DINOlift
Up to the Job

OPERATING INSTRUCTIONS

DINO 220XSE

Manufacturer:

Dinolift Oy
Raikkolantie 145
FI-32210 LOIMAA
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info@dinolift.com
www.dinolift.com

Dealer:

TRANSLATION OF THE ORIGINAL INSTRUCTIONS

Valid from serial number

220XSE 650002,650004,650006 -->

SERIAL NUMBERS	CHANGE	DATE
220XSE 650001->	Original	28.12.2015
650002, 650004, 650006->	Radio-control directions	23.8.2016
650006 ->	Sky Rack	24.8.2016
	Manual brake release	10.11.2016

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1. TO THE OPERATOR

Keep this manual on the work platform of the lift in the box reserved for it. If the instruction manual gets lost, damaged, or for some other reason becomes unreadable, order a new manual from the manufacturer.

This manual is intended to familiarise the user with the structure and functions of the work platform, as well as with its appropriate use. The manual provides guidance on the service measures that are the responsibility of the user of the work platform.

Other maintenance procedures on the work platform require special skills, special tools or accurate knowledge about measurements or adjusted values. Guidance for these measures is provided in a separate service manual. For situations that require service or repair measures, contact the authorised service provider, importer or manufacturer.

DANGER

Read all the instructions in this manual before using the aerial work platform. Make sure that you have understood all the instructions. The instructions must absolutely be followed during operation and maintenance of the aerial work platform.

When handling the unit, in addition to the instructions in this manual, the user must also observe the local legislation, the guidelines stipulated by the employer, and regulations valid at the work site.

Dinolift Oy is constantly developing its products. For this reason, the contents of this manual might not always be in full compliance with the most recent version of the product. Dinolift Oy reserves the right to modify the product without prior notice. Dinolift Oy assumes no liability for any problems caused by changed or missing data or mistakes in this manual.

Please consult your dealer or the manufacturer for more information and detailed instructions.

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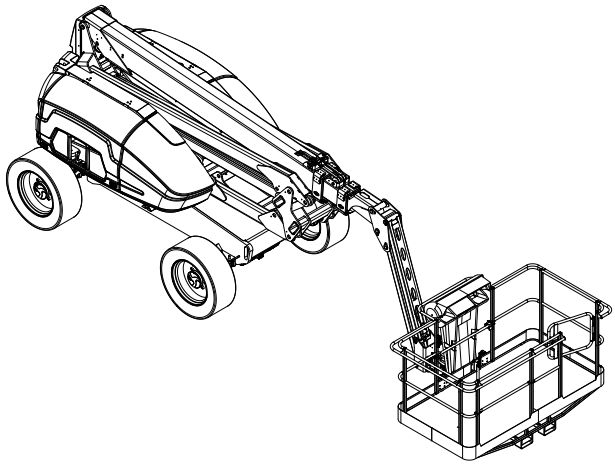
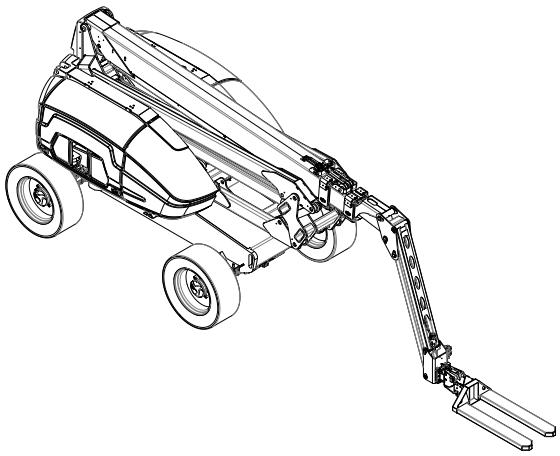
1.1. OVERVIEW OF THE UNIT

The unit is a wheeled, self-propelled aerial work platform.
It is an aerial work platform, which complies with the EN280 type 3 standard, and which during transfer can be steered with the work platform raised from the control station on the platform. The platform can be detatched, to allow temporary use for lifting of goods using pallet forks.





The lift's primary power source is a diesel engine. Drive functions and boom system are hydraulically powered.

Consult the chapters “Technical data" and “Structure and functions of the work platform" in this manual for more detailed information about the lift.

1.2. INTENDED USE OF THE WORK PLATFORM

DINO XSE aerial work platform is primarily intended for transferring people and tools on the work platform. The lifting operations are only allowed up to the maximum permitted load-bearing capacity and within the work area according to the reach diagram. (Refer to the table “Technical Specifications” and the “Reach Diagram”). The machine may also be temporarily used for lifting loads as defined in these operating instruction.

The intended use also covers:
- Following all the instructions in these Operating Instructions
- Performance of the inspections and maintenance operations.

