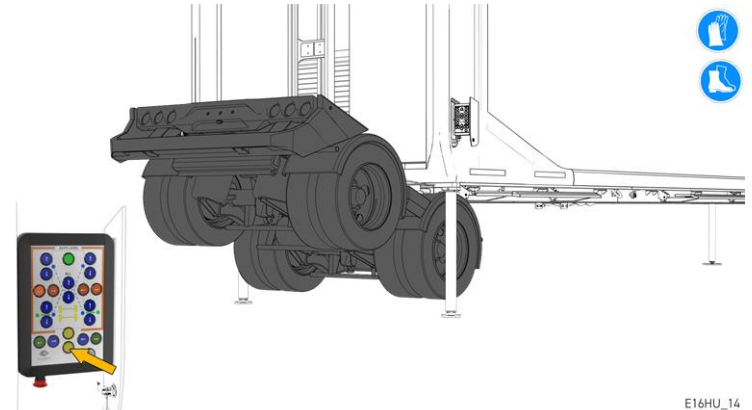
17. Unlock the bumper on both sides.



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 set stops automatically.



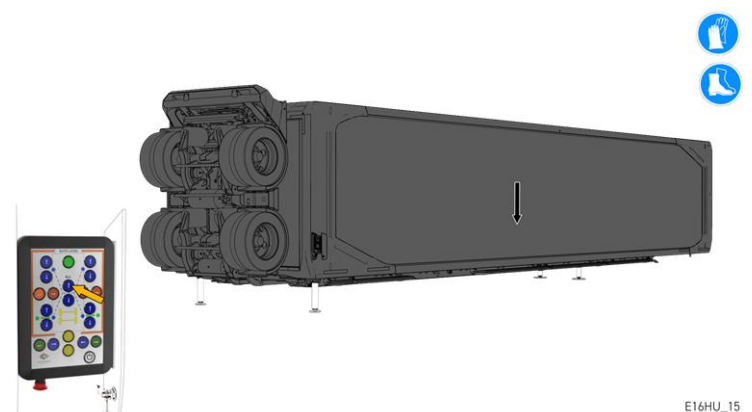
19. Press the indicated button until the "Touchdown" just touches the ground. Release the button immediately for easy leveling.



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



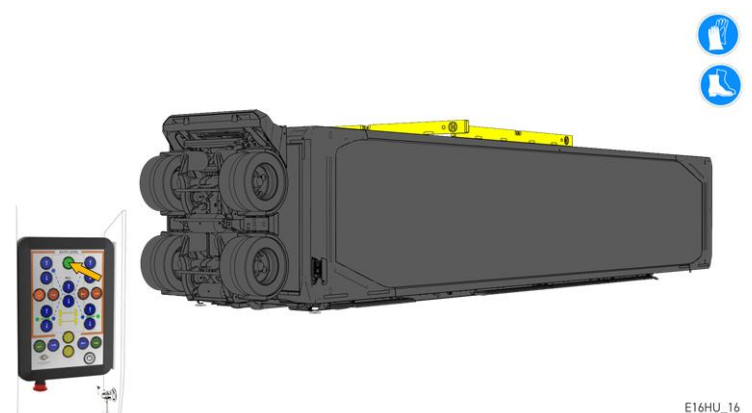
On sloping terrain, the "Touchdown" often first touches the terrain at one point (See "Site Conditions on page 47").



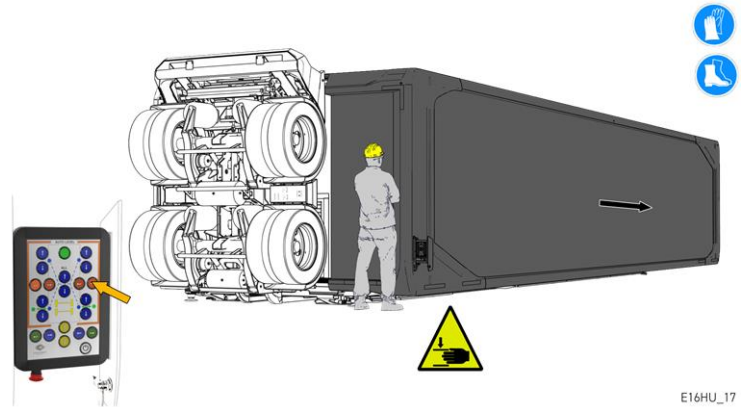
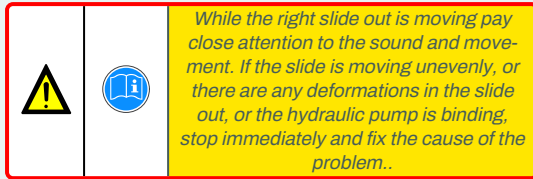
20. Press the indicated button ("AUTO LEVEL") so that the "Touchdown" levels itself in two directions.



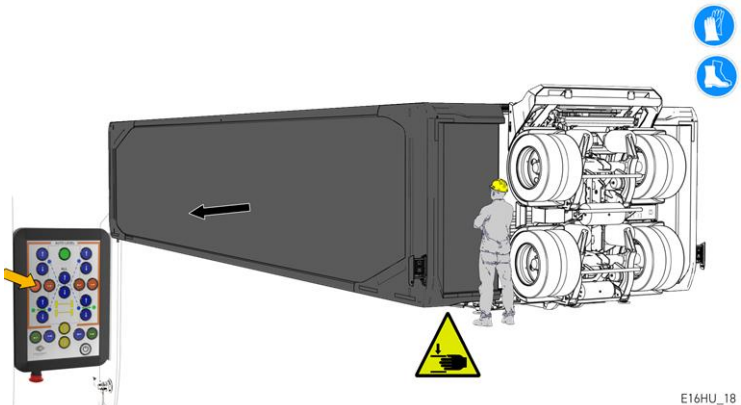
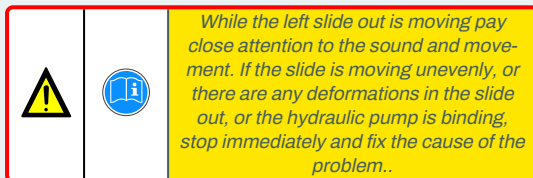
The 8 buttons for operating each piston rod of the lift cylinders light up for a few seconds when leveling is complete.



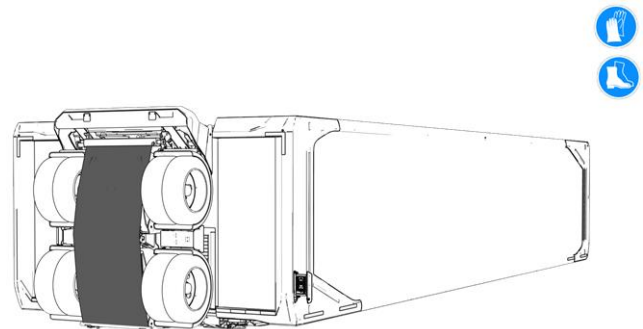
21. Press the indicated button to extend the right slide out.



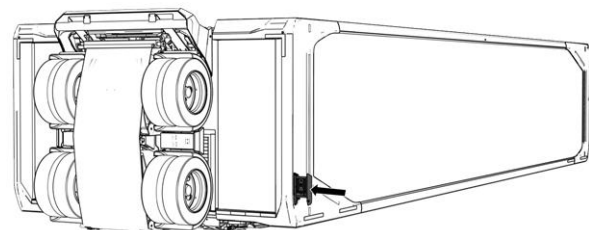
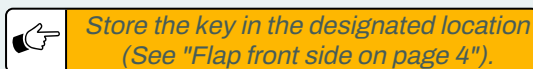
22. Press the indicated button to extend the left slide out.



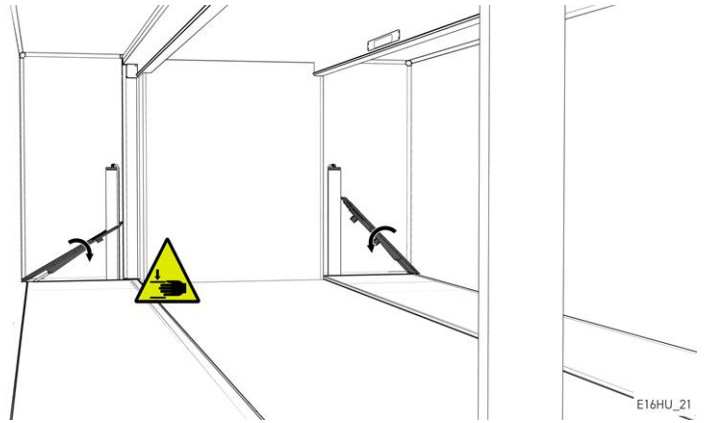
23. Unroll the tarp at the rear using the crank and hook the tarp at the bottom into the tandem set.



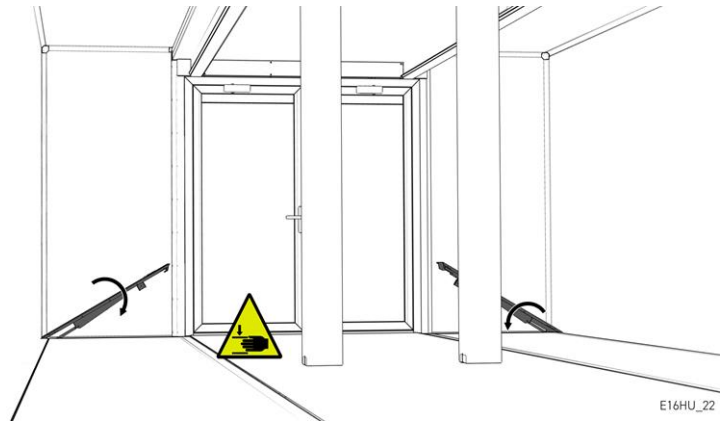
24. Slide the control panels in on both sides and then close the flaps with the key.



25. Tilt the two floor panels at the rear downwards.



26. Tilt the two floor panels at the front downwards.



4. Commissioning

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

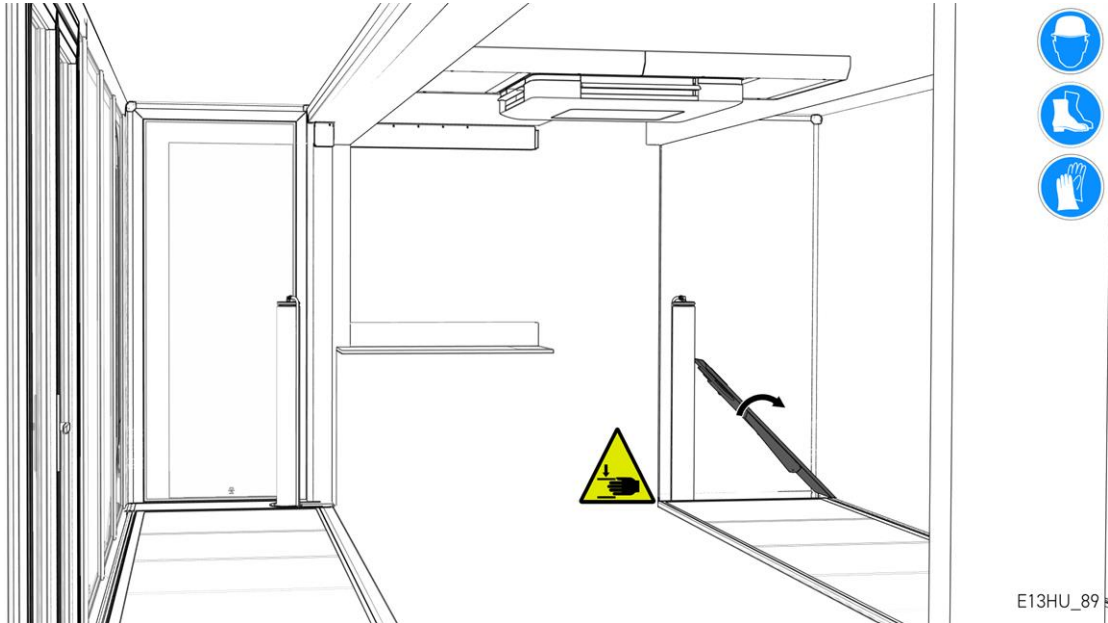
4.1 Operation of Electrically Operated Sliding Doors

Follow the procedure below to open the sliding doors.

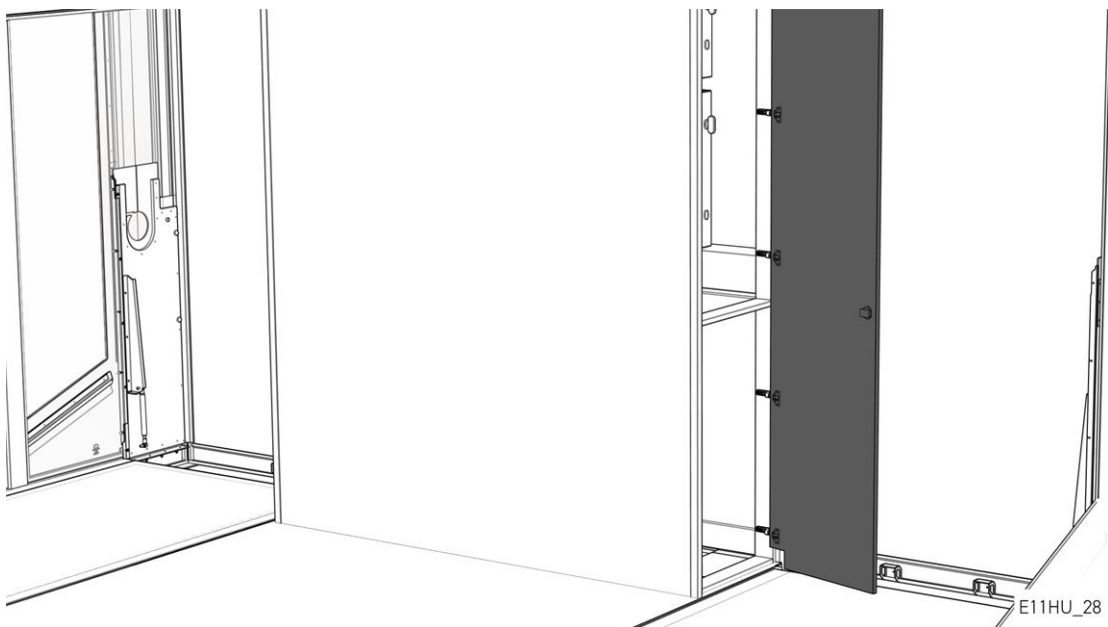
1. Open one of the doors at the rear or front.
2. ↴ Tilt the left rear floor panel upwards.



