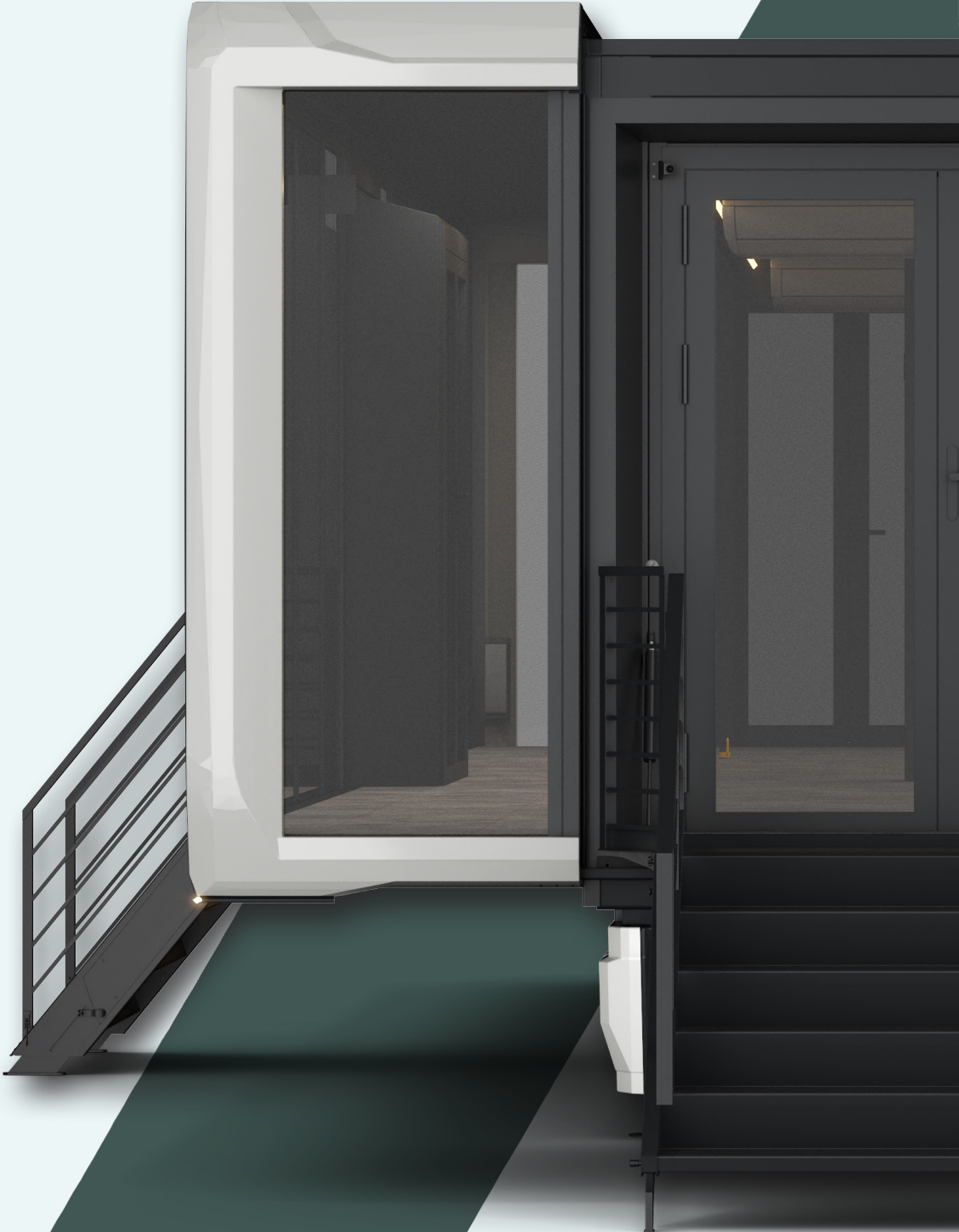


**create
space**
and never
forget



EXPANDABLE
movable spaces


User manual
TRAILER
53FT

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Foreword

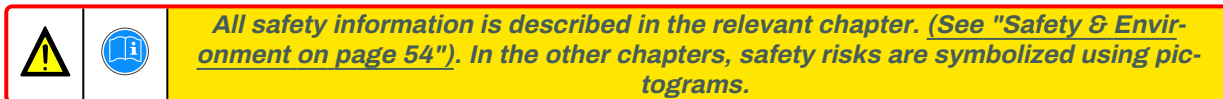
 This manual is intended for drivers and other users of the Expandable 53ft trailer and contains the necessary information for its operation. This operator's manual must always be kept with the vehicle. A separate maintenance and repair manual is available for service technicians via the website: www.expandable-trailers.com.

Terms of use:

A Expandable 53ft trailer is designed to be used as-is without modifications. Any type of modification may affect the safety of the system. The warranty on products supplied for the Expandable 53ft trailer will be void if these products are modified. If the Expandable 53ft trailer is not used in accordance with the instructions provided by Expandable LLC, all warranty claims against Expandable LLC or its suppliers will be considered invalid.

Before the system is put into service, it must be confirmed that the Expandable 53ft trailer complies with the applicable national road traffic legislation. The system may only be operated in accordance with the manuals of both the tractor and the Expandable 53ft trailer.

The images in this manual are for illustrative purposes only and are not intended for any other purpose. The images shown may differ slightly from the system supplied.



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1. Description

This chapter describes the Expandable 53ft trailer. Here you will find information about naming components and their functions.

1.1 Expandable 53ft trailer

Main components

A Expandable 53ft trailer is a semi-trailer with hydraulically extendable sections (slide-outs) that can increase its volume by approximately two times. The Expandable 53ft trailer has eight walls, the panels of which can be selected by the customer. Options include door panels, glass walls, stairs, and solid panels.

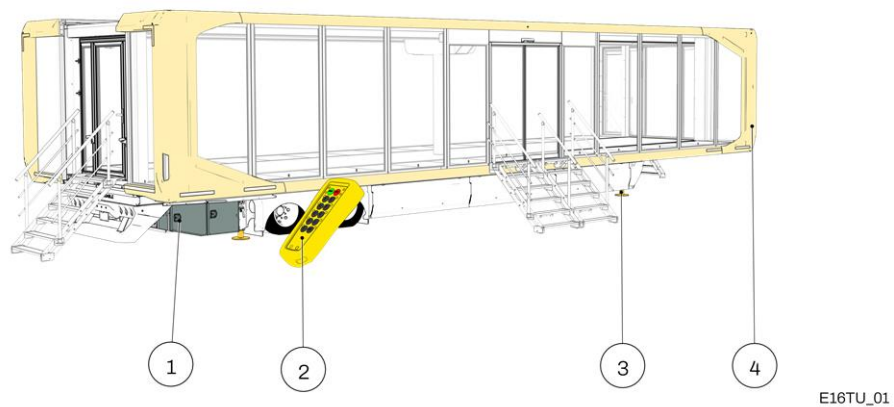


Image 1-1

- | | |
|-------------------|--|
| 1 Storage cabinet | 3 Lift cylinders |
| 2 Remote control | 4 Slide out (extendable and retractable) |

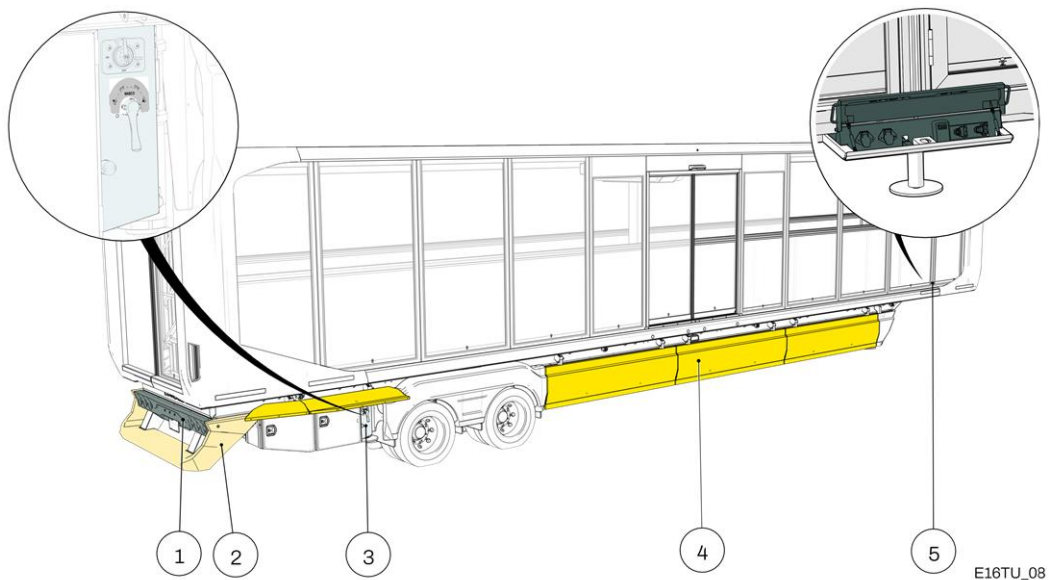


Image 1-2

- | | |
|---|------------------------|
| 1. Rear Light Bar | 3. Underride guard |
| 2. Rear Bumper | 4. Tractor Connections |
| 3. Hydraulic and pneumatic control system | |

The underride guard can be folded up, providing access to the storage compartments and the controls of the hydraulic system.

1.1.1 Hydraulic and electrical operating system

The hydraulic control equipment and the electrical control systems are located in the left storage compartment at the right rear side of the Expandable 53ft trailer.

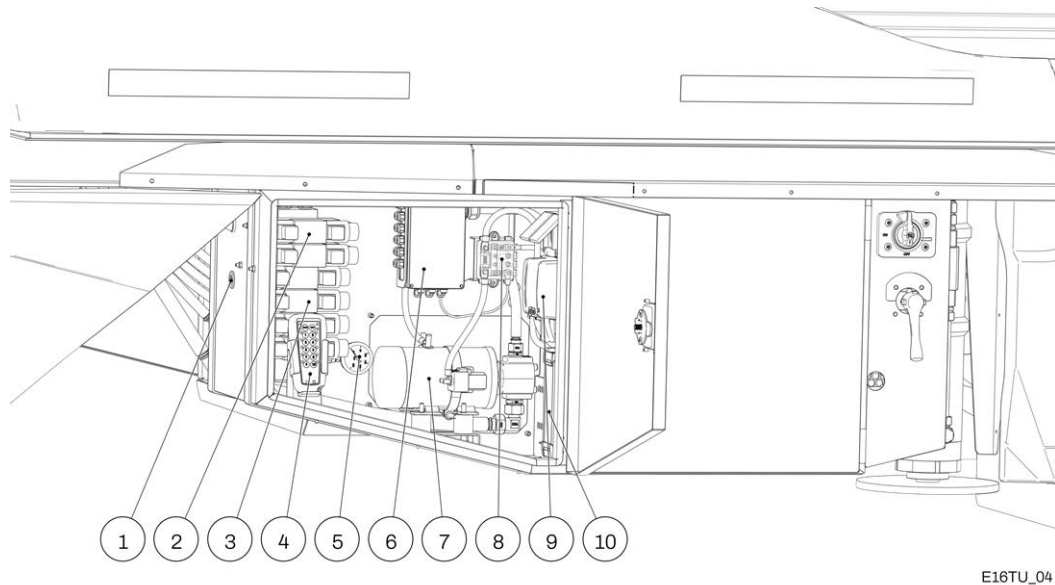


Image 1-3

1. Leveling system alert buzzer	6. Hydraulic control box
2. Slide out valves	7. Hydraulic pump
3. Lift cylinder valve	8. Main fuses (load, pump, and control box)
4. Remote control (Sistematica)	9. Power converter (DC-DC)
5. Pressure indicator	10. Trickle charger

1. Leveling system alert buzzer

The leveling system buzzer sounds when the leveling procedure has been successfully completed. At that moment, the Expandable 53ft trailer is level in both directions.

2. Slide out valves

These valves control the extension and retraction of the segments when one of the designated buttons on the remote control is pressed. (See "[Remote Control Expandable 53ft trailer on page 1](#)").

3. Remote control

The supplied Sistematica remote control is interchangeable with the new remote control developed by Expandable LLC, which will become available during 2026.

4. Lift cylinder valve

This valve controls the extension and retraction of the piston rod in a hydraulic lift cylinder when one of the designated buttons on the remote control is pressed.

5. Pressure indicator

The pressure gauge shows the hydraulic system pressure when one or more cylinders are in operation.

6. Hydraulic control box

The control box energizes the solenoids, which are operated by the remote control.

7. Hydraulic pump

The hydraulic pump converts mechanical power into hydraulic force by pressurizing and moving hydraulic fluid through a valve in a closed system, causing the piston rod to move.

8. Main fuses (load, pump, and control box)

These fuses protect the charging system, the hydraulic pump, and the control box from electrical overload.

9. Power converter (DC-DC)

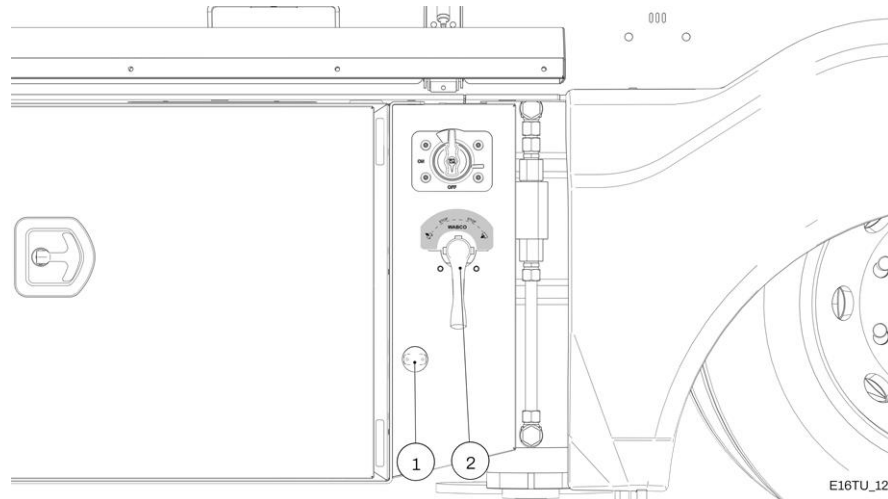
The DC-DC converter adjusts the voltage between 12V and 24V as required.

10. Trickle charger

The trickle charger keeps both 12V batteries charged when the trailer is connected to shore power and disconnected from the tractor.

1.1.2 Setup and Transport Preparation

To prepare the Expandable 53ft trailer for operation or transport, buttons and the air suspension control valve are used in addition to the remote control. Normally, these buttons and the air control valve are used when the tractor is connected and the air system is supplied by the tractor. However, they can also be used when the tractor is disconnected, provided there is sufficient air pressure in the air tanks.



1. "Parking Brake" button

2. Air suspension control valve

1. "Parking Brake" button

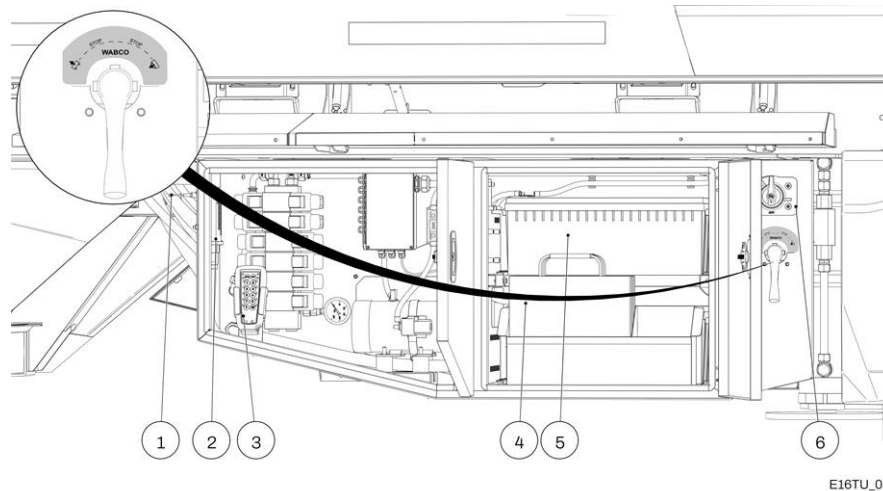
Pressing the button **IN** releases the parking brake. Pulling the button **OUT** applies the parking brake.