This aerial work platform is NOT insulated, and does not offer protection against contact with electric current. The aerial work platform must not be used for work on electric systems.

Observe the safety instructions concerning the operating environment, and the restrictions given in them,

NOTICE

The operator must receive instructions and consent from the manufacturer for all such specific work methods or conditions that the manufacturer has not explicitly defined in the unit's operation and maintenance instructions.

2. TECHNICAL SPECIFICATIONS

	220XSE	With outriggers
Max. working height	21,95 m	
Max. platform height	19,95 m	
Max. outreach	13,40 m	
Boom rotation	continuous	
Tail swing	0,60 m	
Platform size	1,3 x 2,4 m	
Max. number of persons + additional load	3 persons + 110 kg	
Max. allowed load on platform	350 kg	
Max. allowed sideways load (caused by persons)	400 N	
Max. load with pallet forks	500 kg	
Platform rotation	180°	
Jib	1.6 m / 150°	
Work area	refer to the reach diagram	
Weight	12700 kg	12900 kg
Transport width	2,40 m / 2,33 m	2,48 m
Transport length	8,15 m	8,48 m
Transport height	2,56 m	2,52 m
Wheelbase	2,67 m	
Support width	2,33 m x 2,67 m	2,33 m x 4,13 m
Ground clearance	0,43 m	0,42 m
Tyres	OTR 355/55D625 NHS (foam filled)	
Weight of tyres	190 kg	190 kg
Maximum possible tyre load	7650 kg / 75,0 kN	
Max. lateral inclination (chassis)	5°	5°
Max. allowed gradient of ground	5°	12° / 7°
Max. wind speed during operation	12,5 m/s	
Min. ambient temperature when working	- 20 °C	
Driving speed high/low	6.0 / 1.0 km/h	
Turning radius (outer)	5,5 m	
Gradeability	40%	
Socket outlets on the platform	2 x 230V/50Hz/16A	