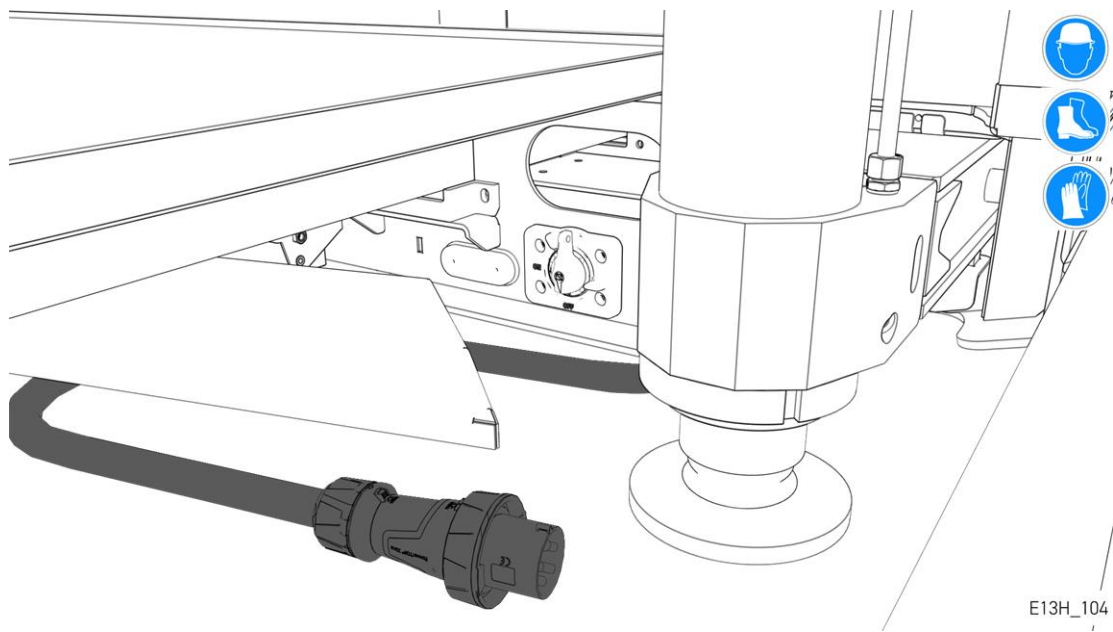
The following steps are only necessary if the power was turned off.



3. ↴ Open the door of the technical room on the inside of the Touchdown.



4. ↴ Lay the cable for shore power outside and connect it and close the door.



5. Tilt the left rear floor panel down.



Ensure that the floor panels are always tilted down during use to prevent accidents.

4.1.1 Button functions for sliding doors with "Assa Abloy" control.

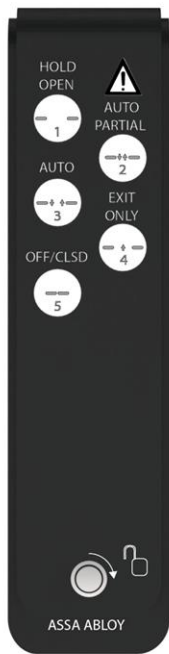


Fig. 4-1

Button functions "Assa Abloy"		
	OPEN	The door is permanently open. The door can be manually moved, for

Button functions "Assa Abloy"		
		example, to clean the windows. All impulse generators except the emergency button (if installed) are disabled.
	AUTO PARTIAL	Two-way traffic, AUTO PARTIAL possible. The door can be partially opened with the internal and external activation units and with a key switch (if installed). With an emergency button (if installed), the door can be fully opened.
	AUTO	Two-way traffic, normal operation of the door. The door can be fully opened with the internal and external activation units and with a key switch or emergency button (if installed).
	EXIT (ONE-WAY TRAFFIC)	One-way traffic from the inside. The door is normally locked if an electromechanical locking device is installed. The door can only be opened with the internal impulse generator or with a key switch or emergency button (if installed).
	OFF/CLOSED	The door is closed and locked (if an electromechanical lock is installed). In an escape route, the OFF mode can only be set if it is confirmed that everyone has left the building. The door cannot be opened with the internal and external activation units. The door can be partially opened with a key switch (if installed). With an emergency button (if installed), the door can be fully opened. If the program switch is in the OFF position, you can give a key impulse to partially open the door with the OFF button. Depending on the configuration, the OFF button works in 3 ways. OFF/CLOSED 1. No key impulse can be given. 2. A key impulse can always be given by holding the OFF button for 2 seconds. 3. A key impulse can be given by first unlocking the program switch and then holding the OFF button for 2 seconds.
	RESET	If you press the button in the opening at the bottom of the unit with a thin object, the door opener will reset and a system test will be performed. The door returns to the closed position (unless it is in the OPEN operating mode or if an error has occurred) and is now ready for normal operation. If the door opener is equipped with an escape route system, it performs a system test by opening the door on battery power (if the program switch is not in the OPEN or OFF position) after slowly closing the doors.

Table 4-1 Button functions Assa Abloy



Any information in the "Assa Abloy" user manual supersedes anything related in this manual.

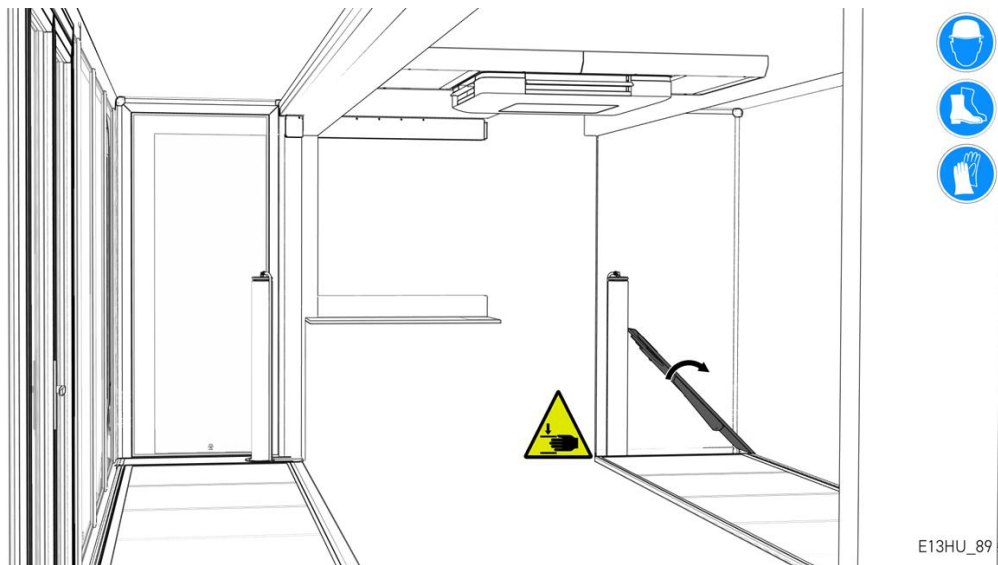
4.2 Power Disconnect

Expandable LLC recommends that users of the Expandable Touchdown Semi Trailer temporarily disconnect the power if it is left on site for an extended period. This applies exclusively to the Expandable Touchdown Semi Trailer. All hydraulic equipment can be turned off with the main switch. All other equipment is connected to shore power. If there are external devices connected to the Expandable Touchdown Semi Trailer, such as refrigerators or electronic equipment, it is up to the user to determine whether the power to these devices can be turned off.

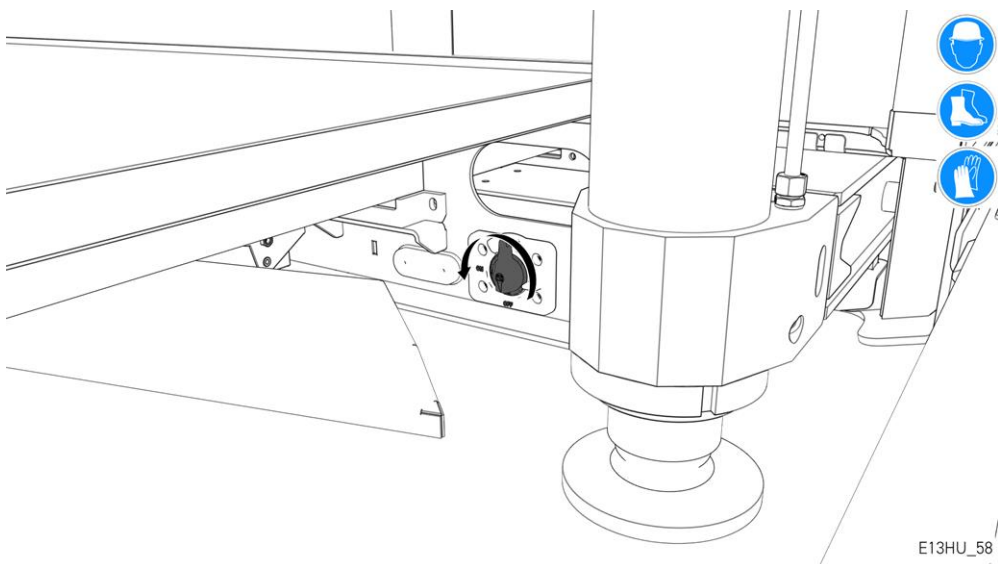
Procedure

Follow the procedure given below.

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



2. ⚠️ Turn the main switch to the "OFF" position to disconnect the power.



Optionally, 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.

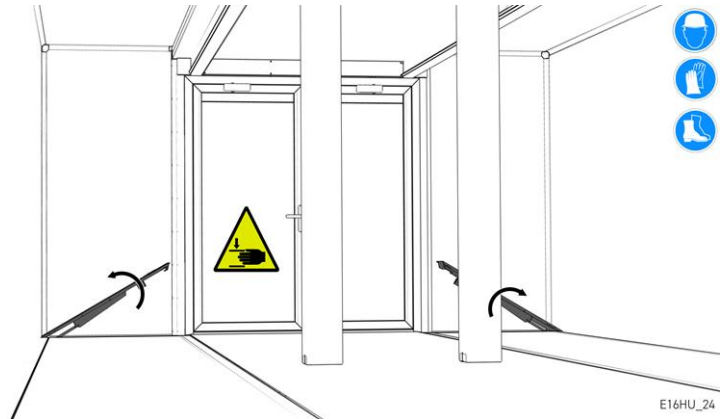
5.1 Preparing for Transport



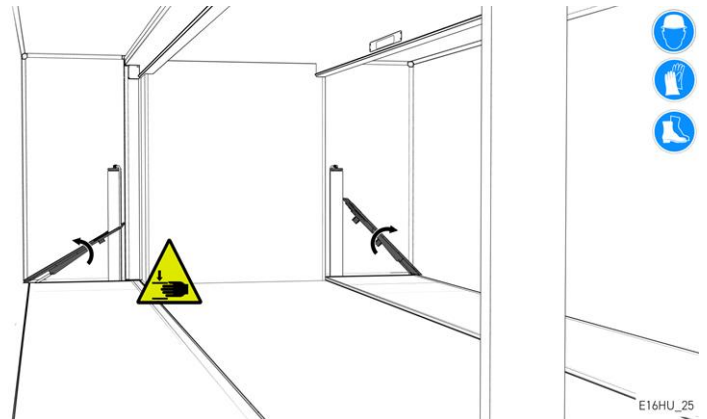
Any items located inside the Expandable Touchdown Semi Trailer must be moved away and off the moving sections of floor and securely tied down before transport or operating the Expandable Touchdown Semi Trailer.

Follow the procedure below.

1. Fold the front floor panels upwards.



2. Fold the rear floor panels upwards.



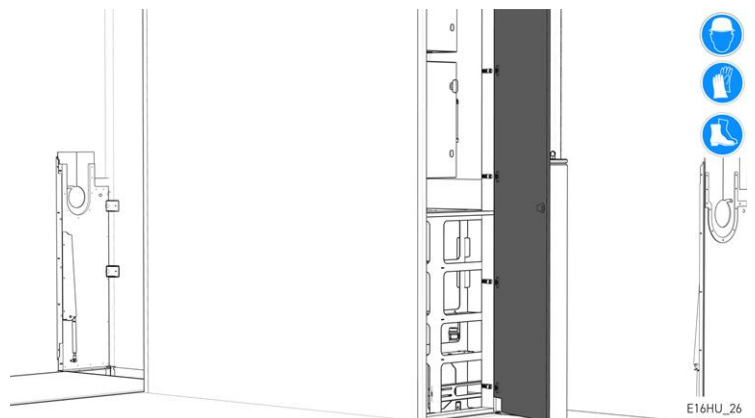
3. Disconnect the shore power and store the cable in the technical room through the inside access door.



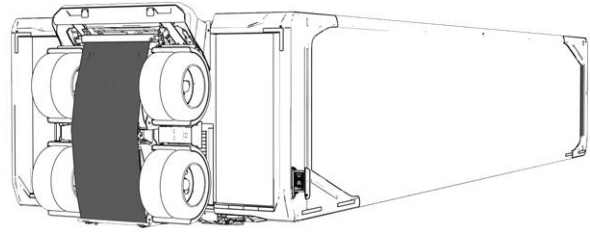
Close the door of the technical room!!!



Lock all entry doors and store the keys in the key safe .