2. Air suspension control valve

Turning the air control valve clockwise releases air from the air springs, causing the rear of the Expandable 53ft trailer to lower. Turning the valve fully counterclockwise increases the air pressure in the air springs, raising the rear of the Expandable 53ft trailer. This only works if there is sufficient air pressure in the air tanks. If necessary, connect the tractor. When the air control valve is set to the center position, the Expandable 53ft trailer returns to the pre-set ride height.

1.1.3 Accessories and Batteries

The Expandable 53ft trailer is equipped with a wireless system for setup and transport preparation. This system consists of a remote control and a receiver with an additional antenna. A remote control is stored in the left storage compartment at the right rear side of the Expandable 53ft trailer.



- | | |
|----------------------------|-----------------------------------|
| 1. Antenna | 4. Outrigger pads |
| 2. Remote control receiver | 5. Batteries |
| 3. Remote control | 6. Main battery disconnect switch |

It is strongly recommended to always use the supplied outrigger pads when setting up the Expandable 53ft trailer for operation.

1. These pads distribute the load of the outriggers over a larger surface area and reduce the risk of ground damage.
2. It is important that the ground has sufficient load-bearing capacity to prevent the Expandable 53ft trailer from sinking.
3. After the main battery disconnect switch is turned to the “ON” position, the 24V hydraulic system becomes active.

1.1.4 Shore Power Connection

During normal operation, the Expandable 53ft trailer is powered via a shore power connection. The extension cable for this connection is stored in the storage compartment at the left rear, underneath the Expandable 53ft trailer floor.

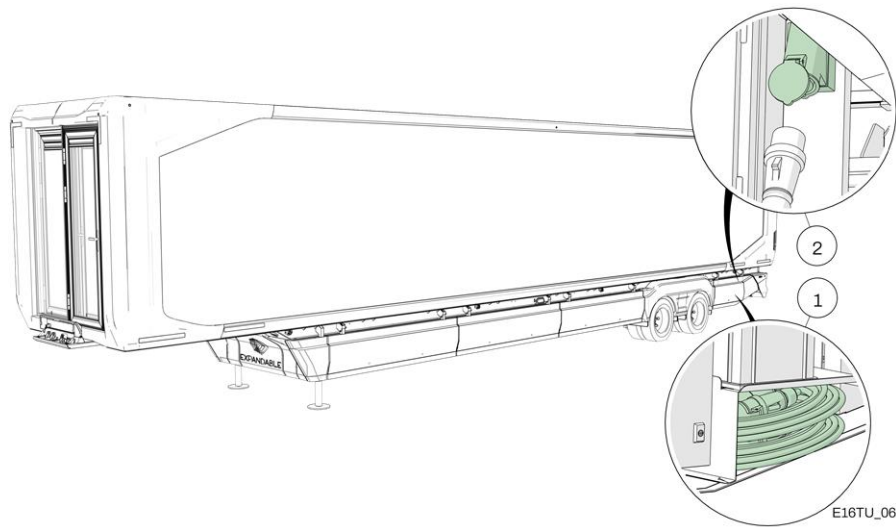


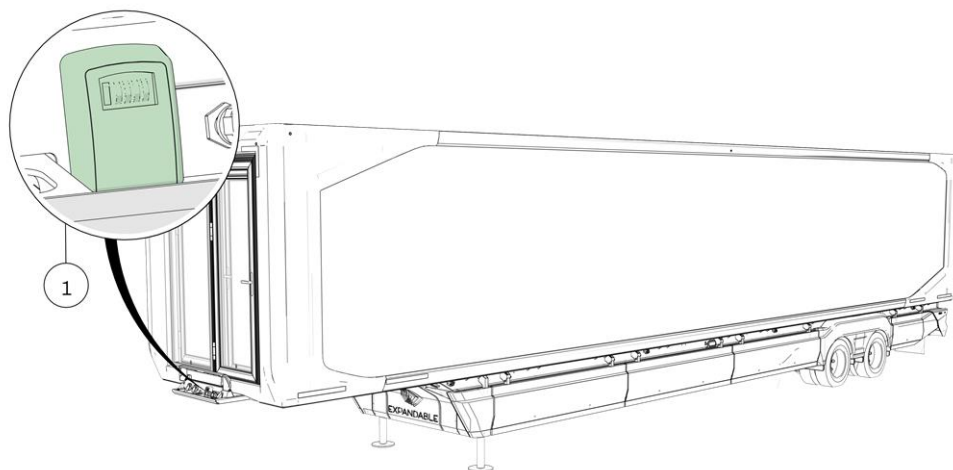
Image 1-4

- 1. Extension cable
- 2. Shore Power Connection

The extension cable can be connected to shore power via the connection point at the left rear of the Expandable 53ft trailer.

1.1.5 Key Lock Box

The Expandable 53ft trailer is equipped with a key safe. It is located under the hatch at the front of the semi-trailer (see "Image 1-5"). The key safe is secured with an adjustable code. The keys for the access doors are stored in the key safe, so they are always kept close to the Expandable 53ft trailer.



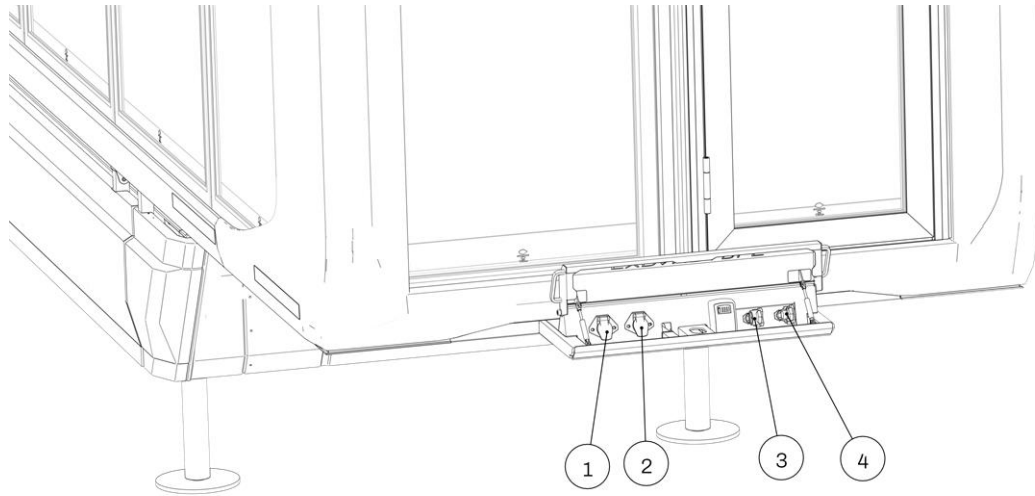
E16TU_09

Image 1-5

- 1. Key Lock Box

1.1.6 Front Connections Expandable 53ft trailer

At the front of the Expandable 53ft trailer, several electrical and pneumatic connections are provided.



E16TU_10

Image 1-6

1. 7-pin electrical socket
2. 2-pin electrical socket

3. Emergency air line (Red)
4. Service air line (Blue)

① 7-pin electrical socket

The 7-pin electrical socket connects the Expandable 53ft trailer's basic lighting—such as turn signals, tail lights, brake lights, and ground—to the tractor.

② 2-pin electrical socket

Through this 2-pin 12V connector, the batteries are charged from the tractor.

③ Emergency air line (Red)

The red air connection (emergency air line) supplies compressed air from the tractor to the trailer's air tanks.

④ Service air line (Blue)

This connection transmits the braking command from the tractor to the Expandable 53ft trailer via compressed air.

2. Remote Control

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

2.1 Remote control Expandable 53ft trailer

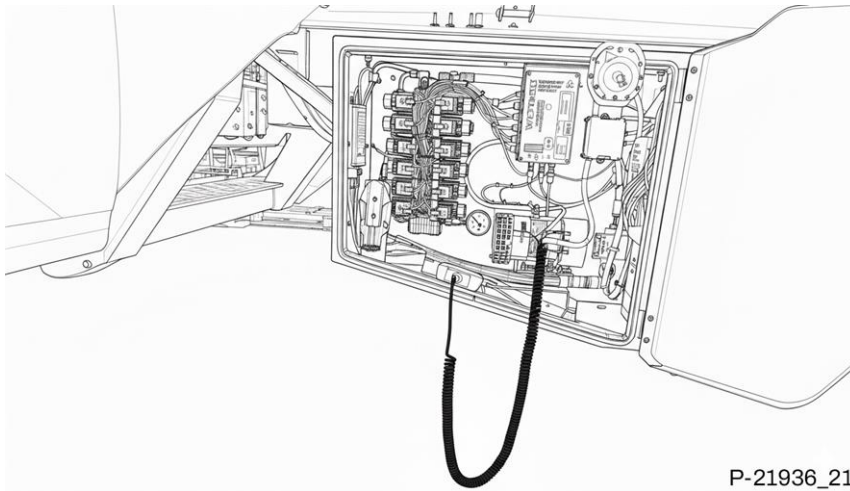


P-21936_18



The remote control is stored in the storage compartment behind the rear underride guard on the right-hand rear side underneath the Expandable 53ft trailer.

From model year 2026 onwards, the Expandable 53ft trailer are equipped with a newly developed remote control system by Expandable LLC. The system consists of two identical units which, depending on their pairing, can function as either a transmitter or a receiver. Both units are equipped with a cable connection. The cable can be connected to one of the units and to the control box; in this configuration, the unit functions as a receiver once it is paired with a transmitter (remote control)..



P-21936_21

If the transmitter is defective or not paired, the receiver will act as a remote control. In this case, the Expandable 53ft trailer can be operated using the cable.

Layout

The control layout is divided into two sections: the upper section for settings and the lower section for operating the Expandable 53ft trailer.



P-21936_17

Settings




P-21936_19

Operation

2.2 Power on the remote control

To operate the Expandable 53ft trailer, the following conditions must be met:

- One of the two units must be connected to the control box via a cable.
- The battery disconnect switch must be set to the "ON" position.

1. Press and hold the button .
After a short time, the screen shown below will appear.



P-21936_19

2. The hydraulic functions of the Expandable 53ft trailer can now be operated, and the remote control can be configured.



P-21936_01

“Not Connected” Message

If the transmitter is not connected to the receiver, the message shown below will appear on the display.




P-21936_08

This is usually caused by one of the following two reasons:


- *The battery disconnect switch is in the “OFF” position.*
- *The transmitter and receiver are not paired.*

2.3 Power off the remote control

1. Press and hold the button .
After a few seconds, the screen below will appear.



P-21938_19

2. Press the  button to switch off the remote control.



P-21938_10

2.4 Settings



The buttons for the settings menu are yellow.


2.4.1 Main menu



The small square next to the letter "A" on the display is flashing.


The following sub menus are available in the main menu:

- *User Menu*
- *Maintenance Menu*
- *Sensor Information*

1. Press the button  to select the square.



P-21936_20

2. Press the button  to display the main menu.




P-21936_02

2.4.1.1 Main Menu

The main menu includes the following submenus:


- *User Menu*
- *Maintenance Menu*
- *Sensor Information*

Procedure

1. In the main menu, press the button  to select the “User Menu”.



P-21936_02

2. Press the button  to display the “User Menu”.



P-21936_22

2.4.1.1.1 Display Menu

The following settings are available in the “Display” menu:

- *Auto*
- *Brightness*
- *Standby (min)*
- *Auto Off (min)*

Auto

When “Auto” is enabled, the display brightness is automatically adjusted to the ambient light level. The available options are “Yes” or “No”.

Brightness



A fixed brightness level for the display can be set here. The adjustable range is from 1 to 10. When this setting is used, the “Auto” setting is ignored.

Standby

This setting determines when the display turns off. The adjustable range is from 1 to 30 minutes. The default setting is 1 minute.





Auto Off

This setting determines when the remote control switches off after entering standby mode. The adjustable range is from 1 to 30 minutes. The default setting is 1 minute.

1. In the “User Menu,” press the button  to select the “Display” menu and press .



P-21930_22

2. In the “Display” menu, press the button  to select one of the settings and press  to confirm. Set the desired value. Use the buttons  or  to adjust the values.



P-21930_03

2.4.1.1.2 Warnings Menu

The following settings are available in the “Warnings” menu:



- *Key Tone*
- *Warnings*

Key Tone

The “Key Tone” setting allows you to enable or disable an audible signal when pressing buttons. The available options are “Yes” or “No”.





Warnings

The “Warnings” setting allows you to enable or disable audible warning signals during operation. The available options are “Yes” or “No”.

1. In the “User Menu,” press the button  to select “Warnings” and press  to confirm.



P-21936_22

2. In the “Warnings” menu, press the button  to select one of the settings and press  to confirm. Set the desired value. Use the buttons  or  to adjust the values.





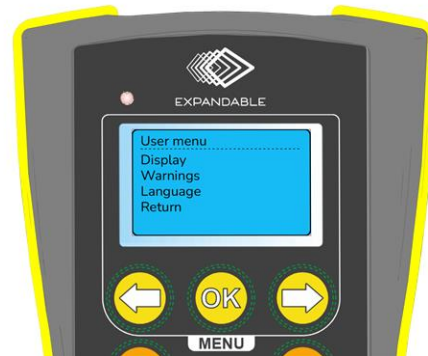
P-21936_23

2.4.1.1.3 Language Menu



The following language options are available in the “Language” menu:

- *English*
- *Nederlands*
- *Deutsch*
- *Francais*

1. In the “User Menu” press the button  to select “Language” and press  to confirm.



P-21936_22

2. In the “Language” menu, press the button  to select the desired language and press  to confirm.





P-21936_18

2.4.1.2 Settings Menu



To access the “Settings” menu from the main menu, an access code must be entered. Within this menu, you can access the following submenu:

- *Pairing AB*

1. In the “User Menu,” press the button  to select “Settings” and press  to confirm.



P-21936_02

2. Press the button  to display the access code input field.
3. Enter the access code and press  to confirm.




P-21938_09

2.4.1.2.1 Pairing AB Menu


Status

In the “Status” menu, you can see which receiver the transmitter is paired with.

1. In the “Pair AB Menu” press the button  to select “Status”.



P-21936_24

2. Press  to display the code of the receiver to which the transmitter is paired.


 *If no code is displayed, the device is not paired.*



P-21936_07


Pairing

When you select the “Pair” option, the transmitter will start searching for the receiver. The “Pair” option must also be confirmed on the receiver in the “Pair AB Menu” by pressing OK, allowing both devices to search for each other via Bluetooth.


1. In the “Pair AB Menu” press the button  to select “Pair”.

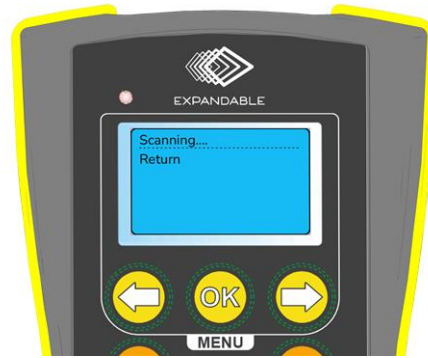


P-21936_24

2. Press the button .

The devices to be paired will now start searching for each other.


 *The code of the paired device can be viewed in the "Status" menu. (See "Status on the previous page").*



P-21936_06


Reset

The pairing between the transmitter and receiver can be removed by selecting the "Reset" function in the "Pairing AB" menu and confirming it.

1. In the "Pair AB menu " press the button  to select "Reset"



P-21936_24

2. Press the button .

The devices are now disconnected.