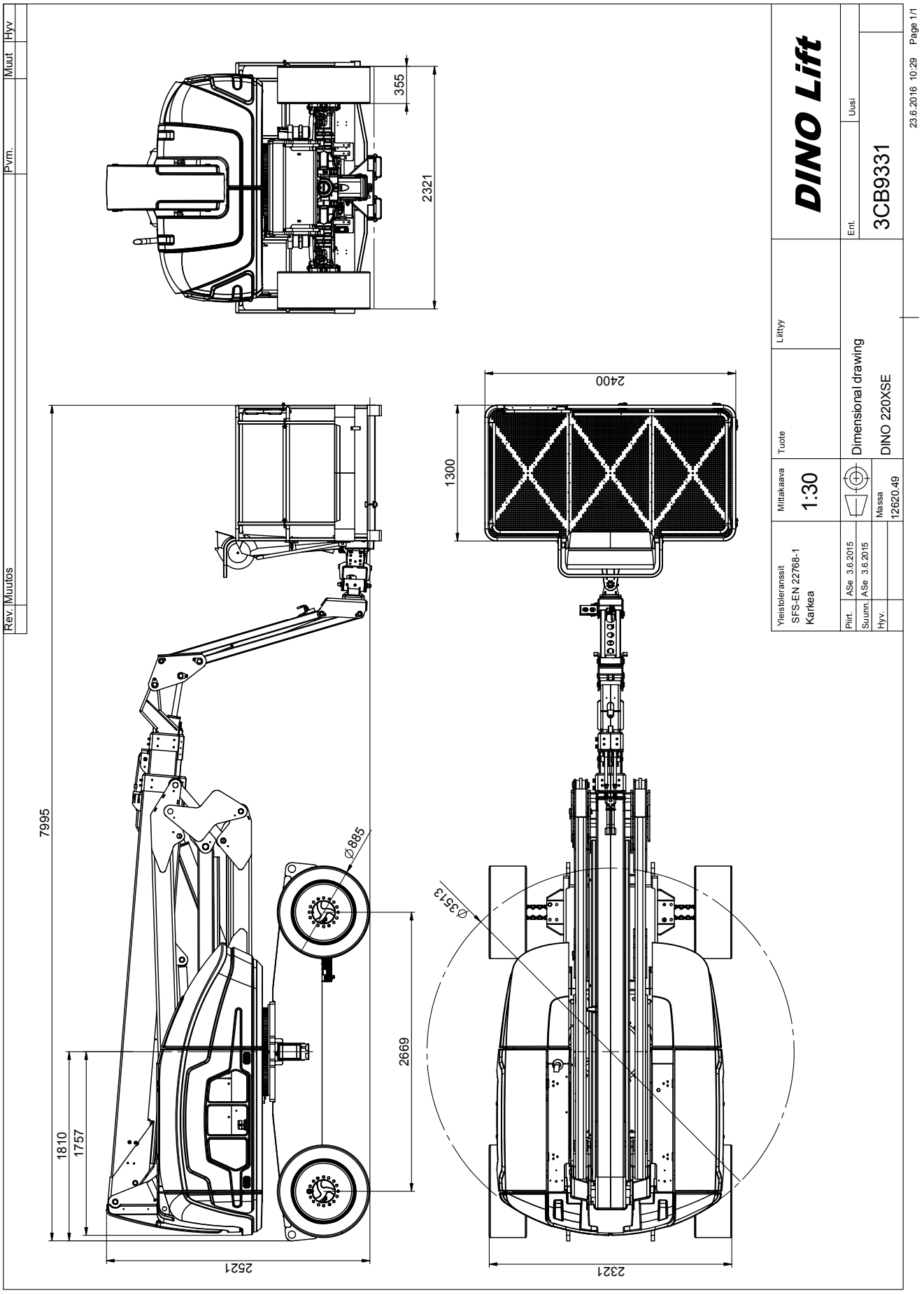
Engine

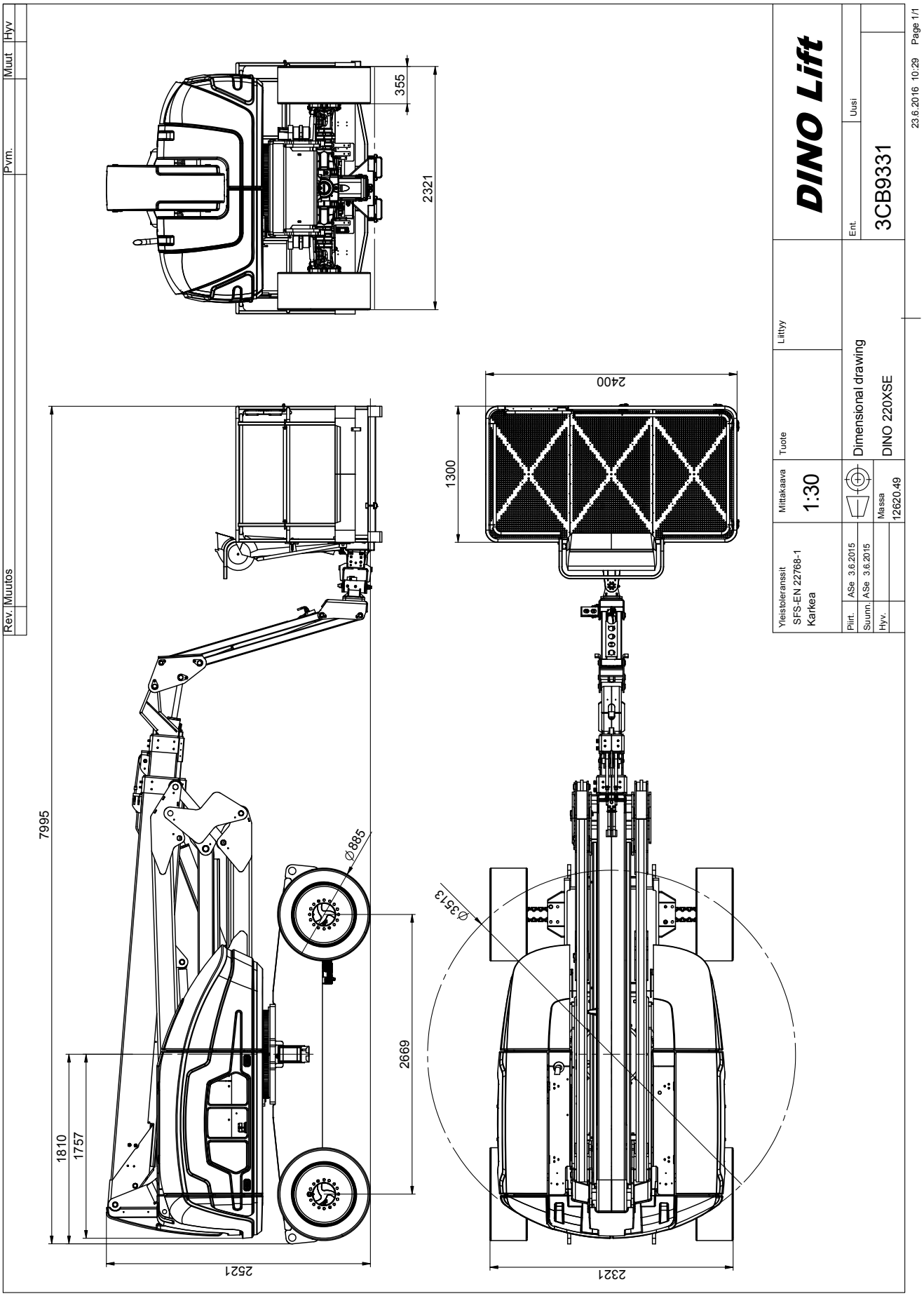
Deutz D2011 L03 i	EU Stage IIIA
Fuel	Diesel
Net power	36,3 kW (48,7 hv)
Oil tank volume	5,5 / 6 l
Sound pressure level	98 dB
Whole-body vibration	< 0,5 m/s2
Fuel tank volume	82 l