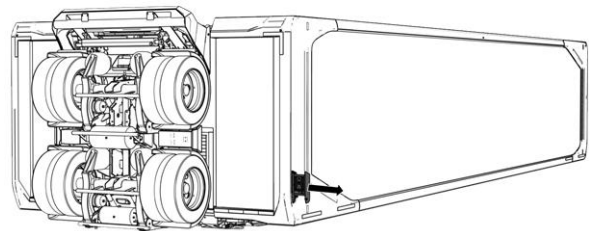


4. Roll up the rear tarp using the crank.



E16HU_19

5. Unlock the sled with the control panel on both sides with the key and pull them out.



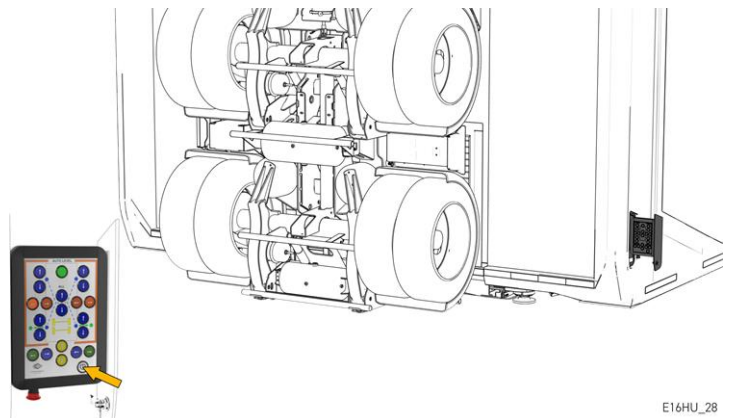
E16HU_27

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

 *The control panels do not turn on at the same time, you must turn each one on separately.*

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

 *The emergency stop is NOT an on/off switch.*

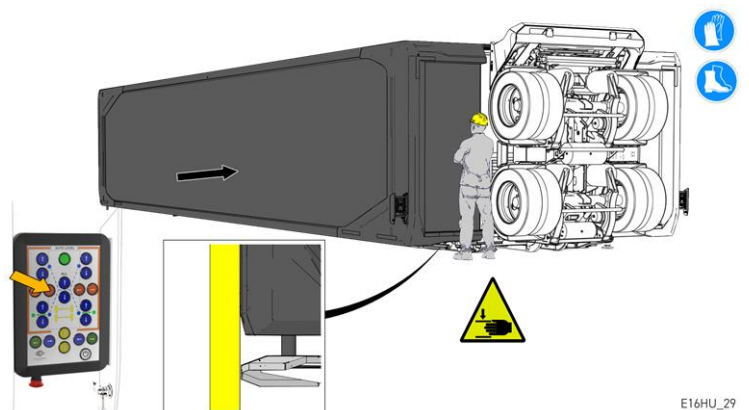


E16HU_28

7. Press the indicated button and slide the left slide out so that it is approximately level with the side underrun protection.

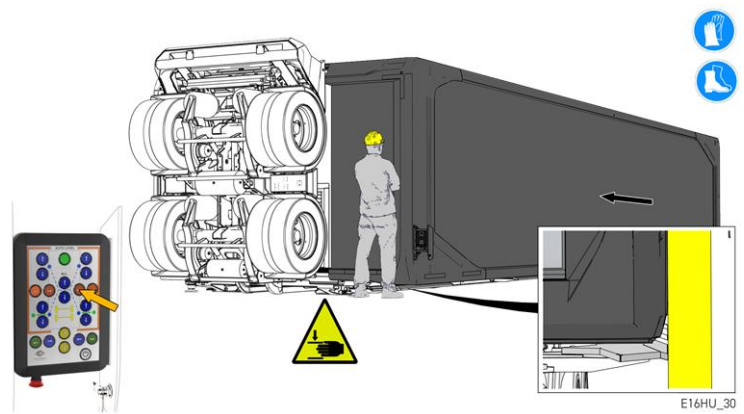
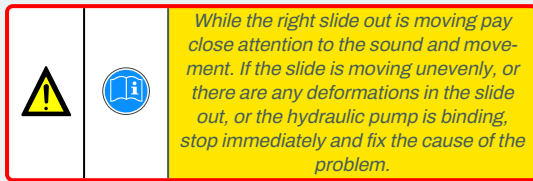
  *While the left slide out is moving pay close attention to the sound and movement. If the slide is moving unevenly, or there are any deformations in the slide out, or the hydraulic pump is binding, stop immediately and fix the cause of the problem.*

 *The emergency ball valve on the rear right must be closed.*

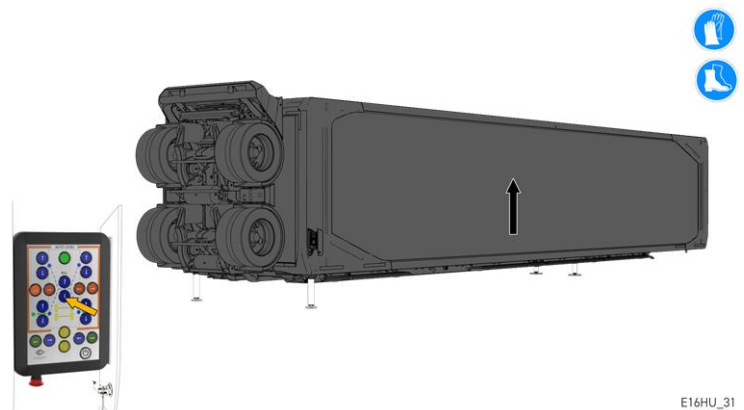


E16HU_29

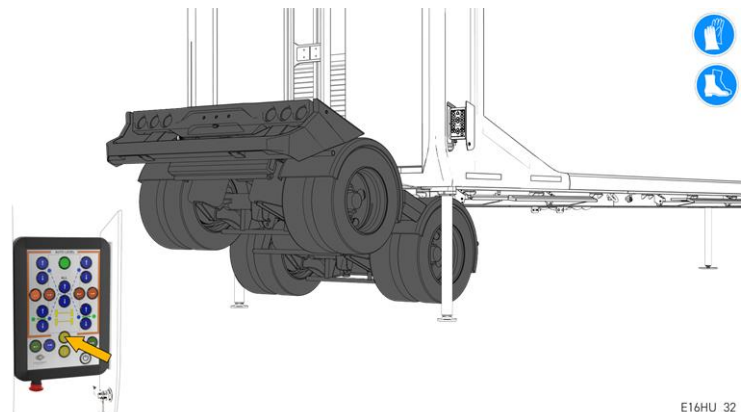
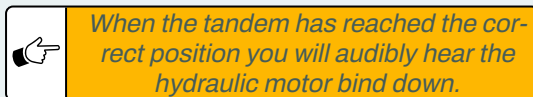
8. Press the indicated button and slide the right slide out so that it is approximately level with the side underrun protection.



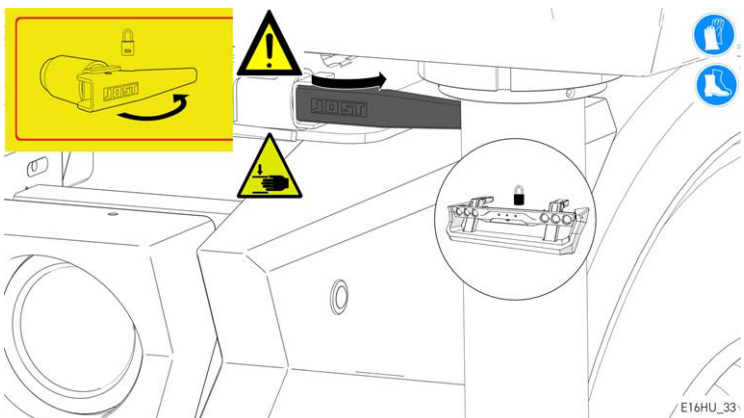
9. Press the indicated button and release it when the Expandable Touchdown Trailer has reached a suitable height for the wheels to fit under the Expandable Touchdown Semi Trailer.



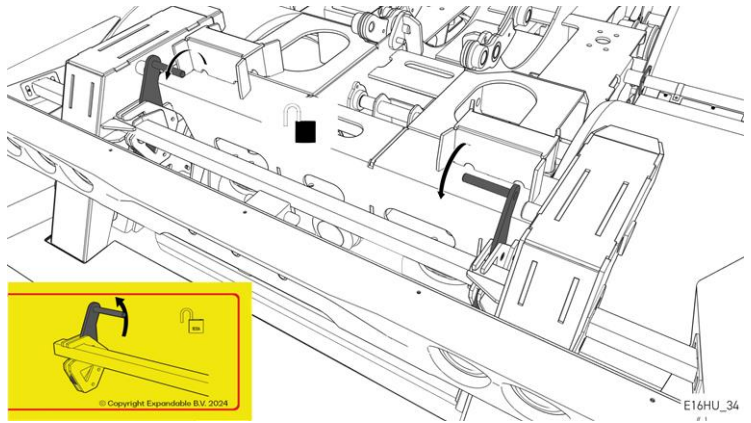
10. Press the indicated button until the tandem stops. Release the button binds down and the tandem stops moving.



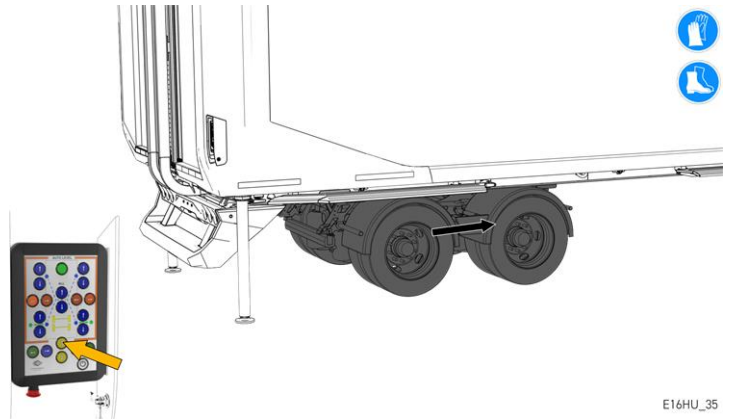
11. Lock the bumper on both sides.



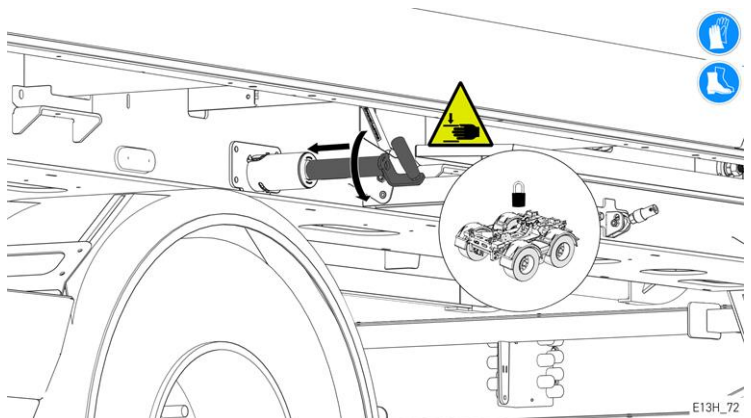
12. Unlock the tandem set on both sides of the tandem set.



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



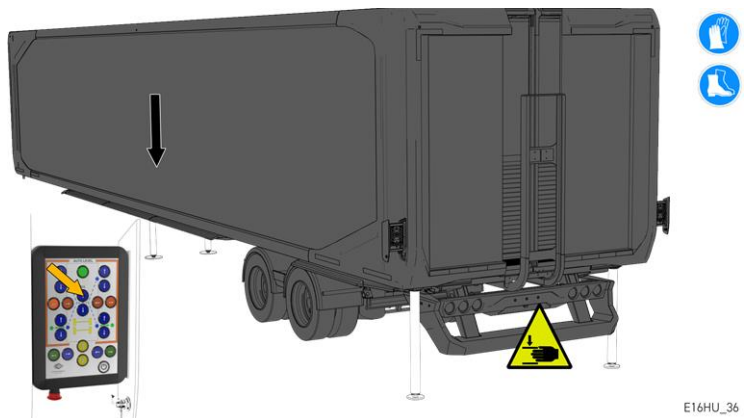
14. Lock the tandem set on both sides.



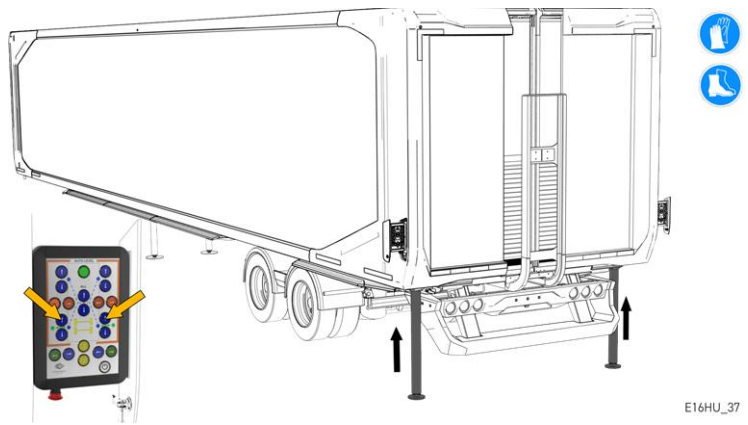
15. Press the indicated button and lower the container onto the wheels. Release the button immediately.



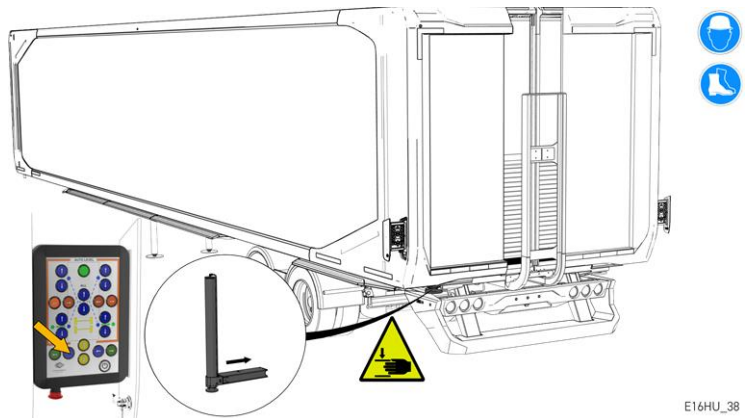
If you hold the button too long, the trailer will tip forward.