P-21936_05

2.4.1.3 Sensor Information


The “Sensor Information” menu consists of five pages. These pages provide information about:

- *PLC software version*
- *Receiver firmware version*
- *Transmitter firmware version*
- *Left slide-out position*
- *Right slide-out position*
- *Support legs*
- *Fault messages*
- *Trailer type*

1. In the main menu, press the button  to select the “Sensor Information” menu.



P-21938_02

2. Press  to go to the first page of the sensor information.

Batt.hydr. ????


SW PLC

SW remote: Remote control software version code.

SW receiver: Receiver software version code.



P-21938_11

3. In the "Sensor Information menu", press the button  to go to the second page of the sensor information.

Tilt f x: Front tilt x

Tilt f y: Front tilt y


Tilt r x: Rear tilt x

Tilt r y: Rear tilt y

Pos.seg.L: Left slide-out position




P-21938_12

4. In the "Sensor Information menu", press the button  to go to the third page of the sensor information.

Pos.seg.R: Right slide-out position



P-21938_13

5. In the "Sensor Information menu", press the button  to go to the fourth page of the sensor information.



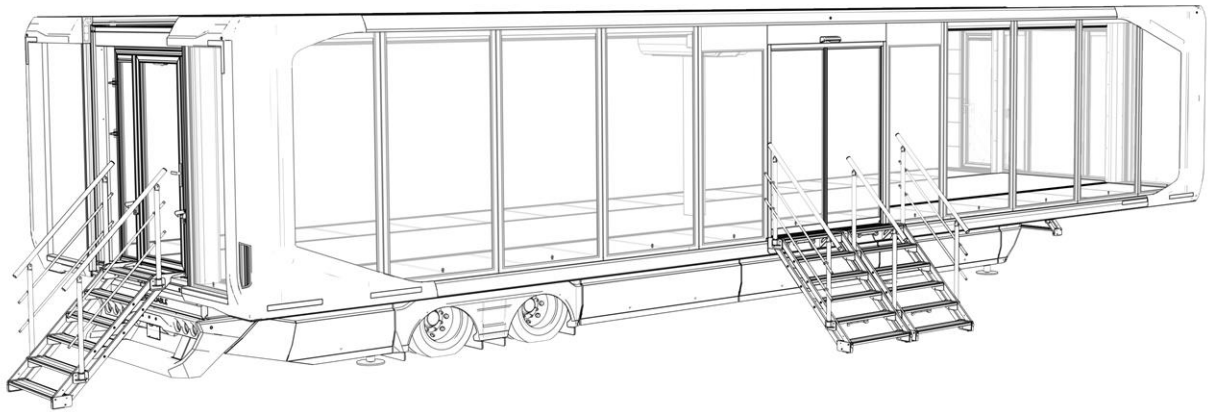
P-21938_14

2.5 Operation

The control area of the remote control contains the buttons used to operate the cylinders connected to the movable parts of the Expandable 53ft trailer.

Button	Function	Description
	Lower front left	Piston rod retract
	Raise front left	Piston rod extend
	Lower front right	Piston rod retract
	Raise front right	Piston rod extend
	Lower rear left	Piston rod retract
	Raise rear left	Piston rod extend
	Lower front right	Piston rod retract
	Raise rear right	Piston rod uit
	Auto level	Automatic leveling
	Not active	
	Left slide-out extend	F1
	Left slide-out retract	F1
	Right slide-out extend	F2
	Right slide-out retract	F2

Table 2-1 Button Functions



E16TU_61

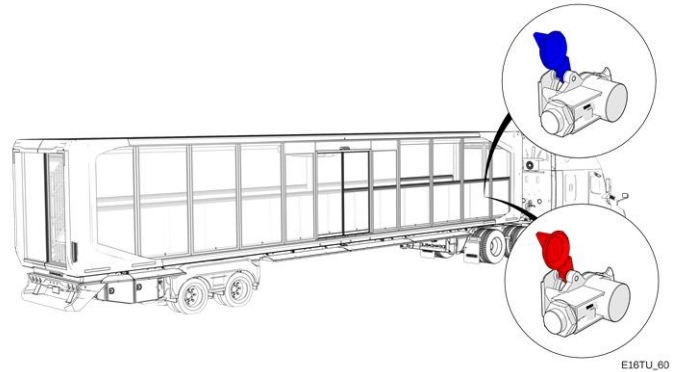
3. Preparation for use

This chapter contains information about disconnecting and preparing the Expandable 53ft trailer.

3.1 Prepare for use

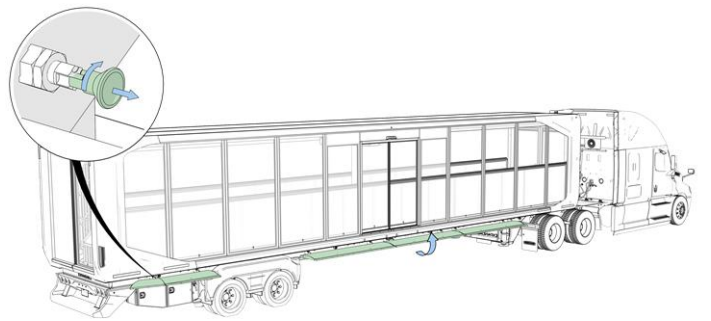
Follow the procedure below.

1. Disconnect the red emergency air line and the blue service air line.

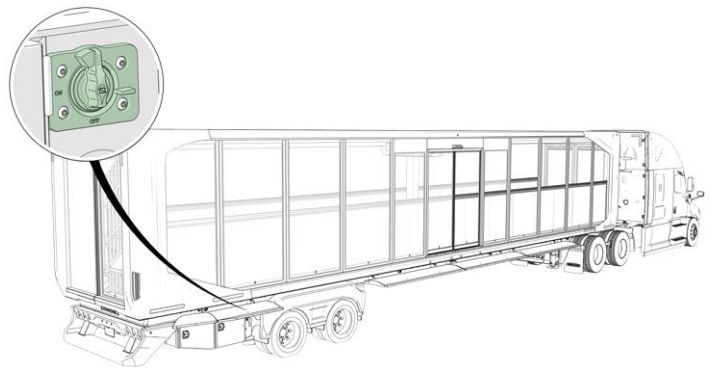


2. Unlock the underride guard on the left and right and tilt them upwards.

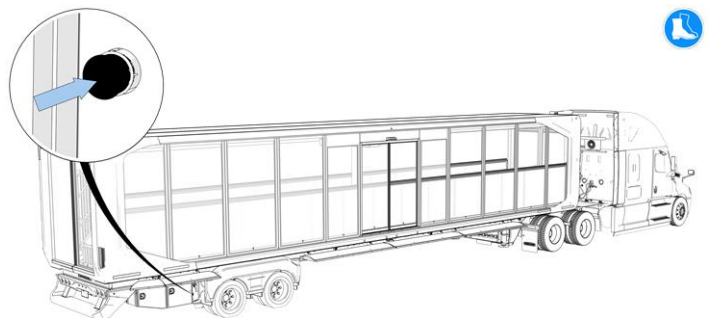
  **Each part of the underride guard has 2 locks**



3. Turn the main battery disconnect switch to the "ON" position.

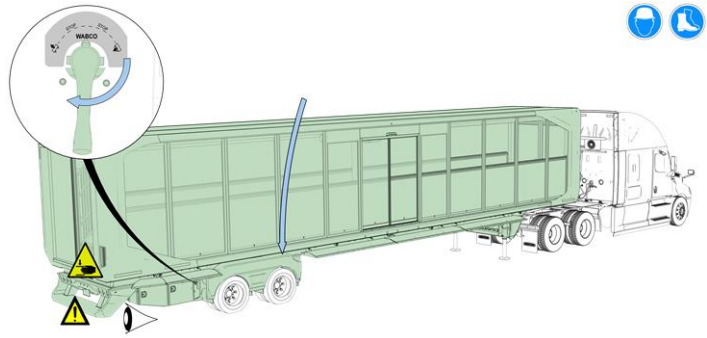


4. Push the black air parking brake knob of the Expandable 53ft trailer to release the parking brake.



- Turn the lever clockwise to release the pressure in the air springs. Lower the rear of the Expandable 53ft trailer as far as possible.

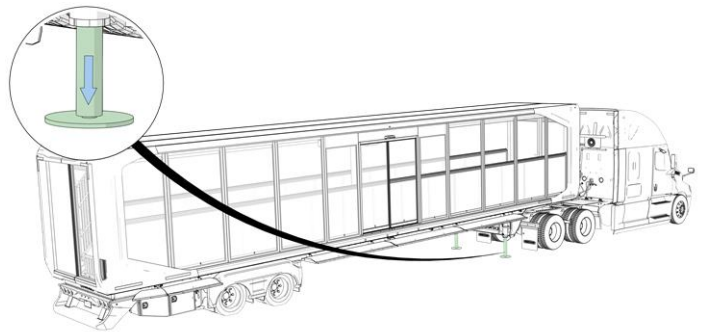
		<i>Ensure that the rear of the Expandable 53ft trailer does NOT touch the ground. This can happen on sloping terrain.</i>
		<i>Please note that the Expandable 53ft trailer tilts backward.!!!</i>



E16TU_52

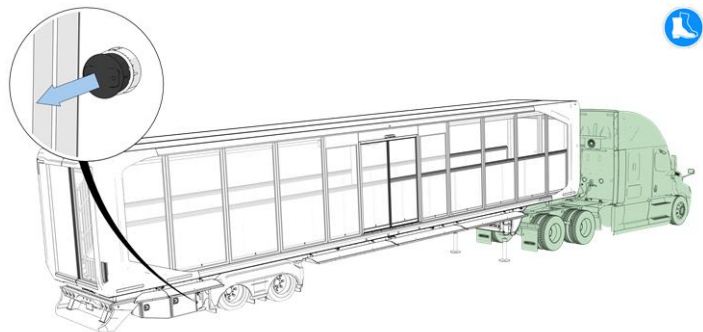
- Press the keys **2** and **4** on the remote control to extend the piston rods of the lift cylinders at the front of the Expandable 53ft trailer until they touch the ground.

		<i>Always use the supplied outrigger pads.</i>
--	--	--



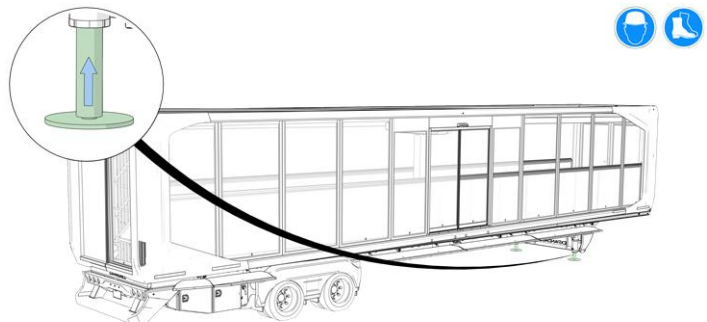
E16TU_18

- Pull out the black air parking brake knob to apply the parking brake on the Expandable 53ft trailer.
- Unlock the fifth wheel coupling.
- Disconnect the hoses and cables between the tractor and the Expandable 53ft trailer.
- Drive the tractor out from under the Expandable 53ft trailer.



E16TU_53

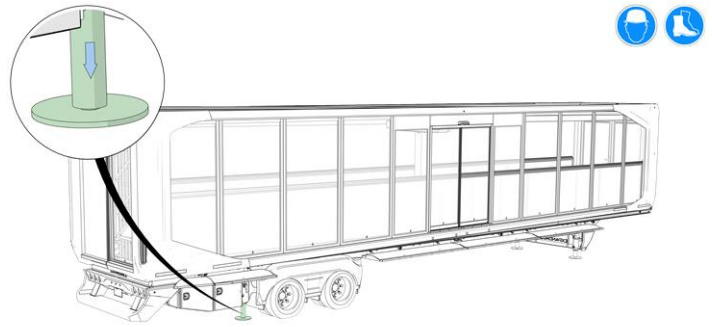
- Press the remote control buttons **1** and **3** on the remote control to retract the piston rods of the front lift cylinders until the front of the Expandable 53ft trailer reaches its lowest possible position.



E16TU_68


12. Press buttons **6** and **8** on the remote control to extend the piston rods of the rear lift cylinders of the Expandable 53ft trailer until they contact the ground.

		Always use the supplied outrigger pads.
---	---	--



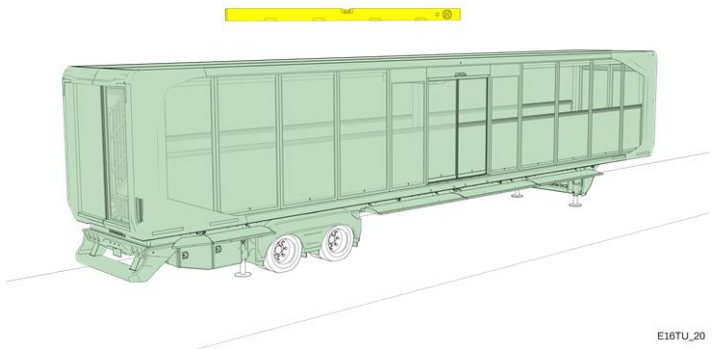
E16TU_72

13. Press the remote control button **9** to automatically level the Expandable 53ft trailer.

	Place wheel chocks in front of and behind the wheels.	
---	--	--



Acoustic Signals

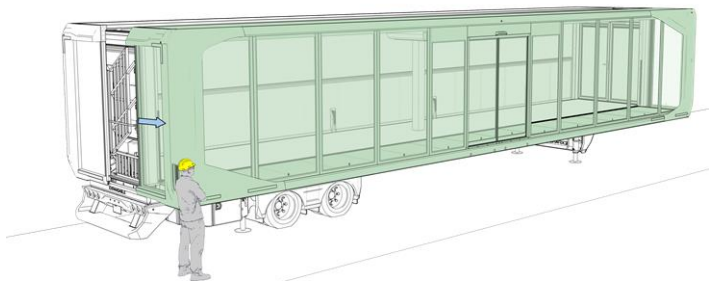
- During leveling: short beep signals
- Completed: three beep signals
- Unsuccessful: three beep signals and a notification



E16TU_20



14. Press the remote control button **13** to slide the right slide out outward.

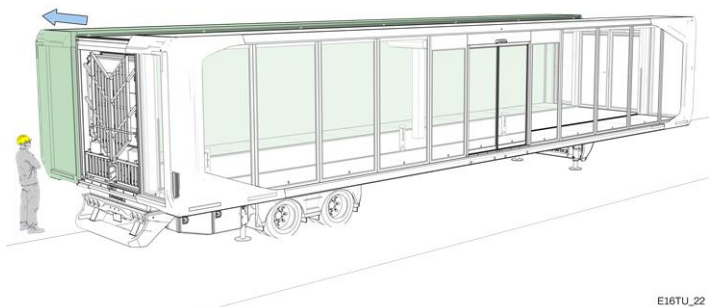
		Stop immediately if any deformation occurs during extension. Correct the cause of the deformation before continuing to extend the segment.
---	---	---



E16TU_21

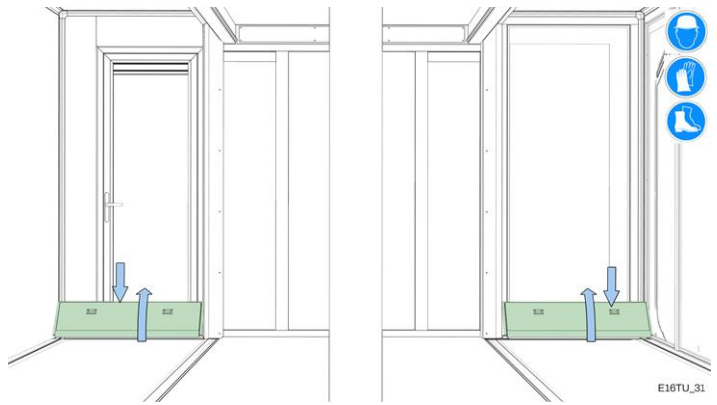
15. Press the remote control button **11** to slide the left slide out outward.