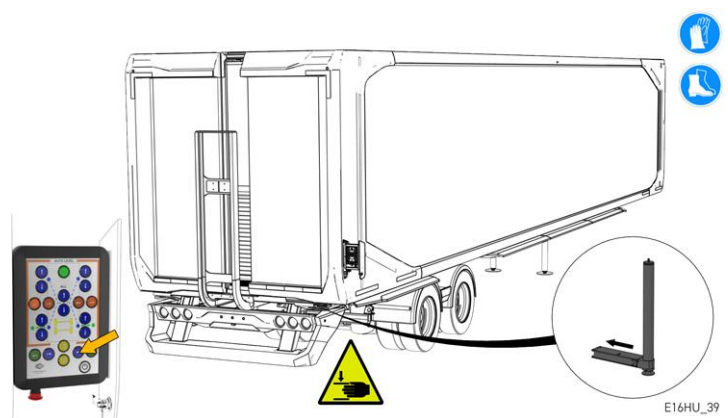
16. Press the indicated buttons to retract the piston rods of the rear lift cylinders.



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

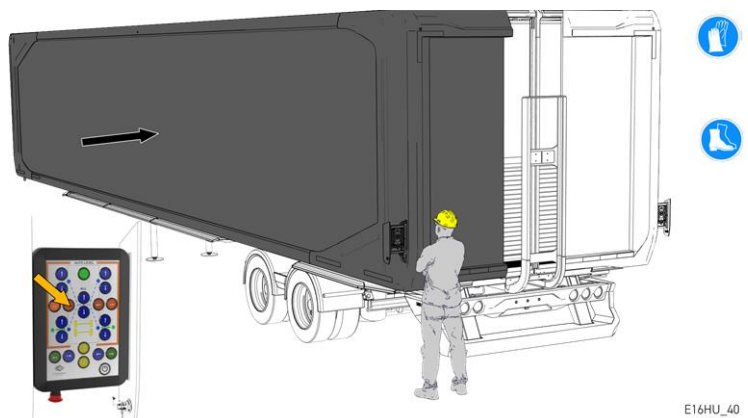


18. Press the indicated button to fully retract the right lift cylinder.

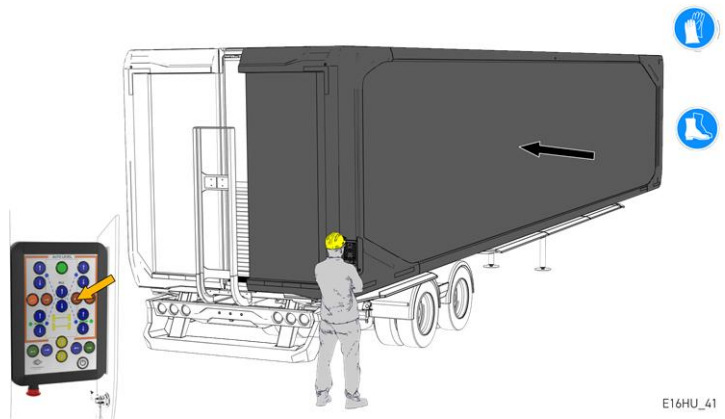
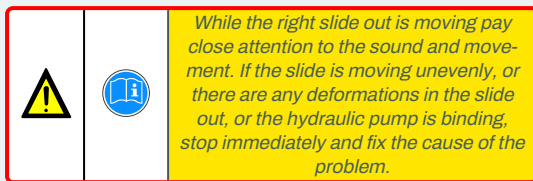


19. Press the indicated button to fully retract the left slide out.

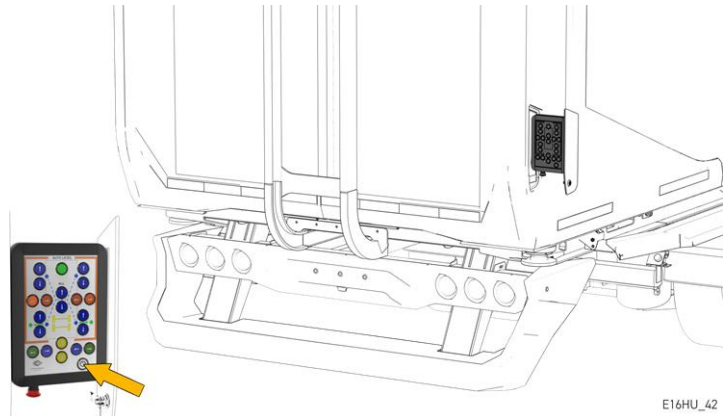
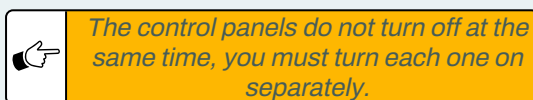
		While the left slide out is moving pay close attention to the sound and movement. If the slide is moving unevenly, or there are any deformations in the slide out, or the hydraulic pump is binding, stop immediately and fix the cause of the problem.
--	--	--



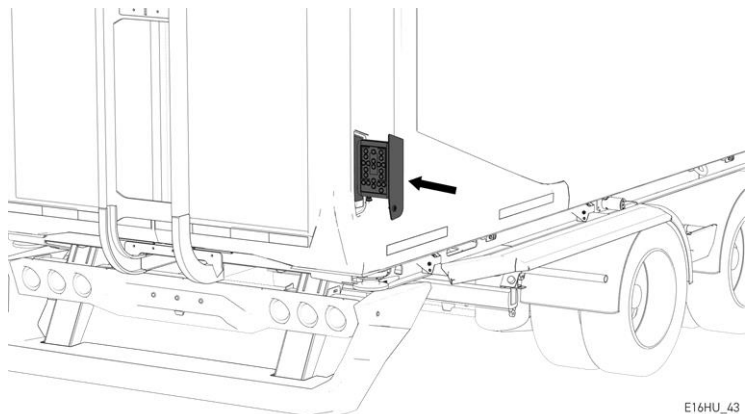
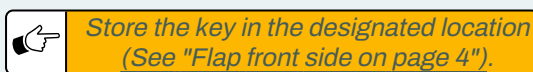
20. Press the indicated button to fully retract the right slide out.



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



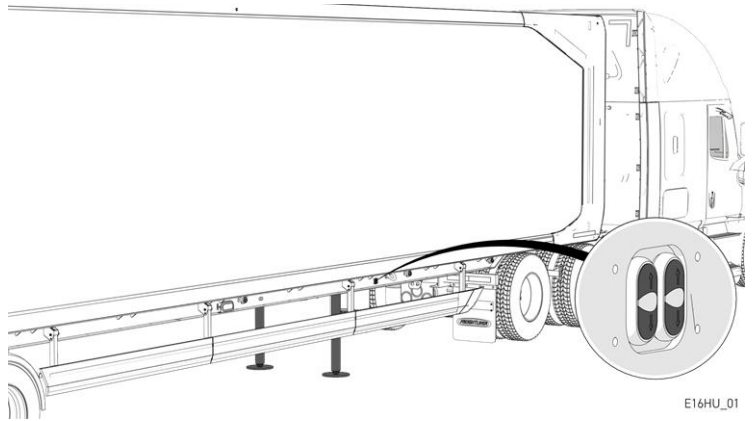
22. Push the control panel both left and right inward and lock the locks with the key.



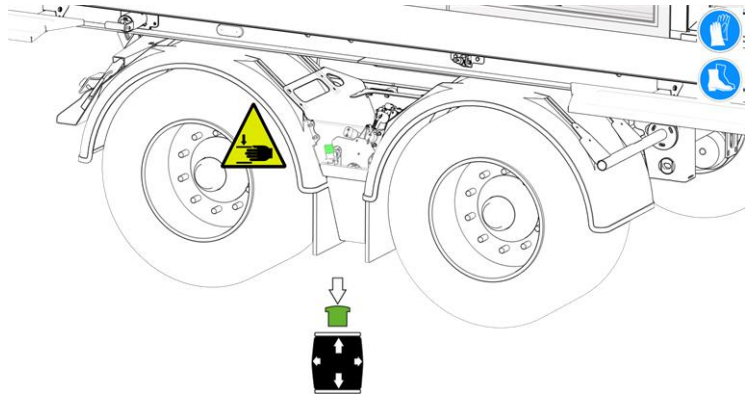
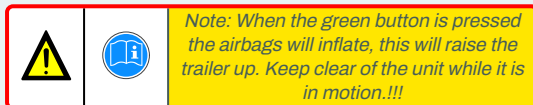
23. Fold the side underrun protection down on both the right and left sides.



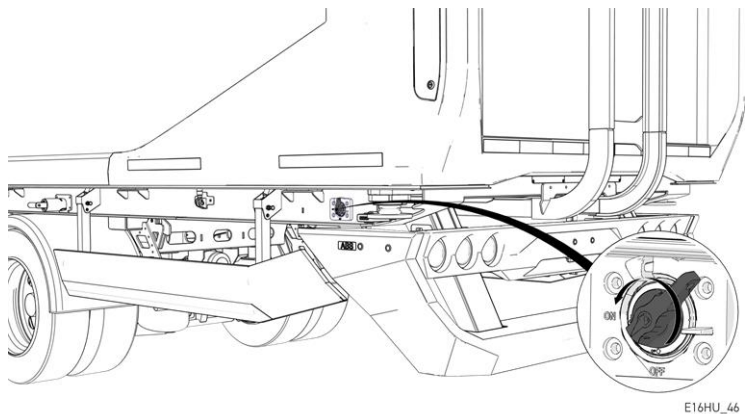
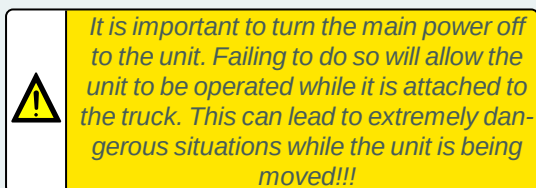
24. Couple the trailer to the tractor and fully raise the piston rods of the front lift cylinders using the push buttons.



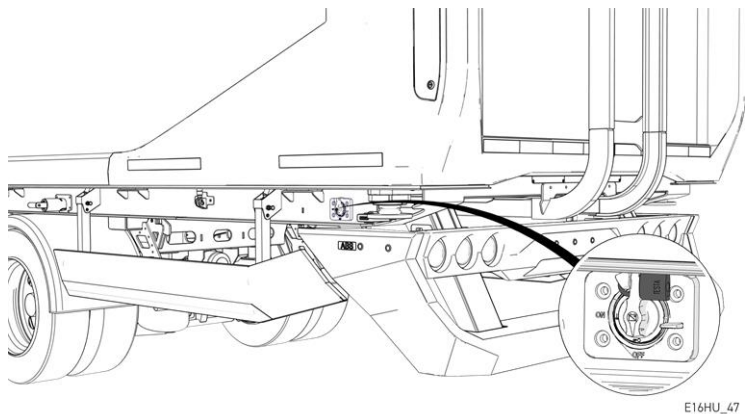
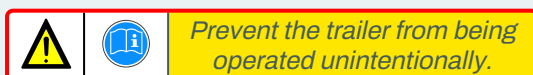
25. Press the green button down.



26. Turn the main switch to "OFF".



27. Lock the main switch with a padlock.

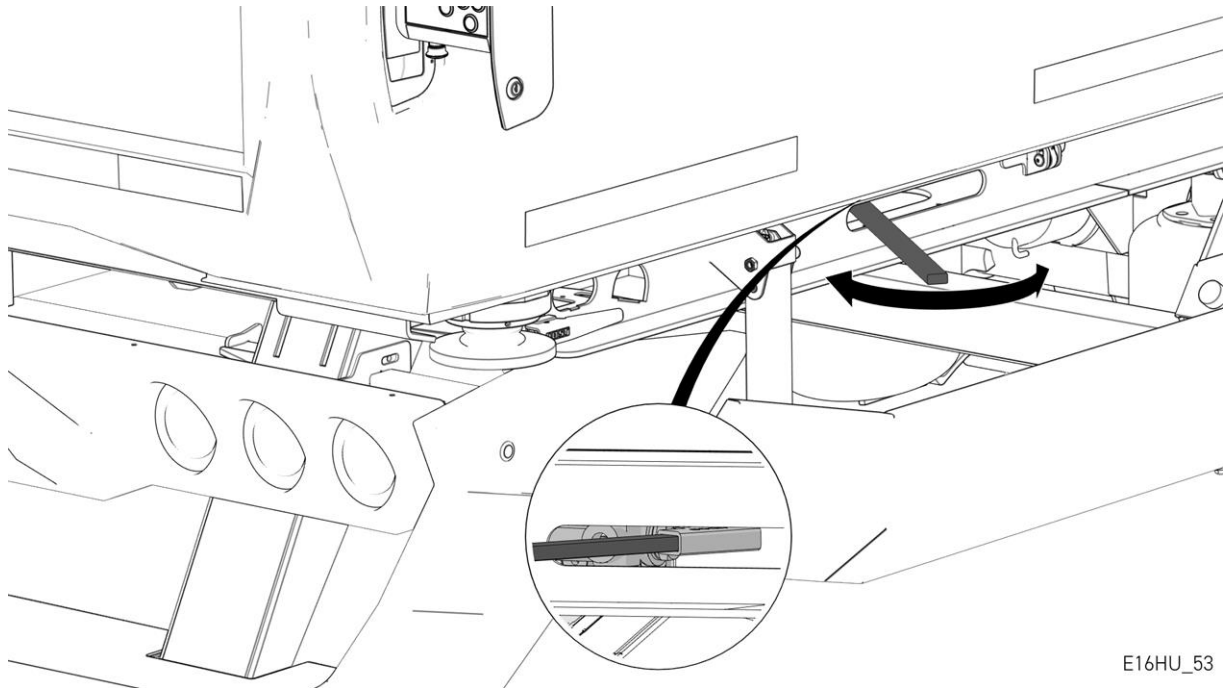


6. Emergency Operation

This chapter provides information on how to access the Expandable Touchdown Semi Trailer in case of a technical malfunction.

6.1 Accessibility "Touchdown" in Case of Malfunction

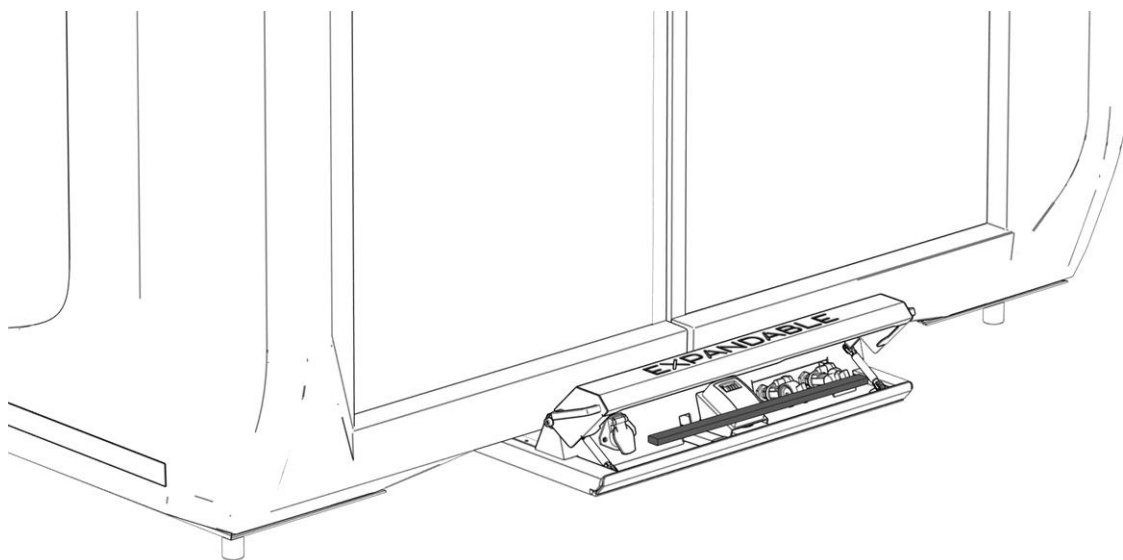
The Expandable Touchdown Semi Trailer can be used in most cases even in the event of a technical malfunction. To make this possible, the "Touchdown" is equipped with a hydraulic hand pump. The hand pump is located at the rear right under the chassis floor (see "Fig. 6-1").



E16HU_53

Fig. 6-1

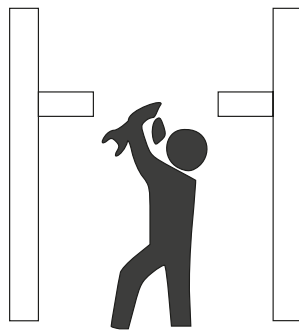
Using this hand pump, the left side slide out of the "Touchdown" can be moved outward, freeing one or more access doors (if present) and the grill.



E16HU_52

Fig. 6-2

The handle is located in the front end connection box (see "Fig. 6-2").



7. Periodic Maintenance

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

7.1 Maintenance Schedule

The table shown below lists the components that require periodic maintenance.

Expandable LLC advises to respect the maintenance intervals indicated in the table and to use only products with the specified specifications. Order your required products in time from Expandable LLC (864)-400-5095

Component	Interval	Product	Specifications	Performing party
Sliding beams slide out	Every 6 months	White Lithium Grease Spray	(See "Lubricant Properties and Specifications on page 59")	Service workshop
Hydraulic filter	Every 2 years	Donaldson P171602		Service workshop
Oil level	Weekly	AW-32 Hydraulic Fluid		Driver/operator (See "Oil level check on the next page")
Oil	Ever 2 years*	AW-32 Hydraulic Fluid	(See "Oil Specifications on page 58")	Service workshop
Tire pressure	Daily		827 KPA (120 PSI)	Driver/operator
Battery voltage	Weekly		24 V (total) (See "Electrical Component Specifications on page 60")	Driver/operator
Exterior lighting	Daily			Driver/operator
Emergency ball valve	Monthly			Driver/operator (See "Control ball valve emergency operation on page 41")

Table 7-1 Maintenance

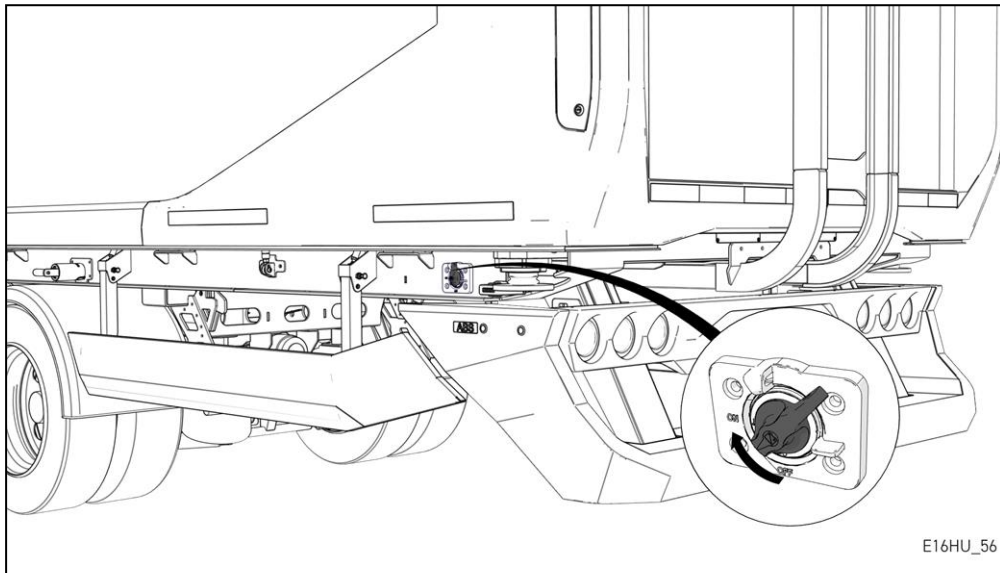
* 1 year after first date of use.

7.2 Oil level check

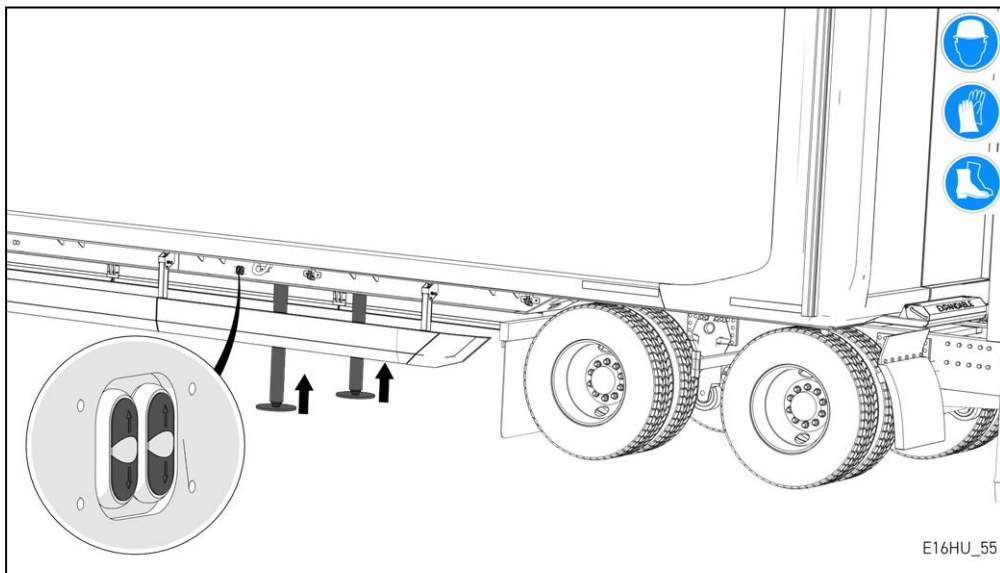
For the correct operation of the hydraulic system, it is essential that the oil level is always at the correct level. To properly check the oil level, the following conditions must be met;

- *Couple the Expandable Touchdown Semi Trailer to the tractor.*
- *Make sure the truck and trailer combination is level.*
- *Make sure all lift cylinders are retracted.*
- *Make sure the right slide out is retracted.*

Procedure



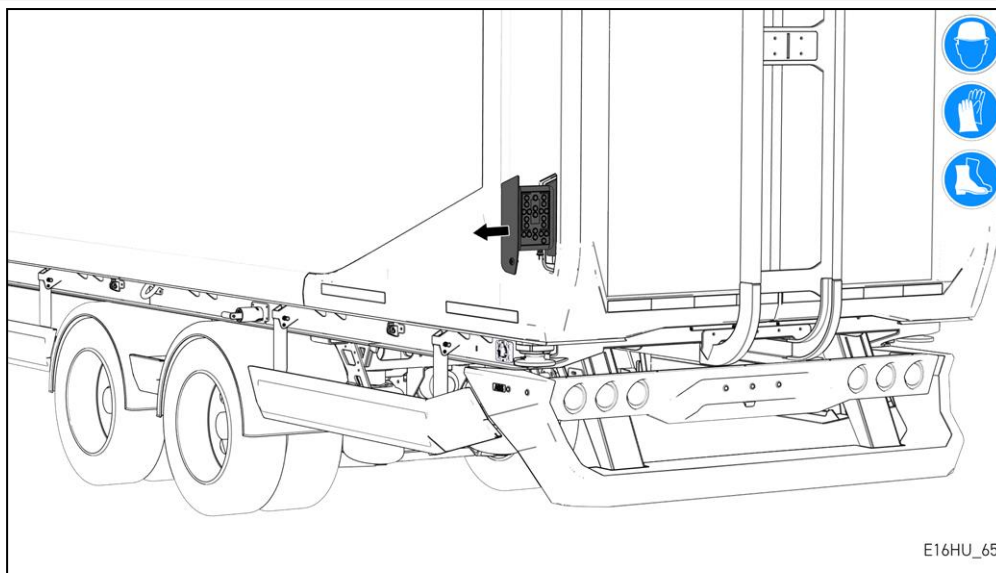
1. ⬆ Turn the main switch to "ON."



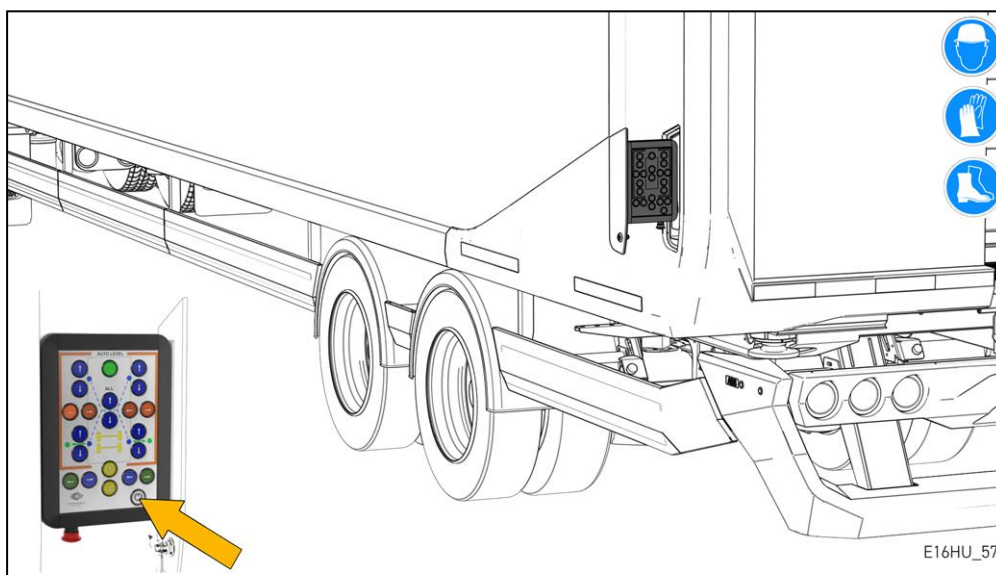
2. ⬆ Hook up the Expandable Touchdown Semi Trailer and move the pistons of the front lift cylinders fully up.



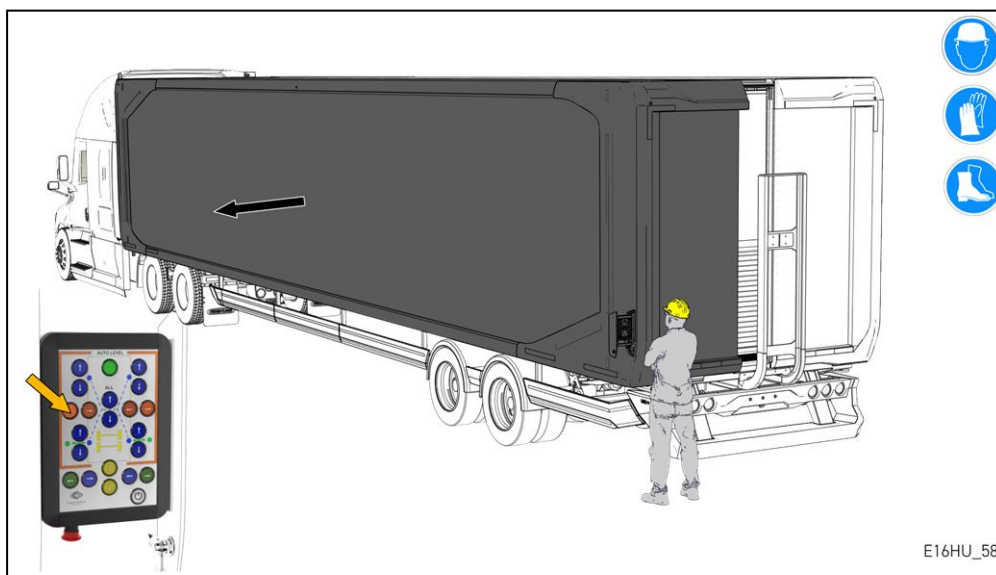
Make sure the truck and trailer combination is level.