		Stop immediately if any deformation occurs during extension. Correct the cause of the deformation before continuing to extend the segment.
---	---	---



E16TU_22

16. Tilt both floorboards down at the front.



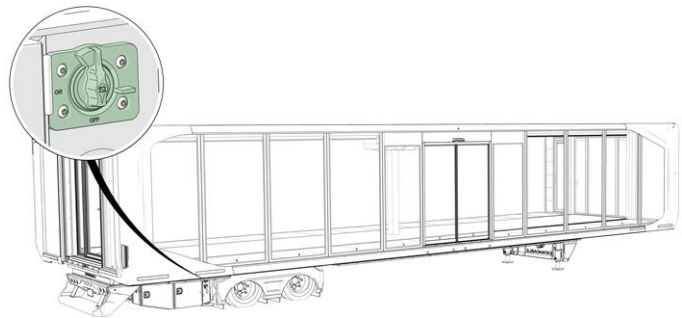
17. Tilt both floorboards down at the rear.



18. Turn the main battery disconnect switch to the "OFF" position.



Lock the battery disconnect switch with a padlock to prevent unauthorized use.



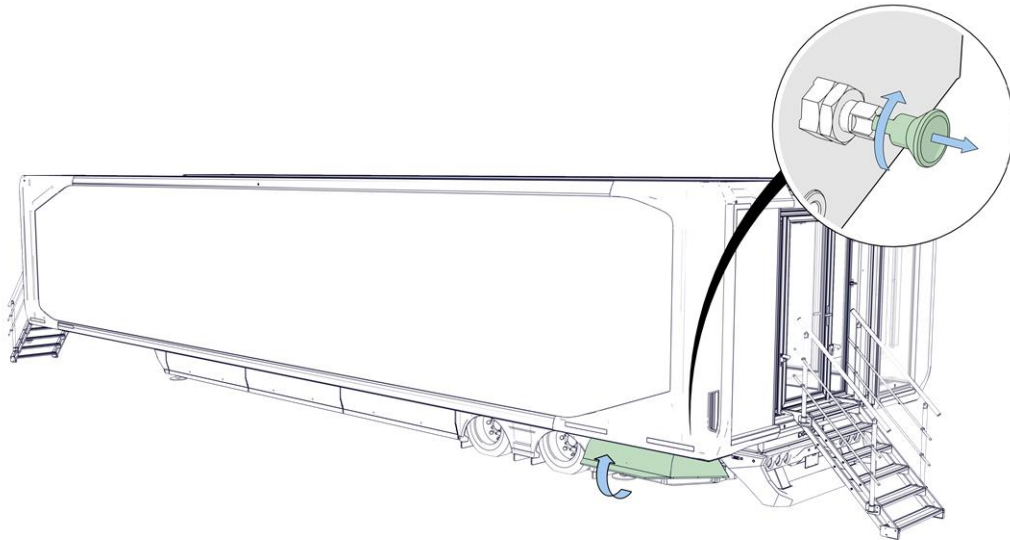
E16TU_66

4. Using your Expandable 53ft trailer

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

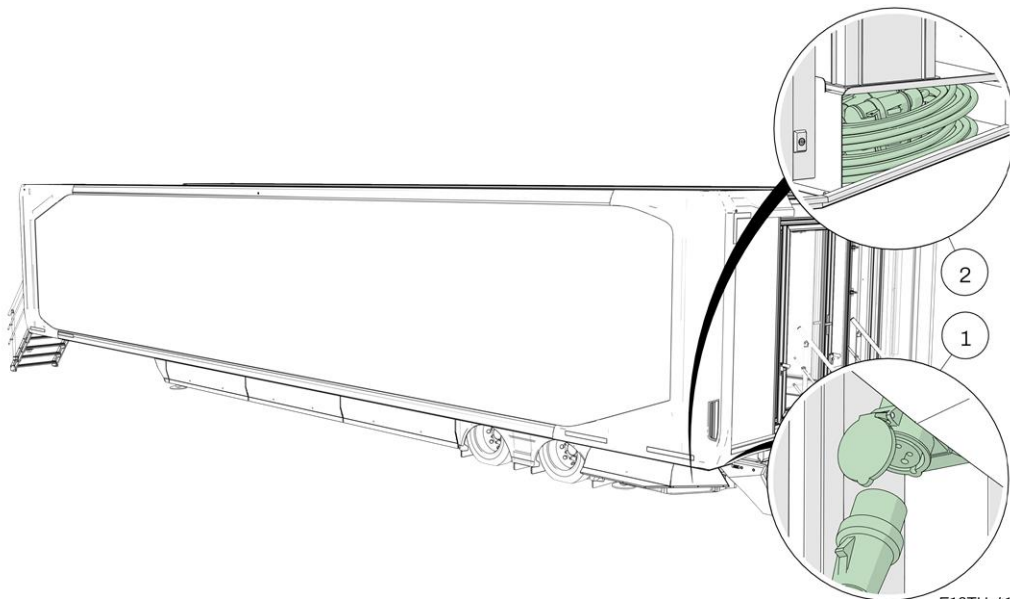
4.1 Connect shore power

Follow the steps below to connect the unit to shore power.



E16TU_40

1. ⬆ Disengage the left-rear underside guard and tilt it upward.



E16TU_41

1 Shore Power Connection

2 Extension cable

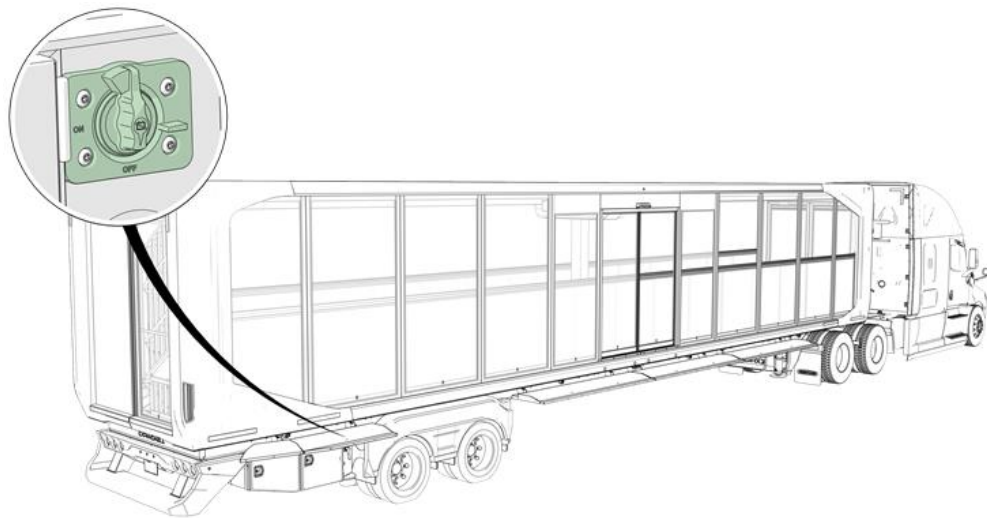
2. ⬆ Unlock and open the storage cabinet door. Retrieve the extension cables needed for the shore power connection from inside the cabinet.
3. ⬆ Connect the shore power supply extension cable.

4.2 Storing your Expandable

We advise users of the Expandable 53ft trailer to temporarily switch off the power if it will remain on-site for an extended period of time. In this case, this applies only to the Expandable 53ft trailer itself. All hydraulic equipment can be switched off using the main battery disconnect switch. All other equipment is powered through shore power. If external devices such as refrigerators or electronic equipment are connected to the Expandable 53ft trailer, it is the user's responsibility to determine whether power to these devices may be switched off.

Follow the procedure below.

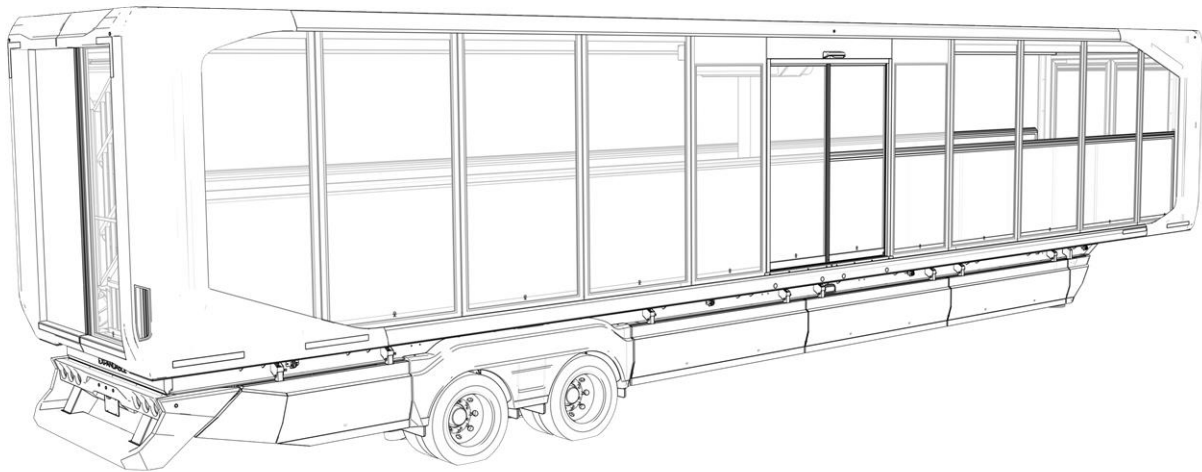
1. ↓ Turn the main battery disconnect switch to the "OFF" position to disconnect the power supply.



E16TU_15



To prevent unauthorized use, lock the main battery disconnect switch with a padlock.



E16TU_63

5. Preparation For Transport

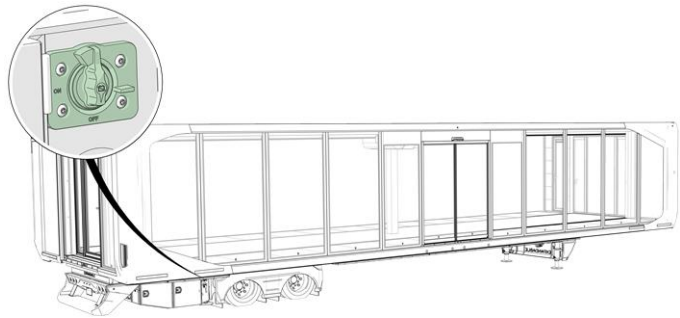
This chapter contains information on preparing the Expandable 53ft trailer for transport and coupling it to a tractor.

5.1 Prepare for transport

Procedure

Follow the procedure below.

- 1. Turn the main battery disconnect switch to the "ON" position.




E16TU_06


- 2. Tilt both floorboards upward at the front.



E16TU_32

- 3. Tilt both floorboards upward at the rear.



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

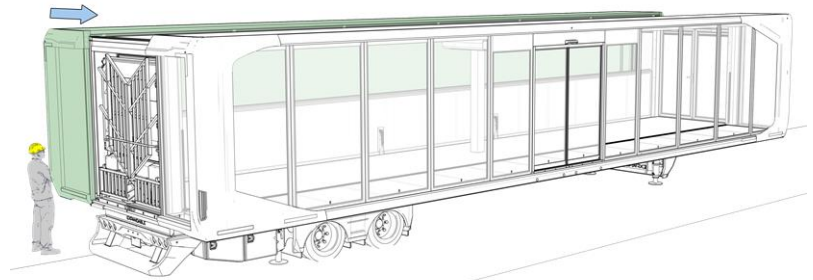
 Remove all items from the folding floors.



E16TU_34



- Press the remote control button **12** and slide the slide out inward.

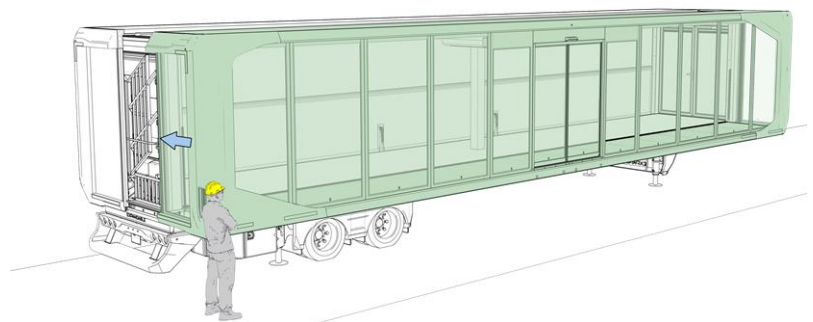
		<i>Stop immediately if any deformation occurs during extension. Correct the cause of the deformation before continuing to extend the segment.</i>
---	---	---



E16TU_24


- Press the remote control button **14** and slide the slide out inward.

		<i>Stop immediately if any deformation occurs during extension. Correct the cause of the deformation before continuing to extend the segment.</i>
---	---	---

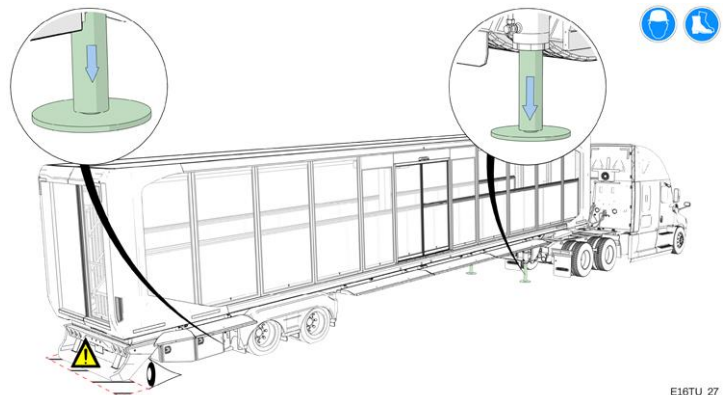


E16TU_25

- Press the remote control buttons **2** and **4** to raise the front of the Expandable 53ft trailer so it can be coupled to the tractor.

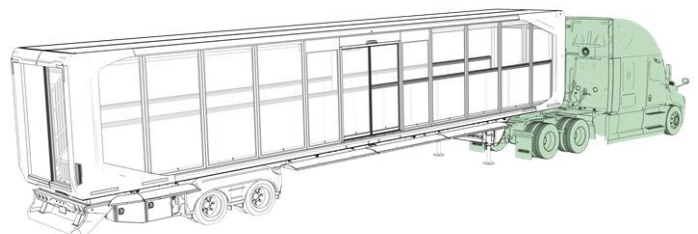
	<i>Ensure the bumper does not touch the ground. DO NOT fully extend the rear piston rods!</i>
---	---

- Press the remote control buttons **6** and **8** to slightly extend the piston rods of the rear lift cylinders, ensuring the bumper remains clear of the ground. (See "Vacuum pull on the air springs on page 42").



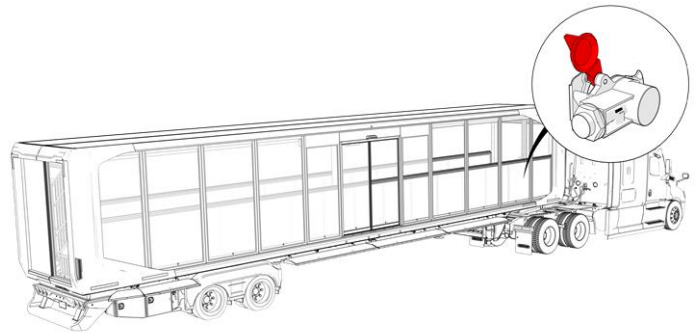
E16TU_27

- Connect the tractor to the trailer.
- Connect the air lines and the electrical connectors.