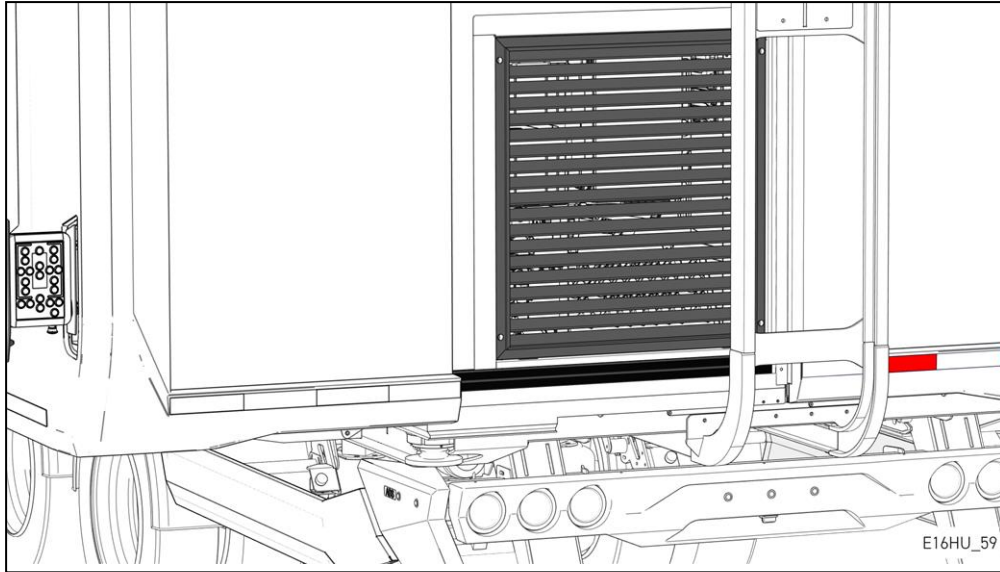
3. ⬆️ Unlock the left control panel and pull it out.



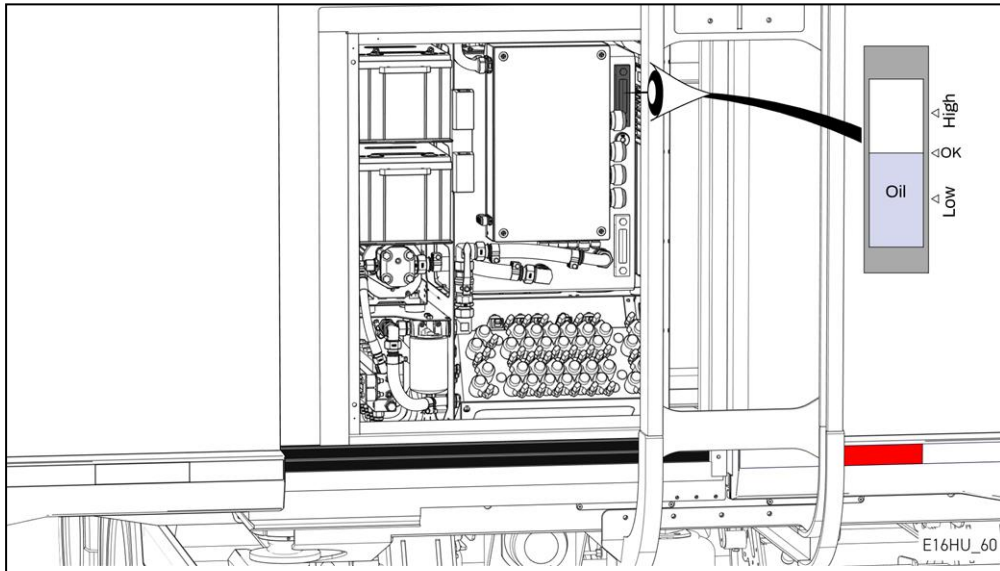
4. ⬆️ Turn on the control panel.



5. ⬆ Move the left slide out all the way out.



6. ⬆ Remove the rear door.



7. ⬆ Check that the oil level in the sight glass is halfway down. Otherwise, top up hydraulic oil ([See "Oil refill on the next page"](#)).
8. Fit the grill.
9. Slide the left slide out all the way in.
10. Turn the control panel off.
11. Slide the control panel into the segment and lock the cover.
12. Turn the main switch to "OFF" and lock the main switch with a padlock.

7.2.1 Oil refill

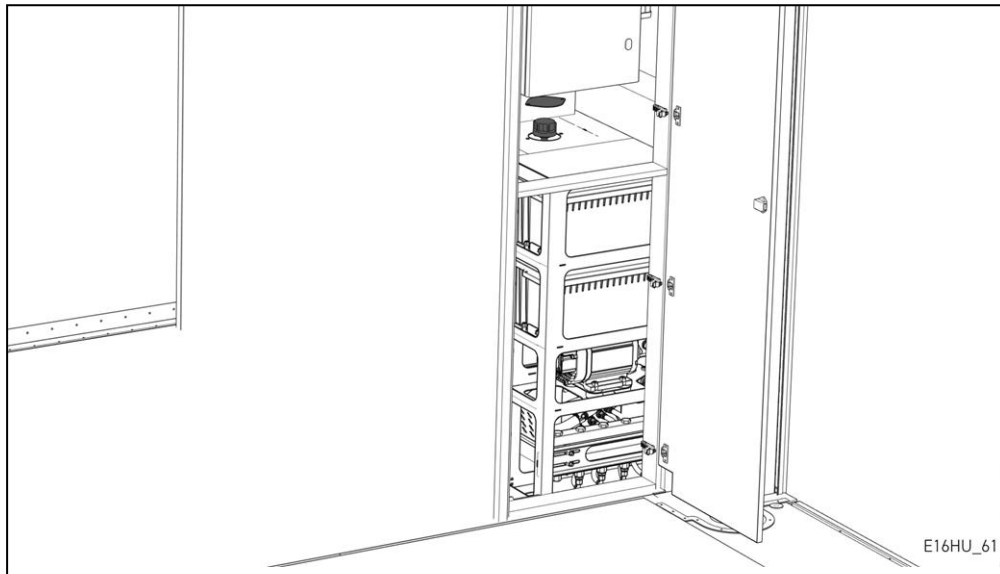
If the hydraulic oil reached the "low" level it must be refilled before operating the Expandable Touch-down Semi Trailer.



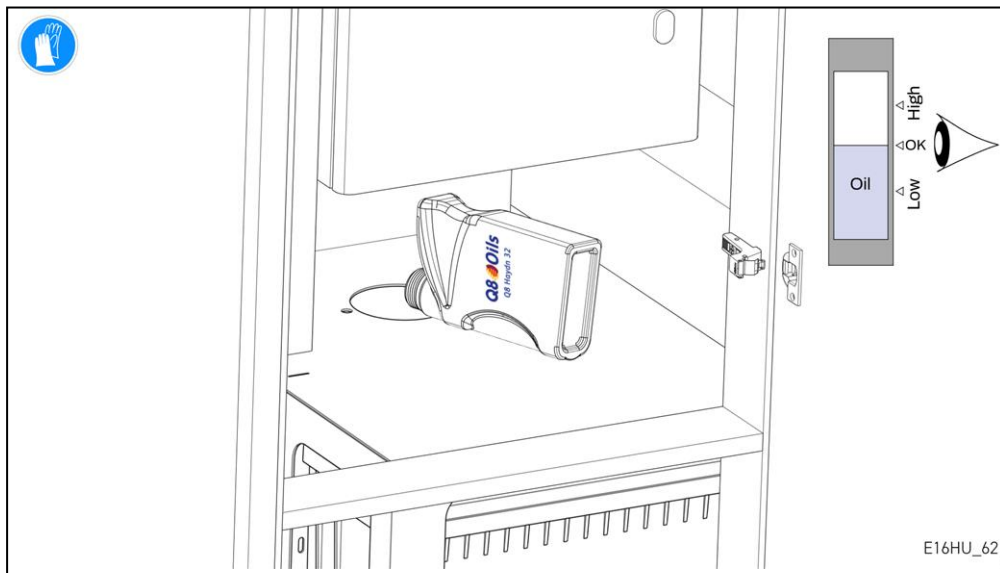
Hydraulic oil can only be refilled through the access door of the technical room on the inside of the Expandable Touchdown Semi Trailer.

Procedure

Follow the procedure given below.



1. Remove the sealing cover and cap from the tank.



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



If the oil level is too high you must remove the excess from the tank. Overfilling the tank above the full line can result in damage to the system or fluid over flow from the tank. Expandable LLC recommends making an appointment with the service workshop as soon as the hydraulic oil level is "High".

3. Reinstall the cap and the sealing cover and remove any spilled hydraulic oil.



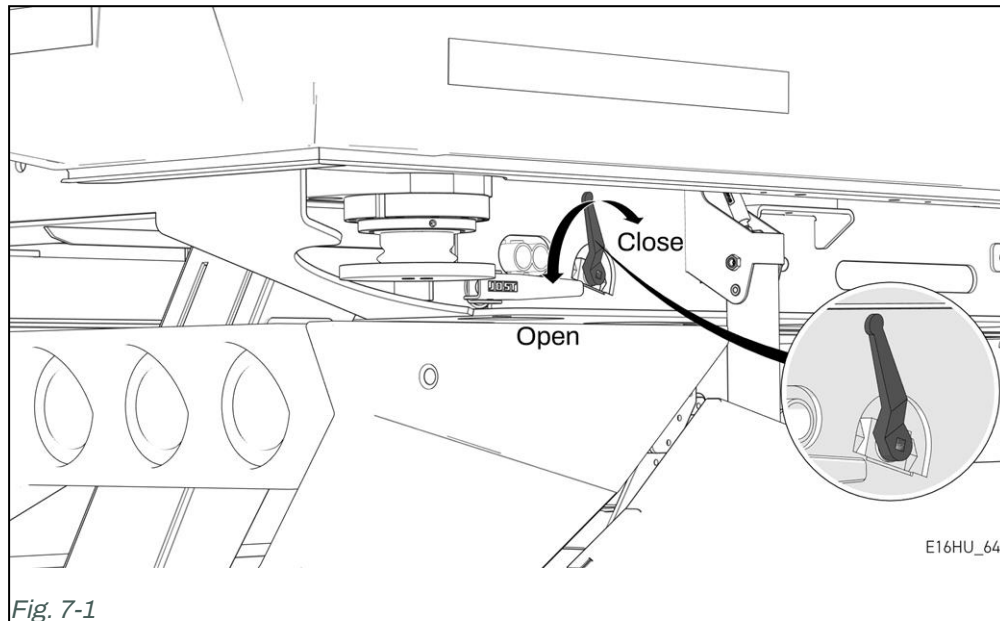
CLOSE the door of the technical room to prevent damage while sliding in the left slide out!!!

7.3 Control ball valve emergency operation

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

Procedure

Follow the procedure given below.



1. Open and close the ball valve to check that it moves fully in both directions. Have the ball valve replaced if necessary.
2. Check for any leaks and replace the ball valve if necessary.



Make sure the ball valve is always closed, otherwise it will not be possible to retract the slide out using the control panel

8. Safety & Environment

The following paragraphs contain information on the safe use of the Expandable Touchdown Semi Trailer. It also describes what to do when the Expandable Touchdown Semi Trailer has reached the end of its lifespan.

8.1 Environment



When the Expandable Touchdown Semi Trailer reaches the end of its life for any reason, it must be dismantled and disposed of according to local and/or national regulations.

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

8.2 Safety During Use



The use of a Expandable Touchdown Semi Trailer can potentially bring risks.

Always consult the relevant regulations (for example: road traffic law, company procedures, safety and health regulations) that apply to the country where the Expandable Touchdown Semi Trailer is used.

General instructions for the use of a Expandable Touchdown Semi Trailer:

- *Never set up the Expandable Touchdown Semi Trailer on terrain where the slope exceeds the permitted values.*
- *Never use or place a Expandable Touchdown Semi Trailer on public roads unless it has been established that the complete 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 maneuver with the Expandable Touchdown Semi Trailer if there are **NO** people or animals in the immediate vicinity of moving parts of the trailer.*

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



9. General Information

The following paragraphs provide general information regarding this User manual and the product manufactured by Expandable LLC.

9.1 Cleaning

Use a mild detergent and remove the detergent with water from the hose at low pressure. Expandable LLC recommends NOT cleaning the “Touchdown” with aggressive or etching detergents. Using a pressure washer or cleaning in a car wash is strongly discouraged. This is to prevent loosening of 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 associated documentation regarding the Expandable Touchdown Semi Trailer must be provided to the customer.

- *The vehicle may not be used until it is established that the trailer on which the Expandable Touchdown Semi Trailer is mounted complies with the national road traffic laws.*
- *The 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 for the Expandable Touchdown Semi Trailer is handed over to the customer upon delivery. Indicate to the customer that the user manual should be kept with the trailer.
Warranty	Warranty on products from Expandable LLC can be found in the delivery terms.

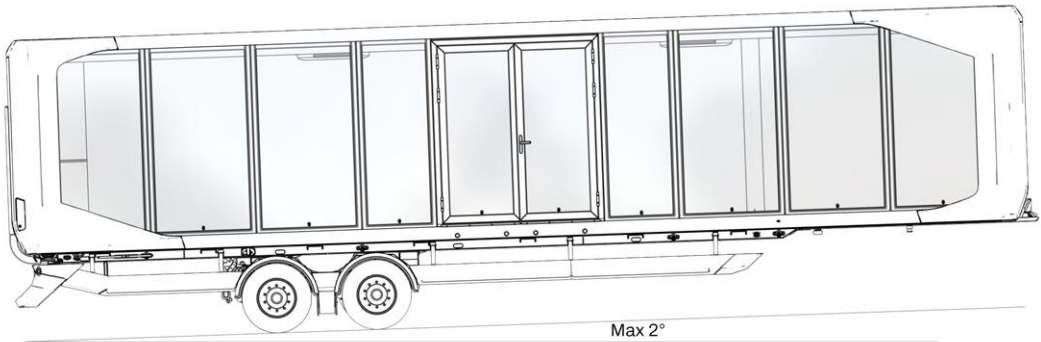
Table 9-1 Delivery Documents

9.3 Site Conditions

Your Expandable Touchdown Semi Trailer should preferably be made ready for use and transport on a site that is level both longitudinally and laterally. However, some slope of the site is allowed as long as the slope angles do not exceed the maximum permissible values shown in the table [\(see "Table 9-2"\)](#). The maximum allowable slope angles in both the longitudinal and lateral directions are shown below:

	Slope Angle
Longitudinal direction	2°
Lateral direction	3°

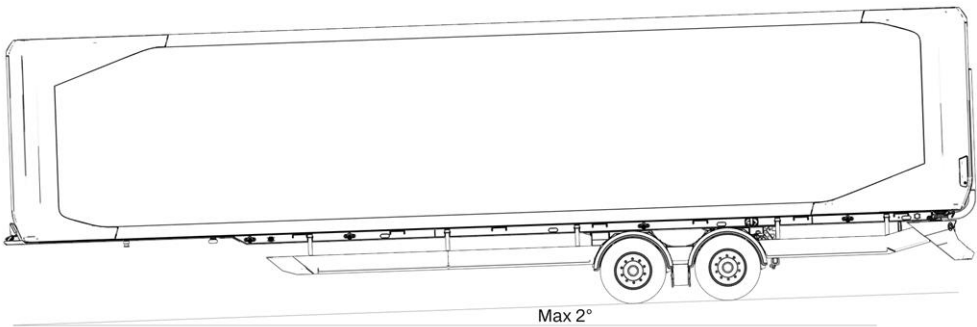
Table 9-2 Slope Angles



E13H_92

Maximum slope angle longitudinal direction

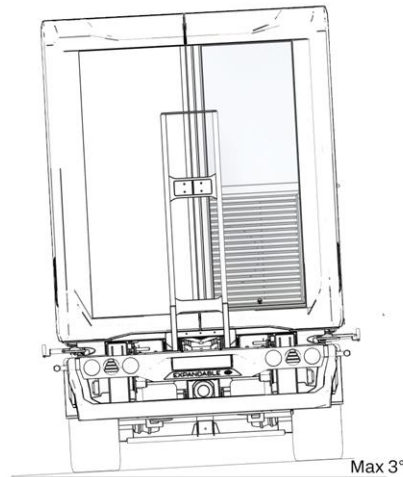
Fig. 9-1



E13H_93

Maximum slope angle longitudinal direction

Fig. 9-2



E13H_94

Maximum slope angle lateral direction

Fig. 9-3

Always determine whether the site is sufficiently load-bearing to support the weight of the Expandable Touchdown Semi Trailer plus the interior before making it ready for use, and use the supplied base plates under the lift cylinders.

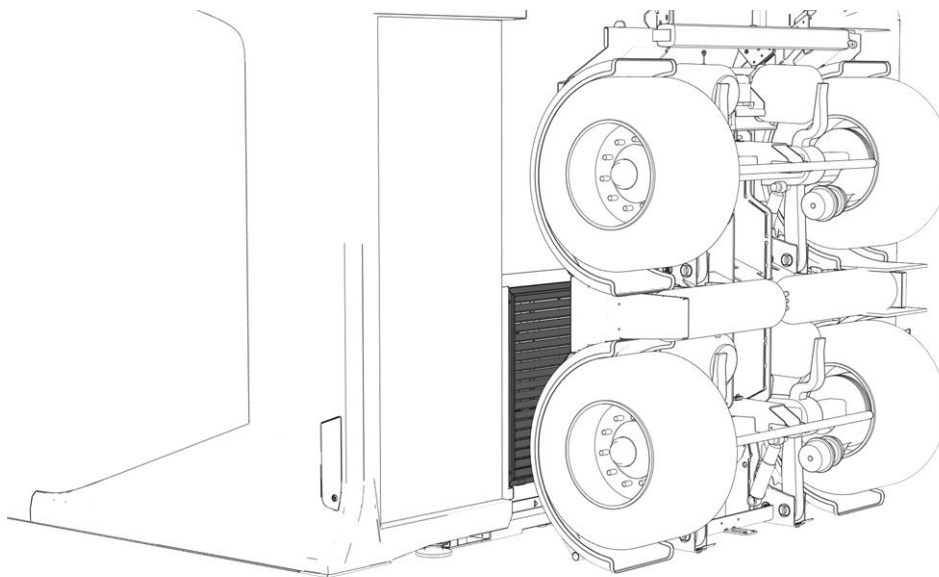
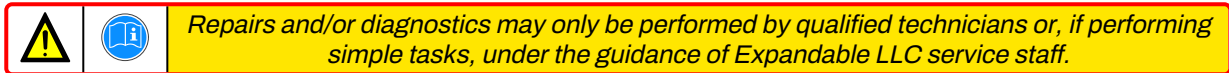
9.4 Access to the Technical Room

The technical room is located at the rear of the Expandable Touchdown Semi Trailer and is normally accessible in both the transport and operational positions for small repairs or diagnostics. In that case, the doors at the rear can be removed after being unlocked with an allen wrench.

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

In the technical room, you will find:

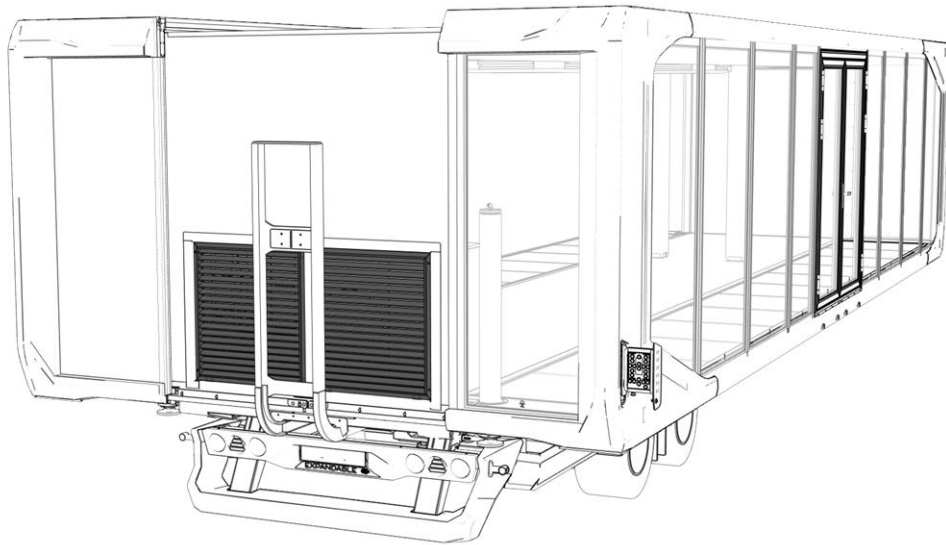
- *the air conditioning installation*
- *the electrical installation with the batteries*
- *the hydraulic control system with the pumps, tank, and filter*



E13H_95

Access to the technical room in operational position

Fig. 9-4



E13H_96

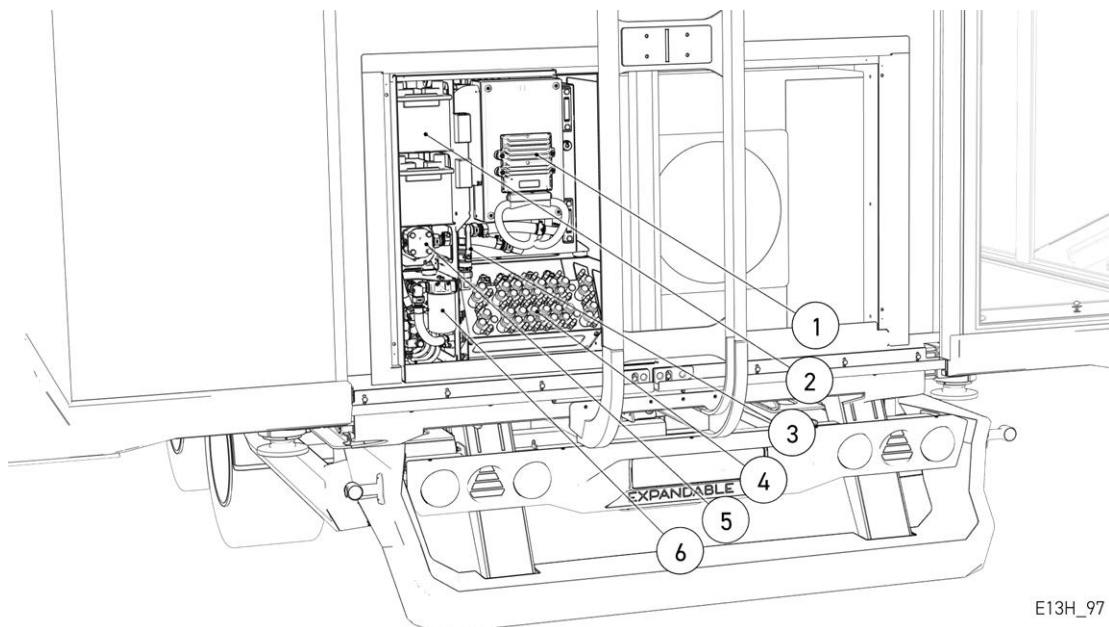
Access to the technical room in transport position

Fig. 9-5

The positions of some of the main components in the technical room are shown in the image below.



The hydraulic filter must be replaced periodically (See "Periodic Maintenance on page 34").



E13H_97

Fig. 9-6

- | | | | |
|----|-----------------------------|----|------------------|
| 1. | Control unit. | 4. | Valve block |
| 2. | Batteries | 5. | Hydraulic pump |
| 3. | Main valve hydraulic system | 6. | Hydraulic filter |

9.5 Checking battery voltage and recharging

The batteries are normally recharged via the built-in trickle charger once the wall current is connected. The battery voltage can be checked via the REMA plug located on the right rear side of the chassis. Should the battery voltage be too low for any reason, the batteries can be recharged via the REMA plug.

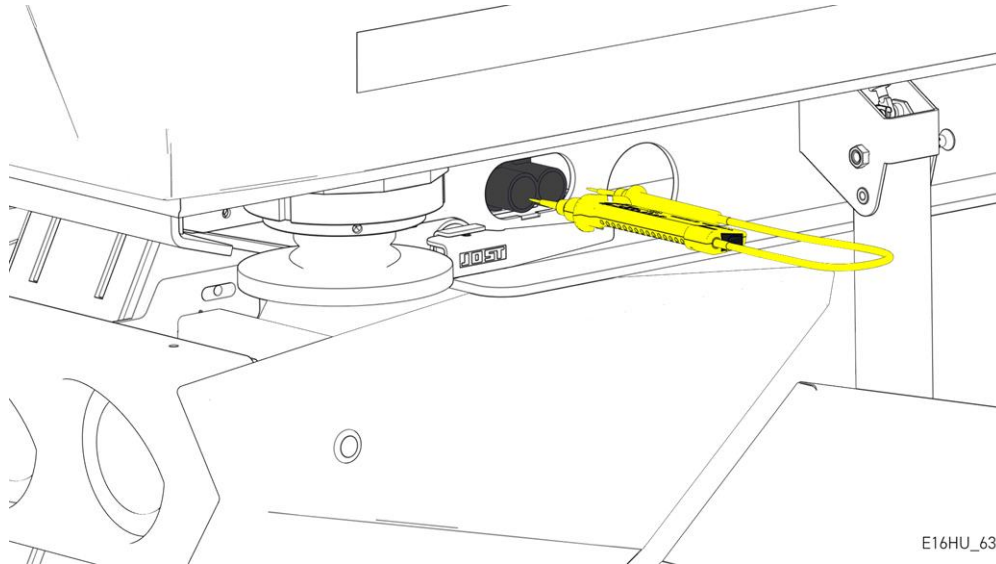


Fig. 9-7

The battery voltage (24V) can be measured on the REMA plug. Should the voltage be too low for some reason, a charger can be connected to the REMA plug.

9.6 Stickers

Expandable LLC has placed stickers on your Expandable Touchdown Semi Trailer at various locations. 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.

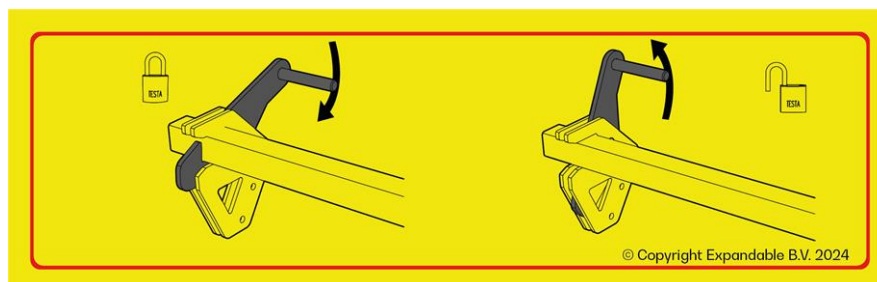


Fig. 9-8

The sticker shown above indicates in which position of the lock the bumper is or is not locked to the tandem axle. The locking of the bumper to the tandem axle takes place automatically as soon as the tandem axle touches the bumper and ensures that the bumper always follows the tandem axle in both upward and downward movements.

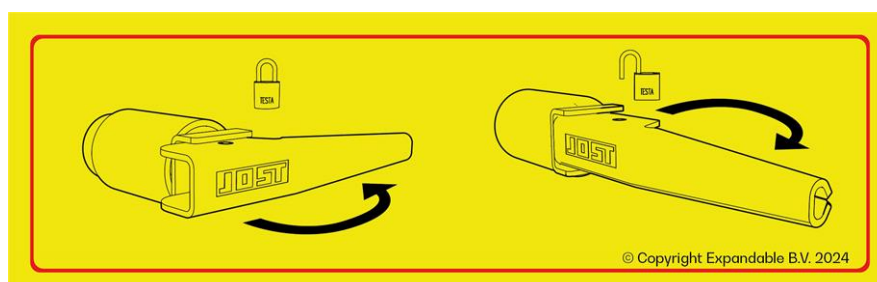
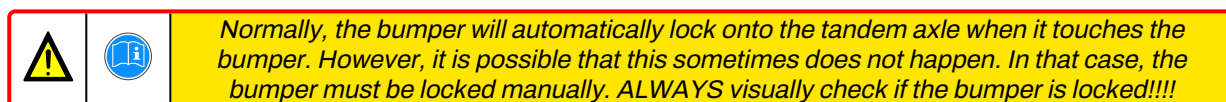


Fig. 9-9

The sticker shown above indicates in which position of the lock the bumper is or is not locked into 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.