E16TU_64

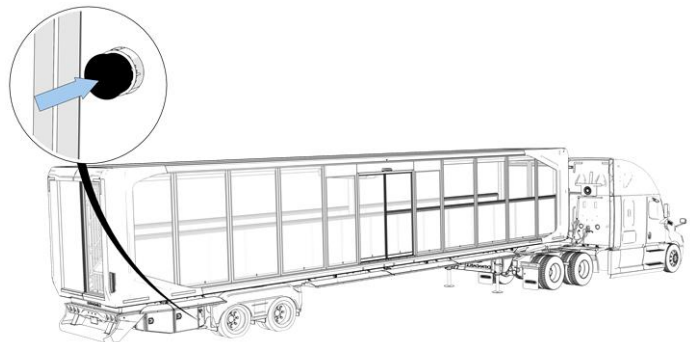
10. Connect the red emergency air line.



E16TU_11

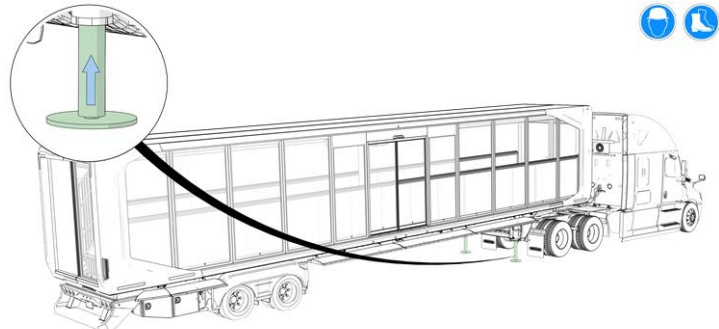
11. Press the black button in to release the parking brake.

		<i>Remove the wheel chocks.</i>
--	--	---------------------------------



E16TU_09

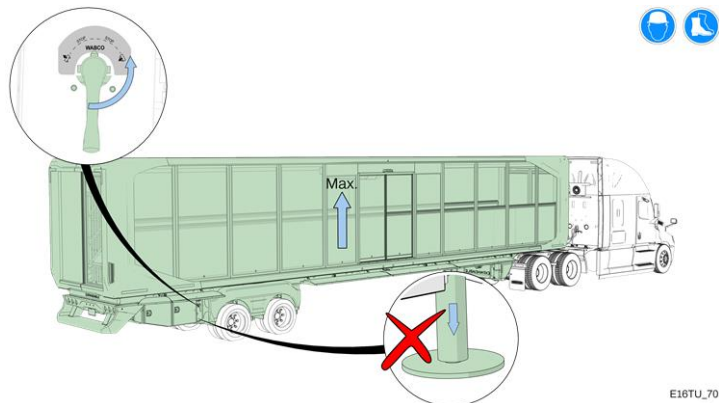
12. Press the remote control buttons **1** and **3** to fully retract the piston rods of the front lift cylinders.



E16TU_57

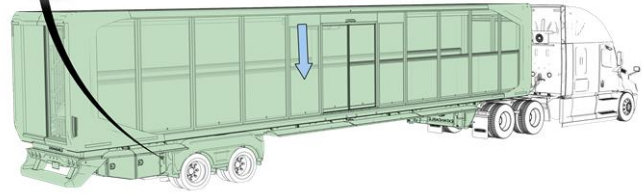
13. Turn the air control valve fully counterclockwise and wait until the rear of the Expandable 53ft trailer reaches its highest position.

		<i>Do not use the rear lift cylinders to raise the rear of the Expandable 53ft trailer.</i>
--	--	---



E16TU_70

- 14. Turn the air control valve to the center position so the Expandable 53ft trailer returns to ride height.

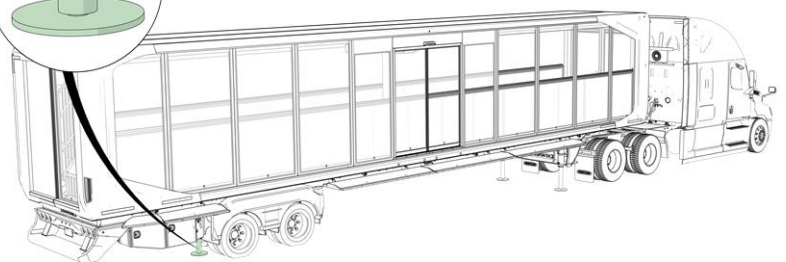
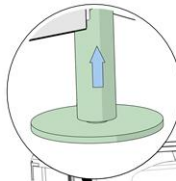


E16TU_59

- 15. Press the remote control buttons 5 and 7 to fully retract the piston rods of the rear lift cylinders.



Store the outrigger pads in their designated storage location.

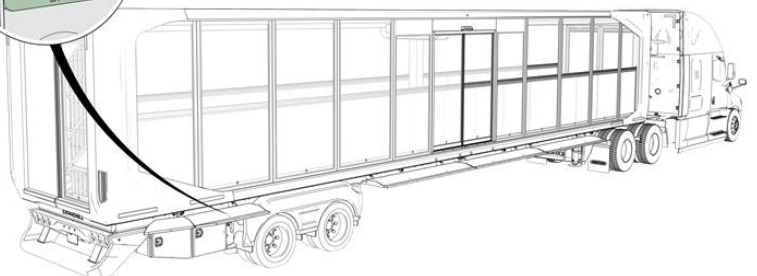


E16TU_65

- 16. Turn the main battery disconnect switch to the "OFF" position.

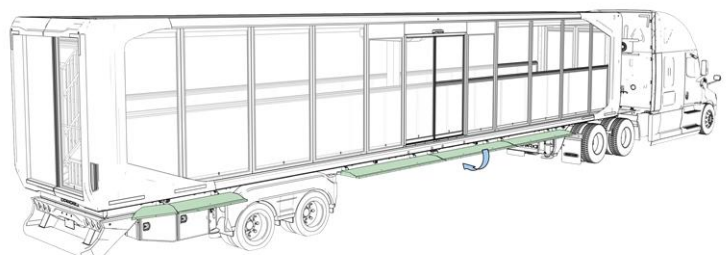


Lock the battery disconnect switch with a padlock to prevent unauthorized use.



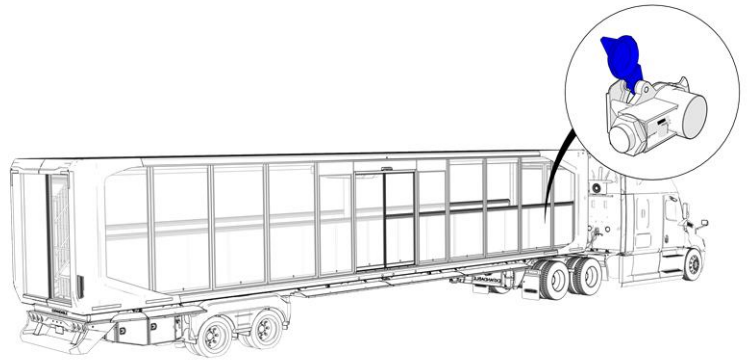
E16TU_15

- 17. Tilt the underride guards down on both sides.



E16TU_30

18. Connect the blue service air line.



E16TU_07

5.2 Vacuum pull on the air springs

As soon as you fully deflate the air springs and then raise the rear lift cylinders, the air springs are pulled into a vacuum by the weight of the suspension, because no air can enter the air springs. (see "Image 5-1").

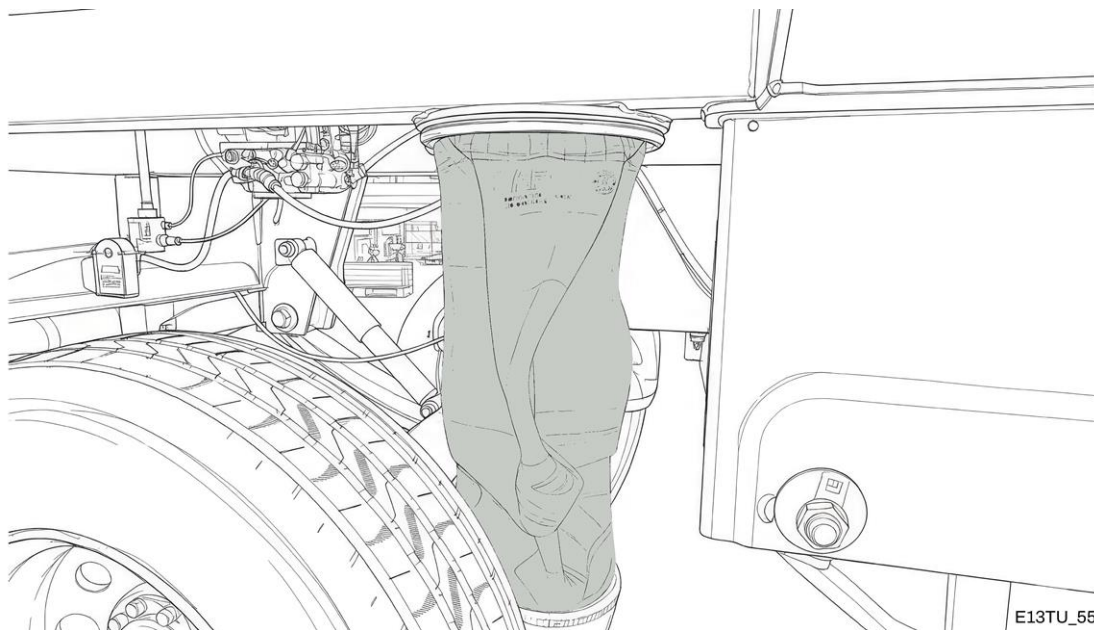
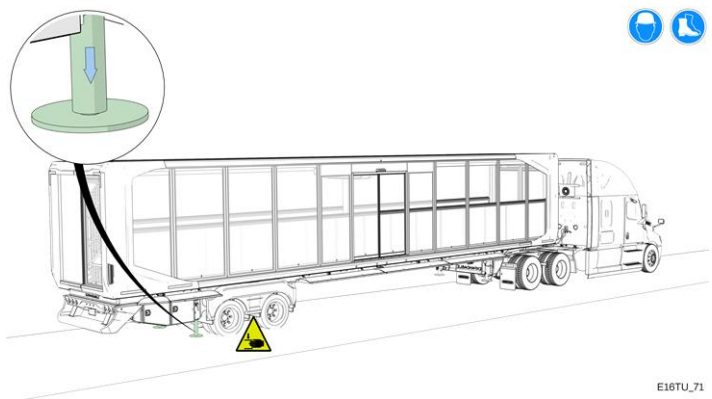


Image 5-1

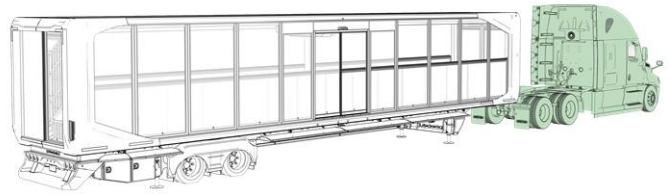
If the Expandable 53ft trailer is then lowered again, the air springs can become jammed between the upper and lower mounting points and possibly other suspension components. If air is then pumped into the air springs, they may become seriously damaged.

Follow the procedure below as soon as a similar situation arises.

1. Press the remote control buttons **6** and **8** to lift the Expandable 53ft trailer at the rear and raise the Expandable 53ft trailer to ride height.

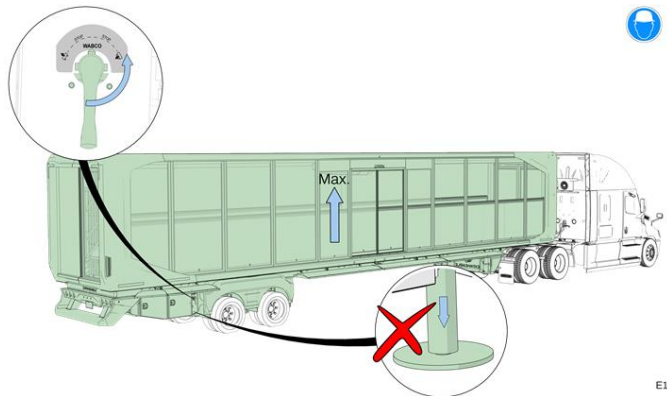


2. Charge the air tanks by coupling a tractor and connecting the red air line.



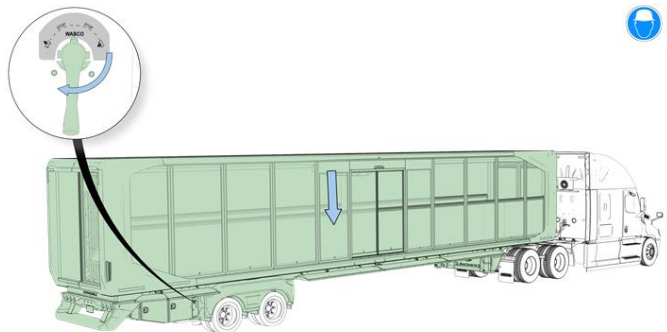
E16TU_56

3. Turn the lever counterclockwise to pump air into the air springs until you hear a popping sound coming from them. This indicates that the air springs are in the correct position.

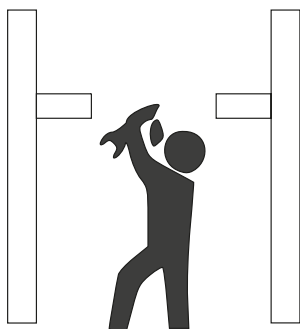


E16TU_70

4. Then turn the lever to the middle position. The Expandable 53ft trailer will return to its normal driving height.



E16TU_59





6. Periodic Maintenance

In this chapter, you will find information about the maintenance you need to perform on your Expandable 53ft trailer. You will also find information about ordering parts.

6.1 Maintenance Schedule

The table below lists the components that require periodic maintenance.

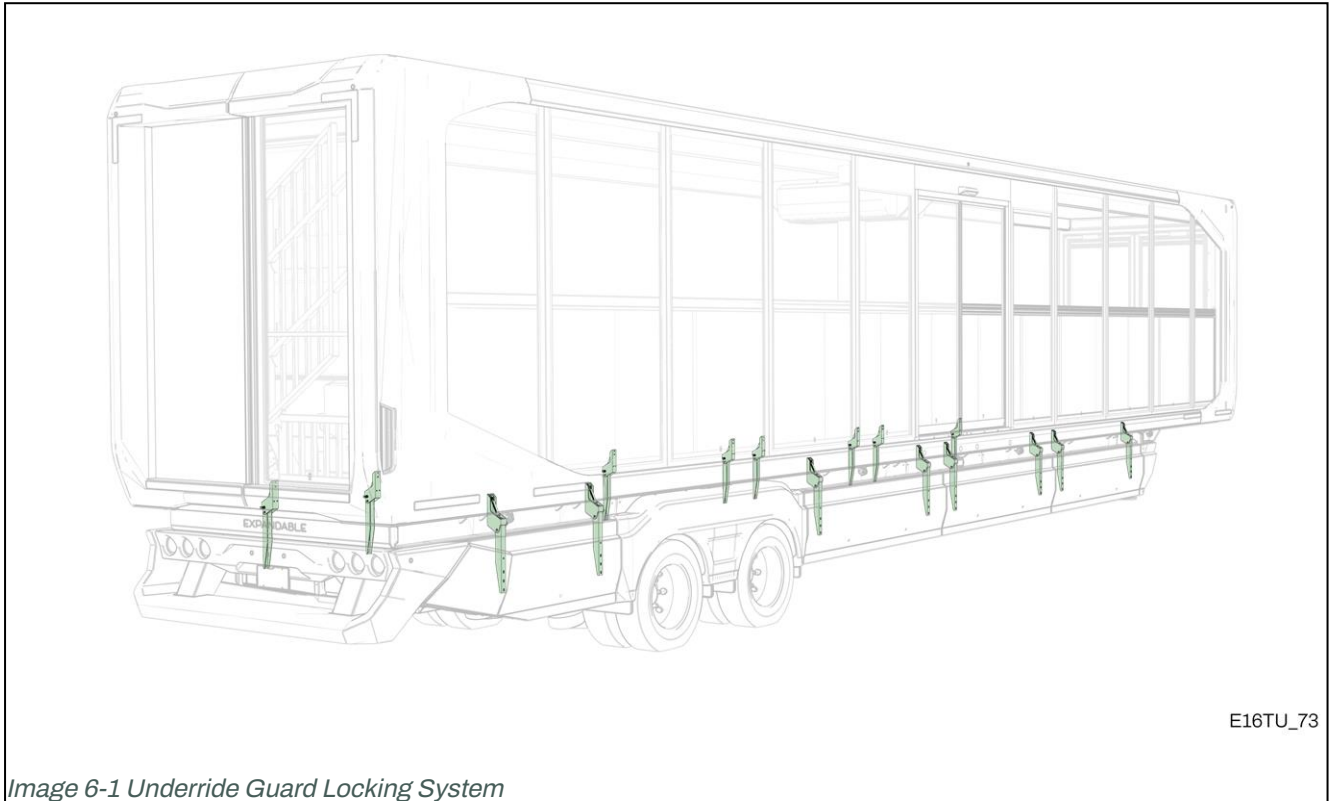



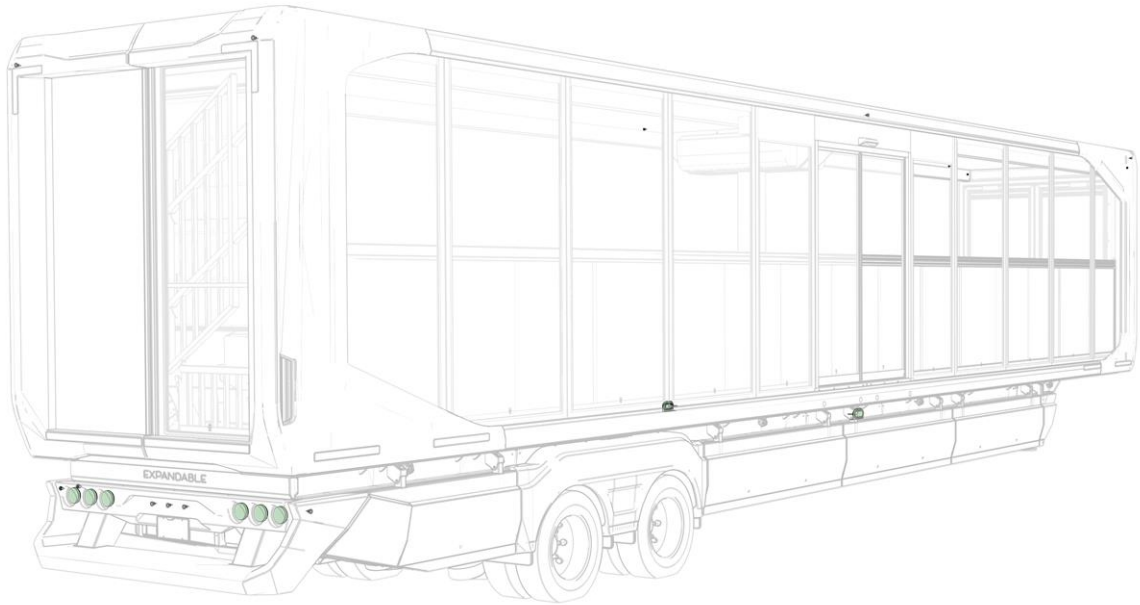
Expandable LLC advises adhering to the maintenance intervals indicated in the table and using only products with the specified specifications. Order your required products from Expandable LLC (864)-400-5095 in a timely manner.

Check	Ref. image	Action	Daily / Before use	Performed by
Sliding guides	Click	Inspect for contamination and remove debris if necessary	x	Driver / Operator
Fixed roof	Click	Inspect for contamination and remove debris if necessary	x	Driver / Operator
Hydraulic system – Check for oil leaks	Click	Inspect / Report	x	Driver / Operator
Door Locks		Inspect / Report	x	Driver / Operator
Battery Voltage Level		Inspect / Report	x	Driver / Operator
Tire Pressure: 850 kPa (123 psi) (cold)		Inspect / Report	x	Driver / Operator
Rim and Tire Damage		Inspect / Report	x	Driver / Operator
Trailer Exterior Lighting	Click	Inspect / Report	x	Driver / Operator
Brakes and Air Suspension Height Control		Inspect / Report	x	Driver / Operator
License Plate and Reflectors		Check / Clean	x	Driver / Operator
Check for EBS fault messages		Inspect / Report	x	Driver / Operator
Fifth Wheel and Kingpin Lubrication		Inspect / Report	x	Driver / Operator
Expandable 53ft trailer Damage		Inspect / Report	x	Driver / Operator
Ride Height Control Operation (Driving Position)		Inspect / Report	x	Driver / Operator
Underride Guard Locking System	Click	Inspect / Report	x	Driver / Operator
Service			Interval	
Expandable Service 1			2000 Km/ 2 Weeks	Service Workshop
Expandable Service 2			30.000 Km/ Every 3 Months	Service Workshop

Check	Ref. image	Action	Daily / Before use	Performed by
Expandable Service 3			60.000 Km / Every 60 Months	Service Workshop
Expandable Service 4			120.000 Km / Every 12 Months	Service Workshop

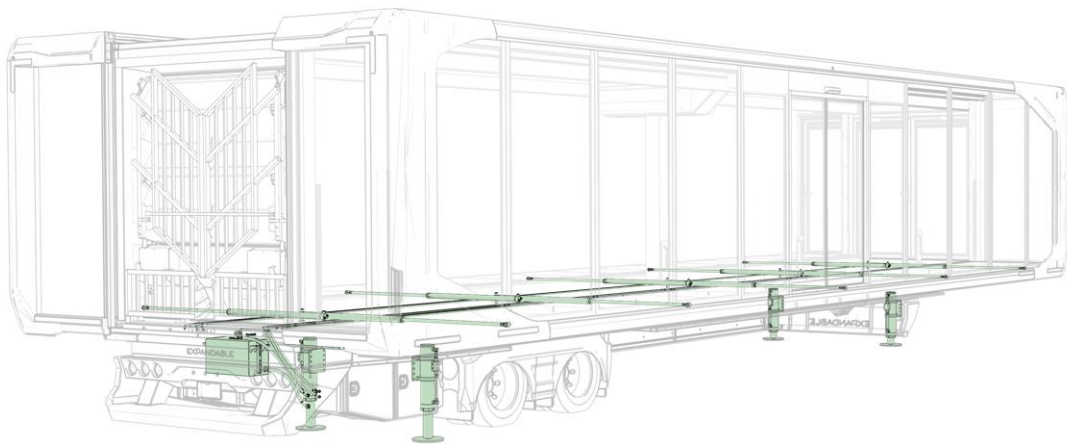
Table 6-1 Maintenance Schedule





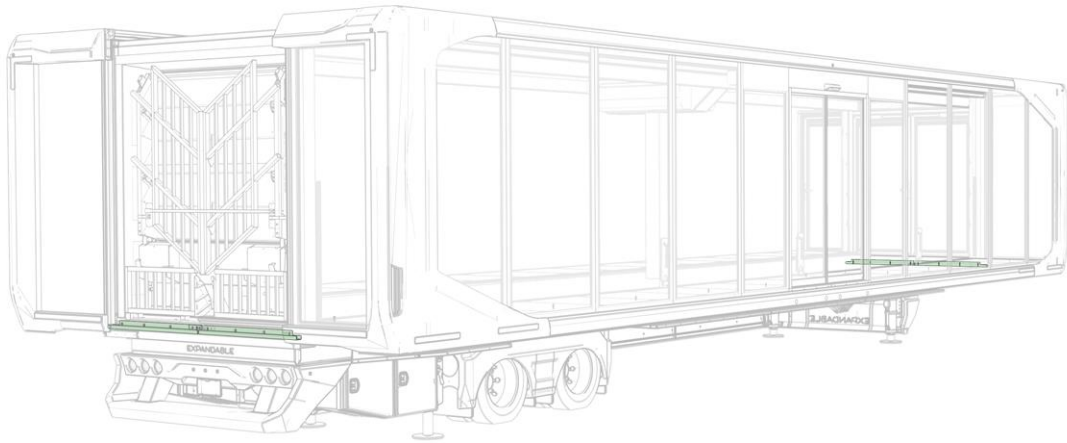
E16TU_74

Image 6-2 Trailer Exterior Lighting



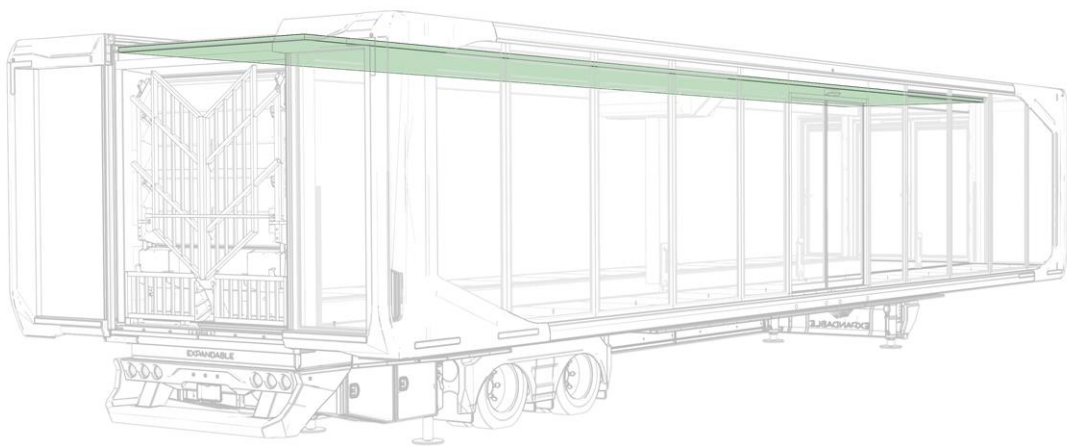
E16TU_75

Image 6-3 Hydraulic system



E16TU_76

Image 6-4 Sliding guides



E16TU_77

Image 6-5 Fixed roof

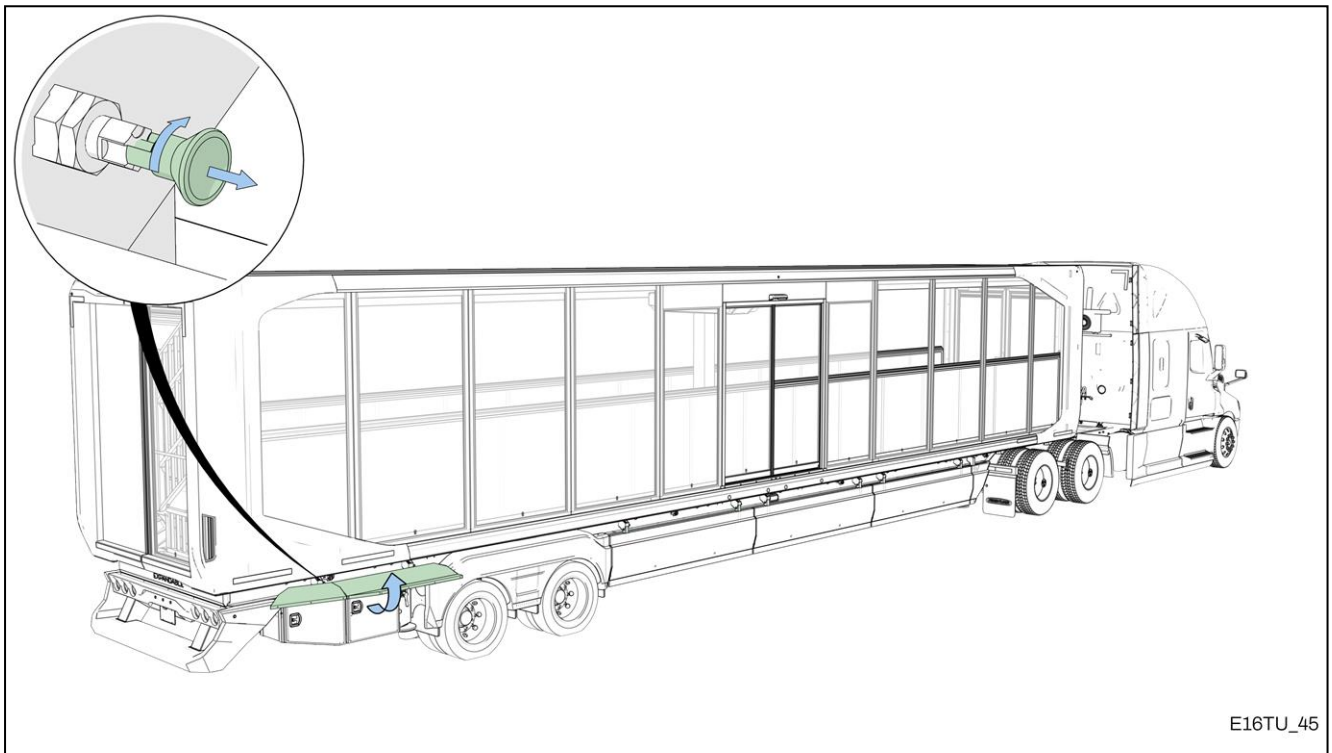
6.2 Oil Level

For the hydraulic system to function properly, it is essential that the oil level is always correct. To ensure an accurate oil level check, the following conditions must be met:

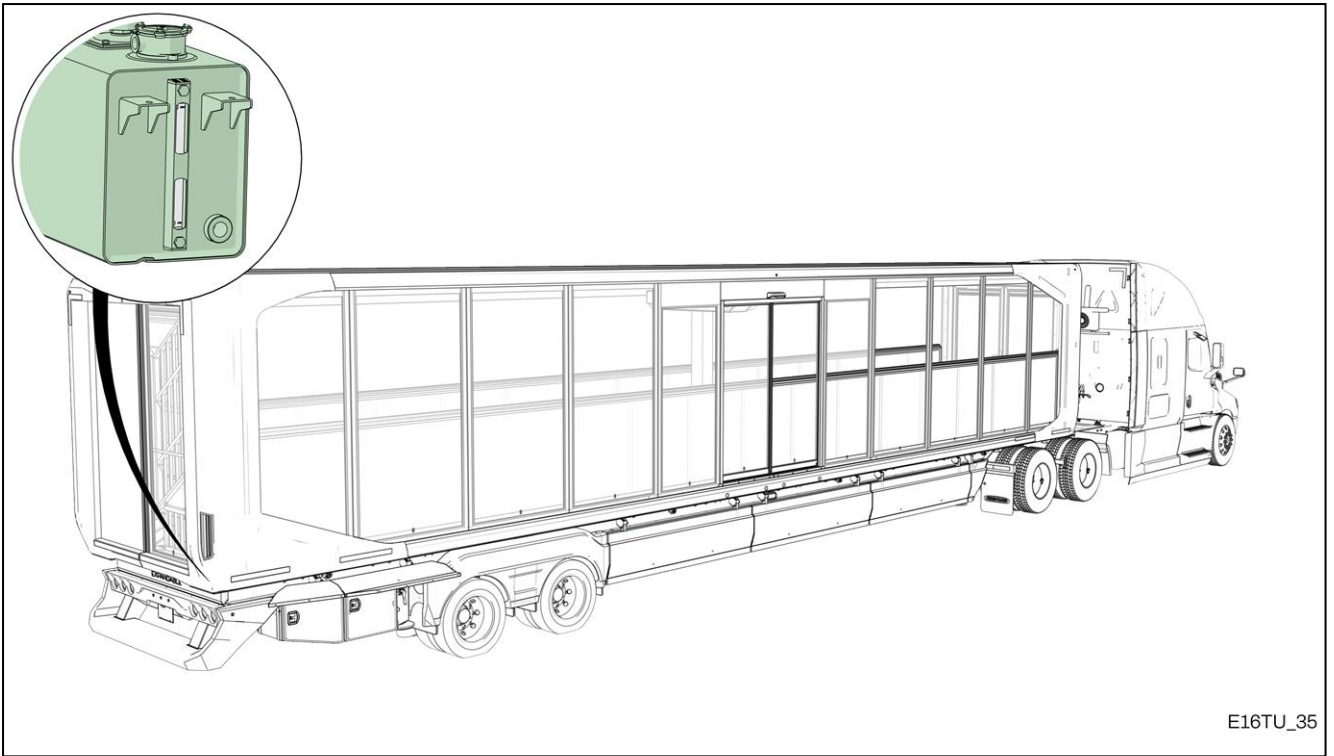
- *Connect the "Expandable 53ft trailer to the tractor.*
- *Ensure that the truck combination is level.*
- *Ensure that the piston rods of the lift cylinders are retracted. (See "Remote control Expandable 53ft trailer on page 1").*
- *Ensure that the slide outs are fully retracted.*

Procedure

Follow the procedure given below.