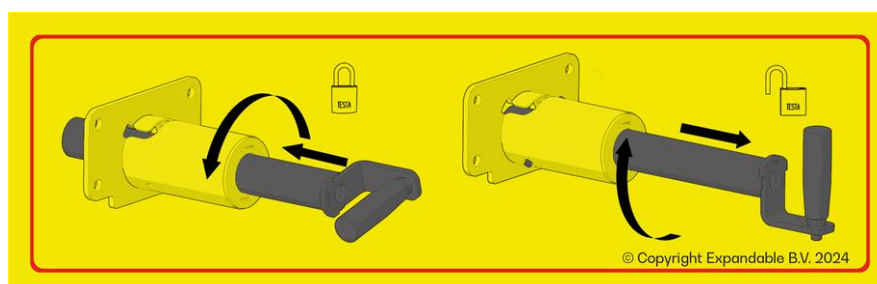
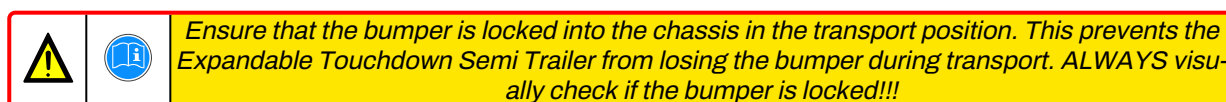


Fig. 9-10

Once the tandem set has reached the transport position or when the tandem set needs to be moved to the rear of the Expandable Touchdown Semi Trailer, the tandem set must be locked or unlocked. In the first image on the above sticker, the lock is turned counterclockwise. Then the lock pin is pressed into the tandem set under spring pressure. In the second image on the sticker, the lock is pulled out of the tandem set against spring pressure and then turned clockwise. These actions must be performed on both sides of the tandem set.



Fig. 9-11

This sticker indicates that no people or animals are allowed inside the Expandable Touchdown Semi Trailer during transport.



Fig. 9-12

This sticker is located on the step at the access door (if provided) and indicates that the step must be removed during road transport.

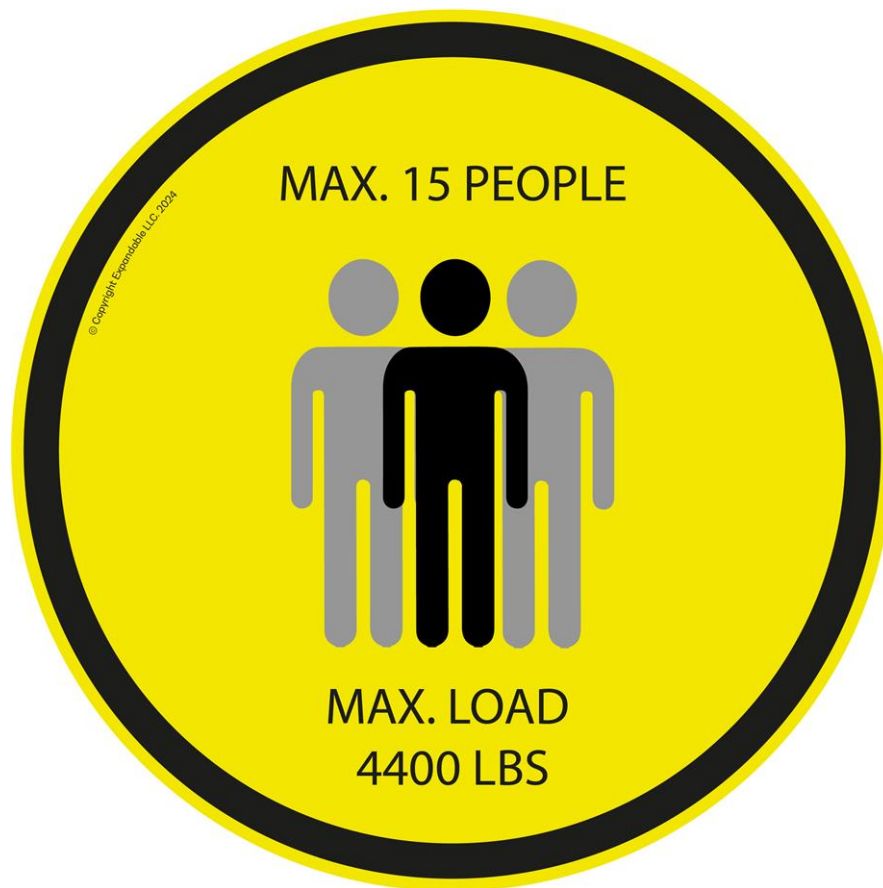


Fig. 9-13

If your Expandable Touchdown Semi Trailer is equipped with an optionally available roof terrace, you will find the above sticker on the door in the portal to the roof terrace. This indicates that the maximum load of the roof terrace is 4400 lbs. Based on an average weight of 195 lbs per person, this corresponds to approx. 15 persons plus any placed tables, chairs, and umbrellas, etc.

		<i>Stickers applied to the Expandable Touchdown Semi Trailer by Expandable LLC may only be removed for replacement with new copies if they have become unreadable. Replace stickers before use if they are unreadable.</i> <i>Ordering: Dail (864)-400-5095</i>
---	---	---

9.6.1 Type Sticker and ALR Plate

The type sticker shown below is affixed to the chassis of the Expandable Touchdown Semi Trailer. On this sticker, you will find information about:

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

MANUFACTURED BY: EXPANDABLE B.V.

DATE OF MFG:dd-mm-yyyy

GVWR: XXXXX kg (XXXXX LB)

GAWR: (EACH AXLE)

(WITH TIRES)

(RIMS AT)

(COLD)

9071 kg (20000 LB)

255/70R22.5 H

22.5"x8.25"

827 KPA (120PSI) DUAL

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE
SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

V.I.N.: XL9EXXHUXYYYYYY

TYPE : EXXHU TRAILER

TIRE AND LOAD INFORMATION
RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT

The weight of cargo should never exceed
5670 KG (12500 LB)

TIRE	SIZE	COLD TIRE PRESSURE
FRONT	NONE	
INNER	NONE	
REAR	255/70R22.5 H	827 KPA (120PSI)
SPARE	NONE	

SEE OWNER'S
MANUAL FOR
ADDITIONAL
INFORMATION
VOIR LE MANUEL
D'USAGER POUR
LE PLUS DE
RENSEIGNEMENTS

Fig. 9-14



The type sticker must always be clearly legible. Replace the sticker as soon as it becomes unreadable. In that case, contact Expandable LLC at (864)-400-5095 to order a new sticker. The sticker may not be replaced by a sticker made by third parties without written permission from Expandable LLC

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

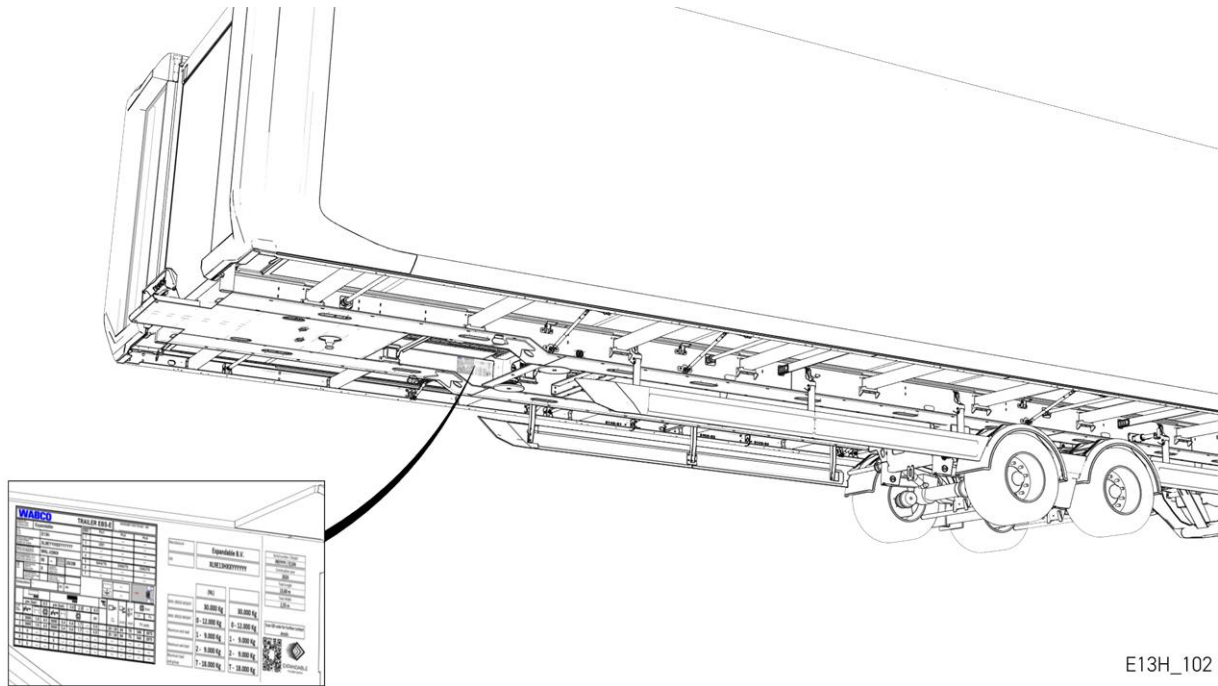


Fig. 9-15



No changes may be made to the ALR plate and the type sticker. Contact Expandable LLC at (864)-400-5095 if the type sticker or the ALR plate have become unreadable.

9.7 Trailer Specifications

	E16HU
Maximum weight	60000 lbs
Load capacity	22500 lbs
Load per axle	17000 lbs
Rim size	22.5" x 8,25"
Tire size	255/70/R22.5
Tire pressure (cold)	827 KPA (120 PSI)
External length transport position	52 ft 8"
External width transport position	8 ft 5"
External height transport position	13 ft 5"
External length operating position	52 ft 8"
External width operating position	15 ft 10"
External height operating position	9 ft 10"
Flat surface area transport position	323 sqr ft
Flat surface operating position	807 sqr ft
Internal volume transport position	98 cu yd
Internal volume operating position	203 cu yd
Maximum number of people on roof with roof terrace	15 (average 195 lbs p.p)
Maximum load middle roof	4400 lbs

Table 9-3 Semi-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
Dension	HF-0, HF-1, HF-2	Swedisch Standard	SS 115434 AM

Table 9-4 Oil Specifications

9.8.1 Oil Properties

	Method	Unit	Features
ISO viscosity class			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	D445	mm ² /s	5.6
Viscosity Index	D 2270		111
Acid Number TAN	D 974	mg KOH/g	0.3
Solidification point	D 97	°C	-30
flashpoint, 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
c 1/2/3	D 892	ml	0/0/0
Anti-rust 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 a specification. They are typical figures obtained within production tolerances.

9.9 Lubricant Properties and Specifications

Berulub Lubricant Properties
Suitable for low temperatures
Prevents stick-slip
Extended relubrication intervals
Very good adhesion
Non-dripping and non-melting
Resistant to hot and cold water, water vapors, lactic, formic, acetic or fruit acids as well as watery-alkline and acid disinfecting or cleaning agents
Contains PTFE

Table 9-6 Berulub Lubricant Properties

	Characteristics
Base oil	Ester
Thickener	Polytetrafluoroethylene (PTFE)
NLGI-grade	3
Kinematic viscosity at 104 °F	5000,0 mm²/s
Kinematic viscosity at 212 °F	340,0 mm²/s
Working temperature range	-4 °F up to 302 °F
Color/Appearance	White
Propellant	Dimethyl ether

Table 9-7 Characteristics

9.10 Electrical Component Specifications

		E16HU/E11HU
Battery	Type	DC250-12 (12V250Ah)
	Capacity	250Ah@10hr-rate to 1.80V per cell @77 F
	Max. Discharge Current	2250A (5 sec)
	Normal Operating Temperature	77° F ± 5° F
	Recommended Maximum Charging Current	67.5A
Connection Voltage		24 V
Roller Current Connection		240 V (50 A split face)
Voltage Sockets		120 V
Light Switches		120 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
	Terminal Bolt Size	3/8"-16 (accepts M10 -connections)
	Moisture Ingress Protection	IP67/IP69K
	Ignition Protection	ISO 8846 & SAE J1171
Water Level Sensor	Moisture Ingress Protection	IP67, IP69K (with IP69K counter connector)
	Relative Humidity	0 - 95% (non-condensing, housing fully potted)
	Power Supply Voltage	10 - 32 V dc
	Polarity Protection	Yes
	Power Consumption	50mA For CFM models (CANbus in series): max. current internal T-joint: 2.5A
	Operating Temperature	-40 .. +176 °F
Inductive Sensor	Operating Voltage	7....30V
	Output Type	NPN
	Output Polarity	DC
	Ambient Temperature	-40 .. +176 °F
	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 mentioned in the table above are a selection from the full specifications of the manufacturer. Expandable LLC always advises con-

sulting the supplied documentation of the manufacturer of the electrical components, which supersedes anything related in this manual.

9.11 Pictograms

The following pictograms are used in this manual:

Description		Description		Description	
	Important announcement!		Maximum number of people / maximum load		Delivery information.
	Risk 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 LLC
	Wear work gloves		Wear safety clothing		Surface treatment
	Wear hearing protection		Wear safety glasses		Good
	Inflating bellows		Deflating bellows		

Table 9-9 Pictograms

any questions?
contact us

Expandable LLC
7021 Augusta Road
Piedmont
SC, 29673
United States

(864)-400-5095
info@expandable-usa.com



EXPANDABLE
movable spaces

Part no.: 162022 EN (US)-0
Release: 8/29/2024

www.expandable-trailers.com