1. ↑Tilt the rear right-hand underride guard upwards.



2. ↑ Check through the sight glass that the hydraulic oil level is up to the "MAX" mark. Top up the hydraulic oil if the level is below "MAX." (See "AW-32 Hydraulic Fluid on page 1").

6.2.1 Refilling Hydraulic Oil

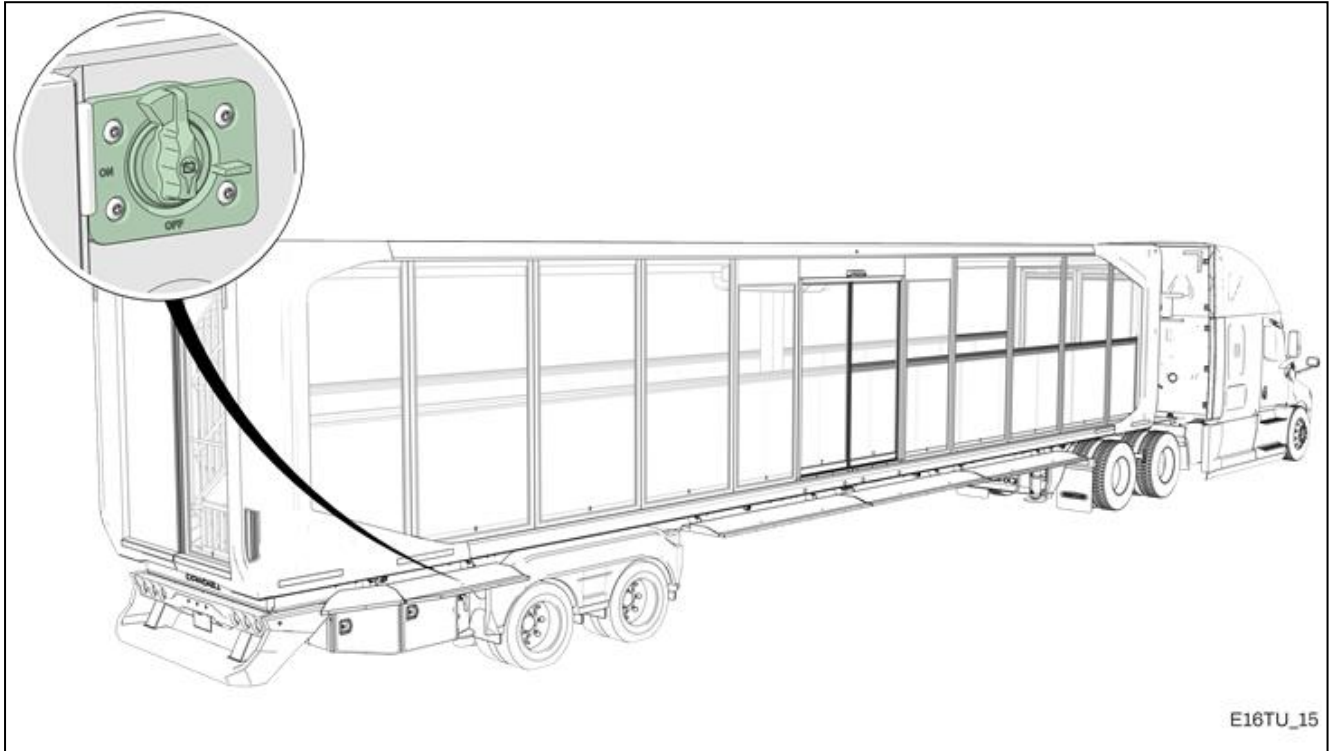
When the hydraulic oil level falls below the “MAX” mark, oil must be added.



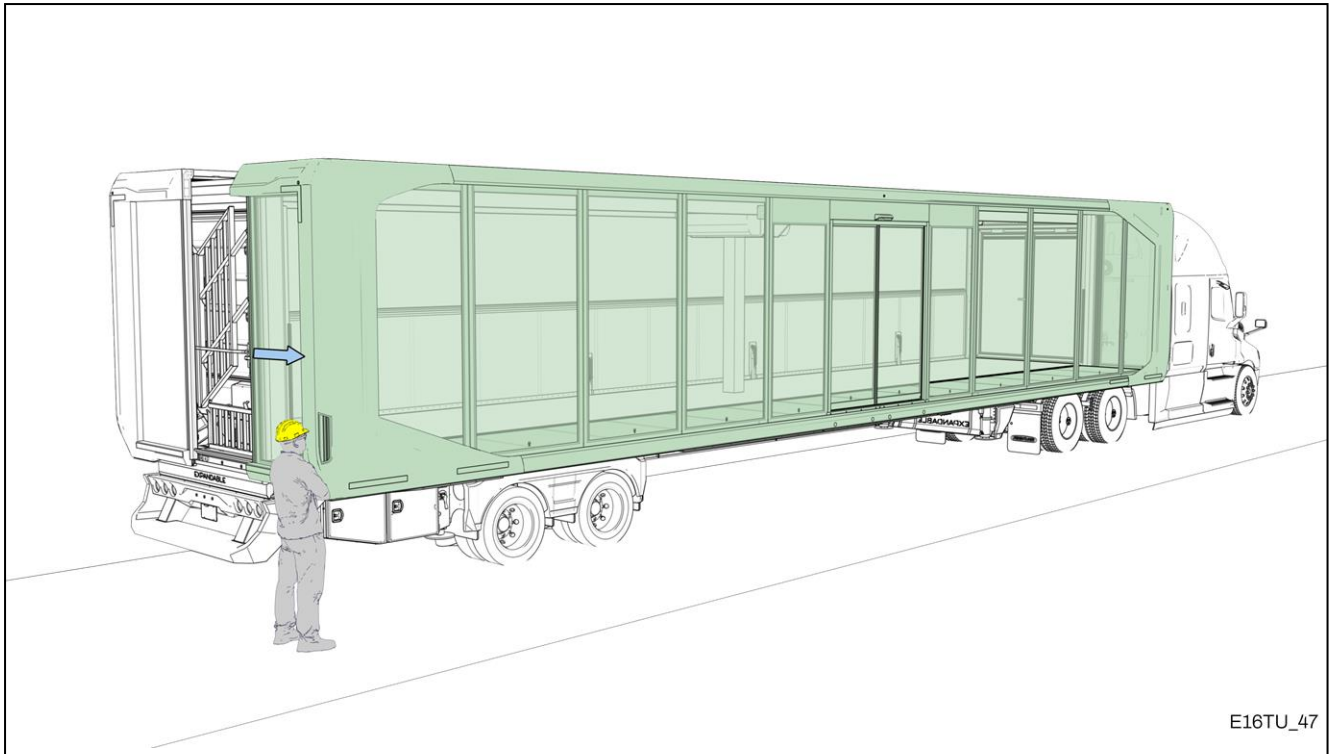
Hydraulic oil can only be refilled when the slide-outs are fully extended.

Procedure

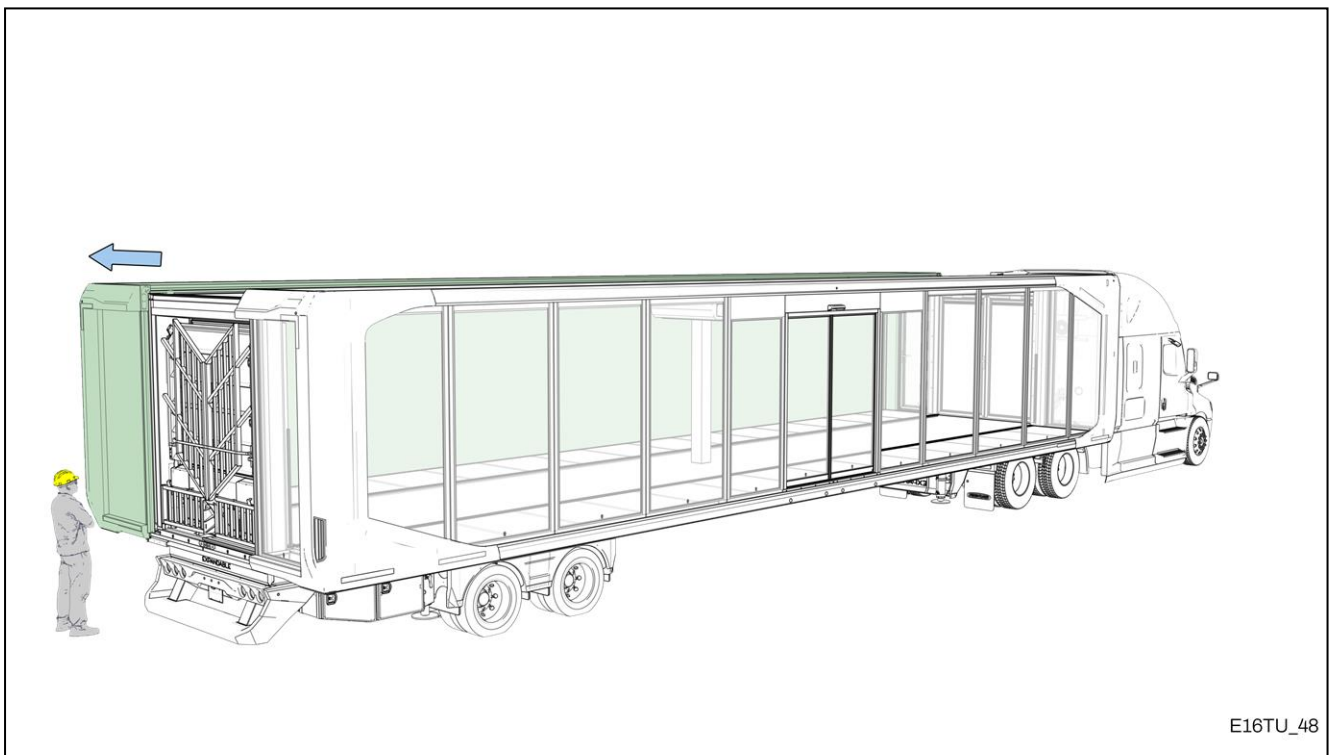
Follow the procedure given below.



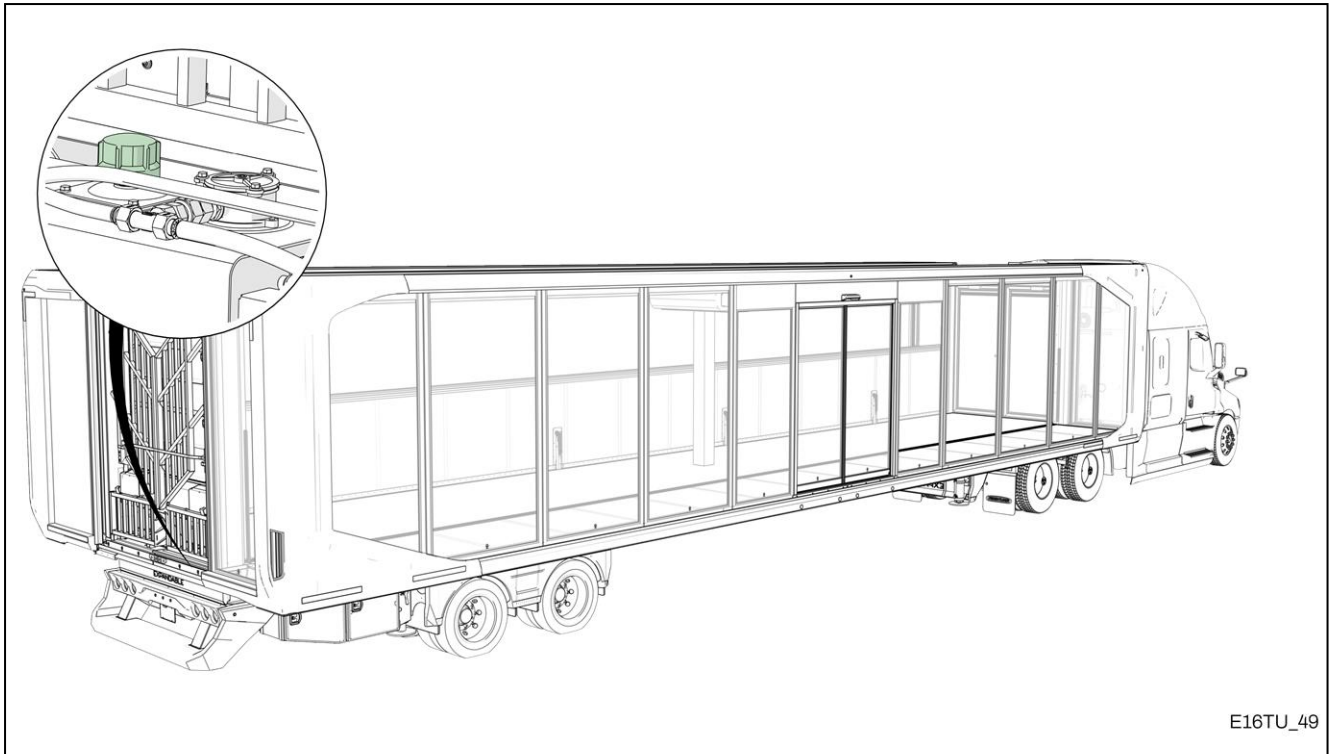
1. ⬆ Set the main battery disconnect switch to the "ON" position.



2. ↑Slide the right slide-out outward (See "Right slide out slides outwards on page 1").



3. ↑Slide the left slide out-outward (See "Left slide out slides outwards on page 1").



4. ⬆ Unscrew the cap on top of the tank and add hydraulic oil.
5. Tighten the cap.
6. Slide both slide-outs inward.
7. Set the main battery disconnect switch to the "OFF" position..
8. Tilt the underide guard downwards.
9. Disconnect the tractor if necessary.




To prevent damage to the hydraulic system and possible leaks, we recommend scheduling an appointment with the service workshop as soon as the hydraulic oil level is above "MAX".

7. Safety & Environment

The following sections contain information on the safe use of the Expandable 53ft trailer. They also describe what to do when the Expandable 53ft trailer has reached the end of its service life.

7.1 Environment

 Once the Expandable 53ft trailer has reached the end of its service life for any reason, it must be dismantled and disposed of in accordance with local and/or national regulations. Contact your local or national government agency, waste disposal service, or the supplier where you purchased the Expandable 53ft trailer for more information on where materials are collected for recycling.

7.2 Safety During Use

 Using a Expandable 53ft trailer may involve certain risks. Always consult the relevant regulations (for example: road traffic laws, company procedures, and safety and health regulations) that apply in the country where the Expandable 53ft trailer is being used.

General Instructions for Using a Expandable 53ft trailer:

- **Never** set up the Expandable 53ft trailer on terrain where the slope exceeds the permitted values (See "Terrain Conditions on page 59").
- **Never** use or position a Expandable 53ft trailer on a public road unless it has been confirmed that the complete trailer complies with the national road traffic regulations.
- Read the operator's manual **BEFORE** a Expandable 53ft trailer is coupled and/or put into operation.
- Perform the daily inspection **BEFORE** a Expandable 53ft trailer is coupled and/or put into operation.
- The truck driver is **ALWAYS** responsible for the use of the Expandable 53ft trailer.
- Only maneuver the Expandable 53ft trailer when there are **NO** people or animals in the immediate vicinity of moving parts of the tExpandable 53ft trailer.

The nature of potential hazards and limitations during use is indicated by the pictograms shown below.




8. General Information

The following sections contain general information about this operator's manual and the product manufactured by Expandable LLC.

8.1 Cleaning your Expandable 53ft trailer

Use a mild cleaning agent and rinse it off with low-pressure water from a hose. Expandable LLC recommends NOT cleaning the unit with aggressive or corrosive cleaning agents. The use of a high-pressure washer or cleaning the unit in a car wash is strongly discouraged. This is to prevent the film from detaching from wrapped parts of the Expandable 53ft trailer.

8.2 Vehicle Registration and Delivery

 The Expandable 53ft trailer must not be used until it has been confirmed that the tractor to which it is attached complies with the applicable national road traffic laws.

 *The Expandable 53ft trailer must not be used until it has been confirmed that the tractor to which it is attached complies with the applicable national road traffic laws.*

 *National road traffic laws vary by country. Please contact the national inspection authority in the relevant country for the required information.*

Subject	Action
Warning Sticker	Ensure that the warning stickers are affixed in a manner that makes them clearly visible to users.
User manual	The operators manual for the Expandable 53ft trailer is handed over to the customer upon delivery. Please inform the customer that the operator's manual must be kept with the Expandable 53ft trailer.
Warranty	The warranty on products manufactured by Expandable LLC can be found in the terms and conditions of delivery <i>(See general terms and conditions)</i> .

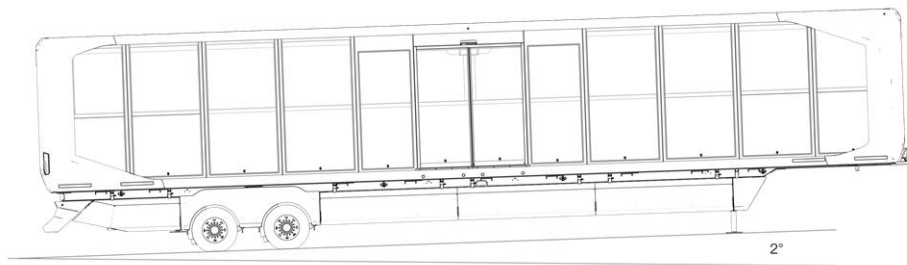
Table 8-1 Delivery documents

8.3 Terrain Conditions

Your Expandable 53ft trailer should preferably be prepared for use and transport on a level surface, both longitudinally and transversely. However, some slope is permitted as long as the inclination angles do not exceed the maximum permissible values shown in the table (see "Table 8-2"). The maximum permissible inclination angles in both the longitudinal and transverse directions are shown below:

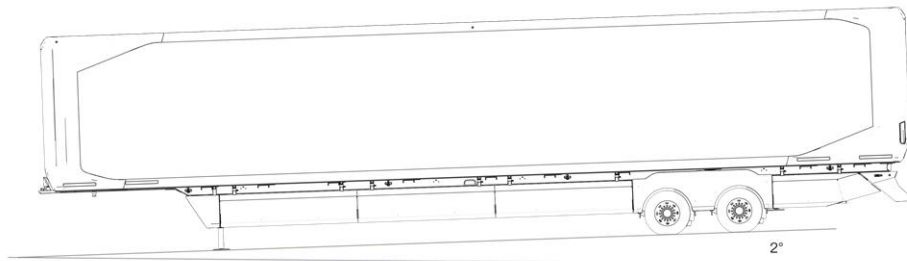
	Angle of inclination
Longitudinal direction	2°
Transverse direction	3°

Table 8-2 Angles of inclination



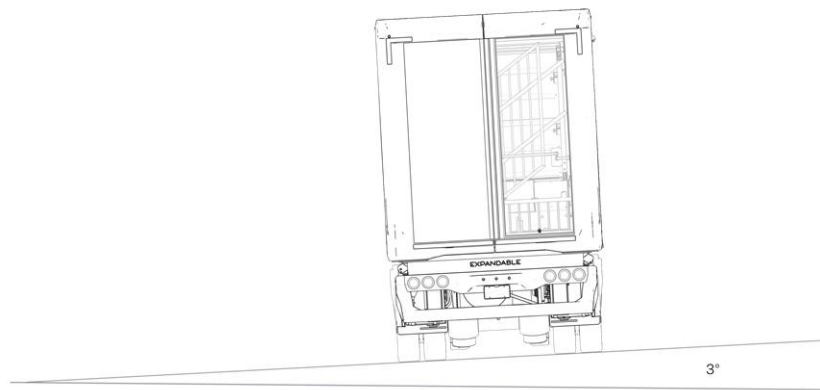
E16TU_36

Maximum Longitudinal Slope Angle



E16TU_37

Maximum Longitudinal Slope Angle





E16TU_38

Maximum Transverse Slope Angle

Before preparing the Expandable 53ft trailer for use, always determine whether the ground is sufficiently load-bearing to support the weight of the Expandable 53ft trailer and its contents, and use the supplied base plates under the lifting cylinders.

8.4 Check Battery Voltage and Recharge

The batteries are normally recharged through the built-in trickle charger as soon as shore power is connected. The battery voltage can be checked at the battery pins and should read 12VDC. A boost converter 12VDC to 24VDC is already installed. If the battery voltage is too low for any reason, the batteries can be recharged via the tractor.

  *The tractor must be able to supply 25 A and must be protected with a 40 A fuse on the tractor side.*

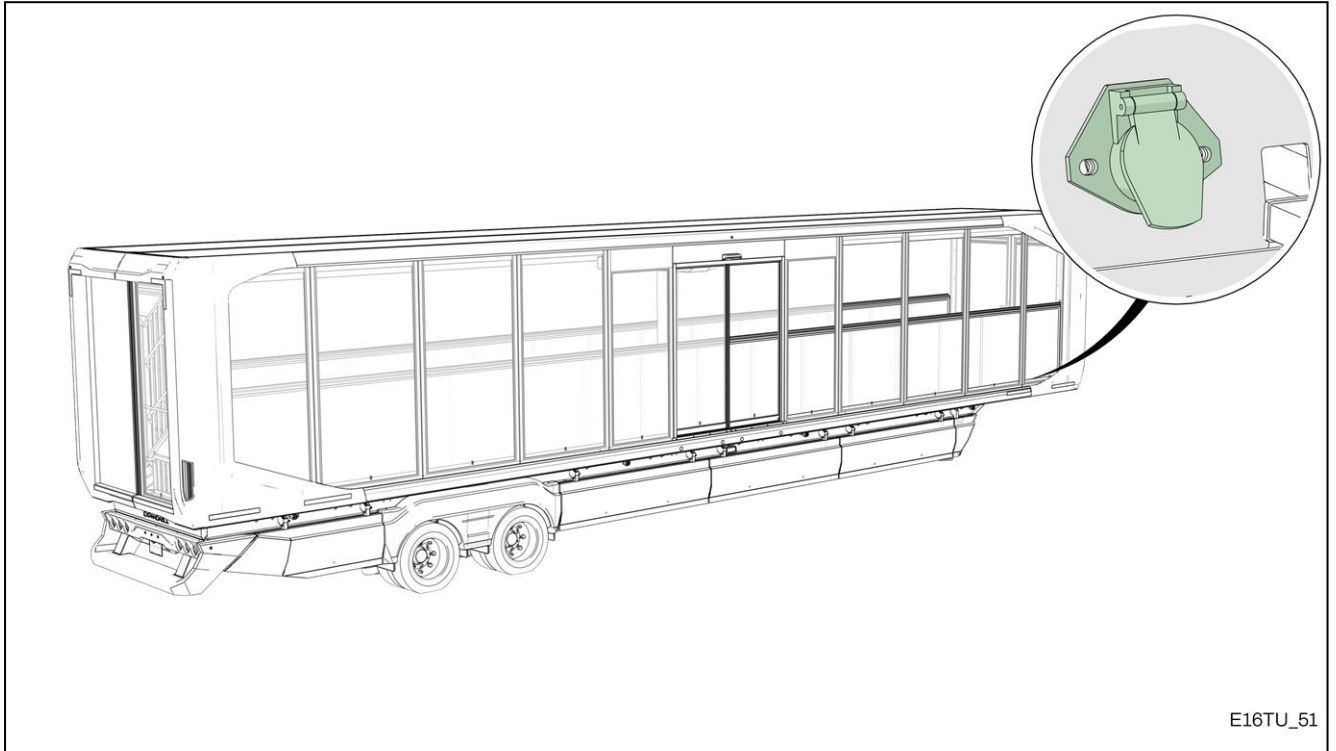


Image 8-1

8.5 Type Sticker and ALR plate

The following type sticker is affixed to the chassis of the Expandable 53ft trailer. This sticker contains information about:

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

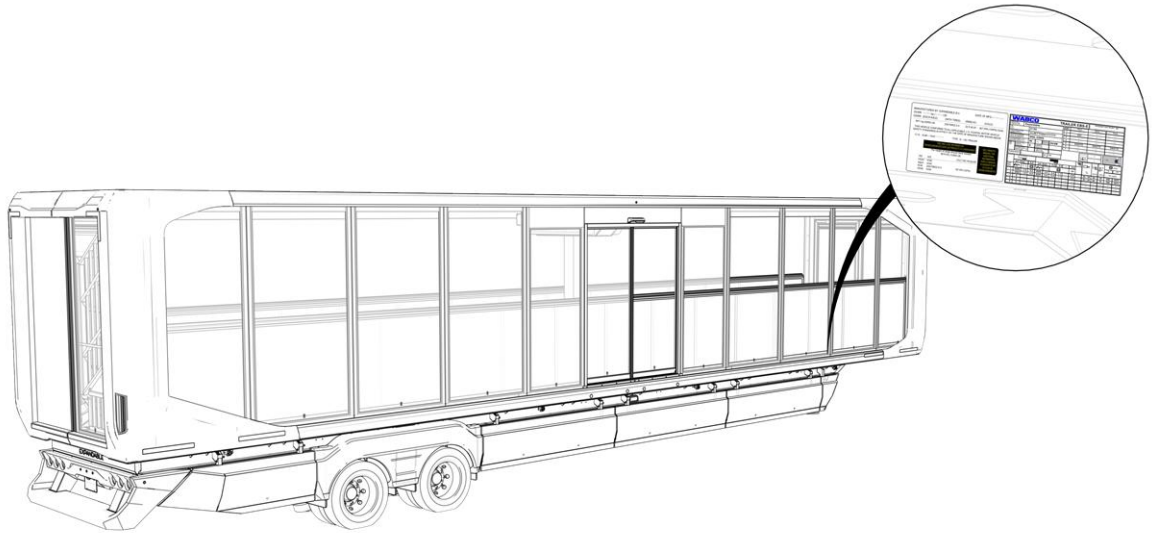
MANUFACTURED BY: EXPANDABLE B.V.		DATE OF MFG:	
GVWR:	kg (LB)		
GAWR: (EACH AXLE)	(WITH TIRES)	(RIMS AT)	(COLD)
<hr/>			
7711 kg (17000 LB)			
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE			
V.I.N.:	TYPE :	TRAILER	

TIRE AND LOAD INFORMATION RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT		SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION VOIR LE MANUEL D'USAGER POUR LE PLUS DE RENSEIGNEMENTS	
The weight of cargo should never exceed 10205 KG (22500 LB)			
TIRE	SIZE		COLD TIRE PRESSURE
FRONT	NONE		
INNER	NONE		
REAR		KPA (PSI)	
SPARE	NONE		

Image 8-2

	<p><i>The type sticker must always be clearly legible. Replace the sticker as soon as it becomes difficult to read. 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 the written permission of Expandable LLC.</i></p>
---	--

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



E16TU_67

Image 8-3

		<p>No changes may be made to the ALR plate or the type sticker. Please contact Expandable LLC at ☎(864)-400-5095 if the sticker or the ALR plate has become illegible.</p>
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8.6 Specifications Expandable 53ft trailer

The table below shows the specifications for the Expandable 53ft trailer.

	53 ft
Maximum weight	60000 lbs
Load capacity	22500 lbs
Tax per axle	17000 lbs
Rim size	Alcoa 19,5 x 7,5 ET134
Tire size	245/70/R19.5
Tire pressure (cold)	850 KPA (123 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	341 sqr ft
Flat surface area operating position	755 sqr ft
Internal volume transport position	99 cu yd
Internal volume operating mode	232 cu yd
Maximum number of people on the roof terrace	15 (average 195 lbs p.p)
Maximum load on center roof	4400 lbs

Table 8-3 Expandable 53ft trailer specifications

8.7 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 8-4 Oil specifications

8.7.1 Oil properties

	Method	Unity	Features
ISO viscosity class			32
Density, 59°F	D 4052	g/ml	0,87
Kinematic viscosity 104°F	D 445	mm ² /s	32.2
Kinematic viscosity 212°F	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	°F	-30
Flash point, COC	D 92	°F	208
Emulsion, distilled water, 129.92°F	D 1401		40-40-0(10)
Foam, 5 min blowing, seq. 1/2/3	D 892	ml	5/10/5
Foam, 5 min slouching, seq. 1/2/3	D 892	ml	0/0/0
Anti-rust test, proc. A and B, 24 h	D 665		pass
Copper strip, 3h, 212°F	D 130		1
FZG Test, A/8.3/90	DIN 51354	load stage	10

Table 8-5 The above figures are not specifications. They are typical figures obtained within production tolerances.

8.8 Lubricant Properties and Specifications

Berulub Lubricant Properties	
Suitable for low temperatures	
Prevents stick-slip (stick together while sliding over each other)	
Extended relubrication intervals	
Excellent adhesion	
Does not drip or melt	
Resistant to hot and cold water, water vapors, lactic acid, formic acid, acetic acid, or fruit acids, as well as aqueous alkaline and acidic disinfectants or cleaning agents.	
Contains PTFE	

Table 8-6 Berulub Lubricant Properties

	Characteristics
Base oil	Ester
Thickener	Polytetrafluoroethylene (PTFE)
NLGI-grade	3
Kinematic viscosity at 140 °F	5000,0 mm ² /s
Kinematic viscosity at 212 °F	340,0 mm ² /s
Working temperature range	-4° F tot 302° F
Color / Appearance	White
Propellant	Dimethyl ether

Table 8-7 Characteristics

8.9 Specifications for electrical components

		53 ft
Battery	Type	EV240-12 (12V240Ah)
	Capacity	240Ah@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	67,5 A
Connection voltage		12 V
Roller Current Connection		240 V (3 x 32 A)
Voltage of Wall Sockets		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
	Terminal Bolt Size	3/8"-16 (acceptert M10 -connections)
	Moisture Ingress Protection	IP67/IP69K
	Ignition Protection	ISO 8846 & SAE J1171
Water Level Sensor	Moisture Ingress Protection	IP67, IP69K (with IP69K counter plug)
	Relative Humidity	0 - 95% (non-condensing, housing completely fully potted)
	Power Supply Voltage	10 - 32 V dc
	Polarity Protection	Yes
	Power Consumption	50mA For CFM-modells(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 8-8 Specifications of Electrical Components



The specifications listed in the table above are a selection from the manufacturer's complete specifications. Expandable LLC recommend that you



always consult the documentation supplied by the manufacturer of the electrical components, as this is authoritative.

8.10 Icons

The following icons are used in this manual:




















Description		Description		Description	
	Important notice!		Maximum number of persons/maximum load		Delivery information.
	Danger of suffocation!		Read this information before you begin!		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		Correct
	Inflate bellows		Deflate the bellows		

Table 8-9 Icons

any questions?
contact us

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movable spaces

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