Axles

	Fixed axle	Steering/oscillating axle
Axle type	DANA MO211S40	DANA MO211S40
Differential lock	Friction lock 45 %	Lockable 100 %
Reduction gear	1:2.28	N/A
Differential	8:35	8:35
Planetary gear	1:6	1:6
Brakes *	Internal brake, self-adjusting	N/A
Steering angle	N/A	45°
Oscillation angle	N/A	5°
** Mechanical release of brakes (see point "Towing")*		

2.1. DIMENSION DRAWING

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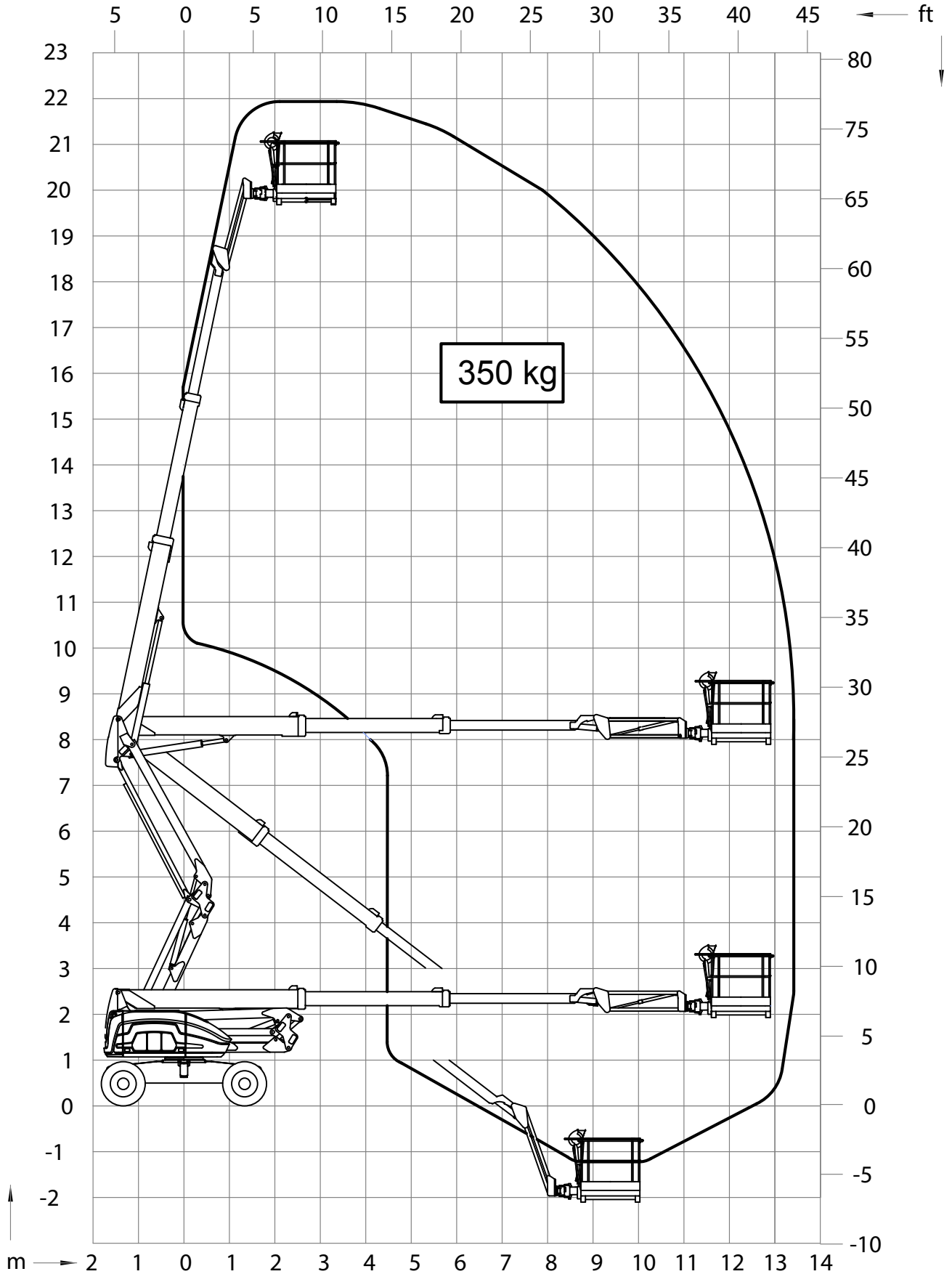
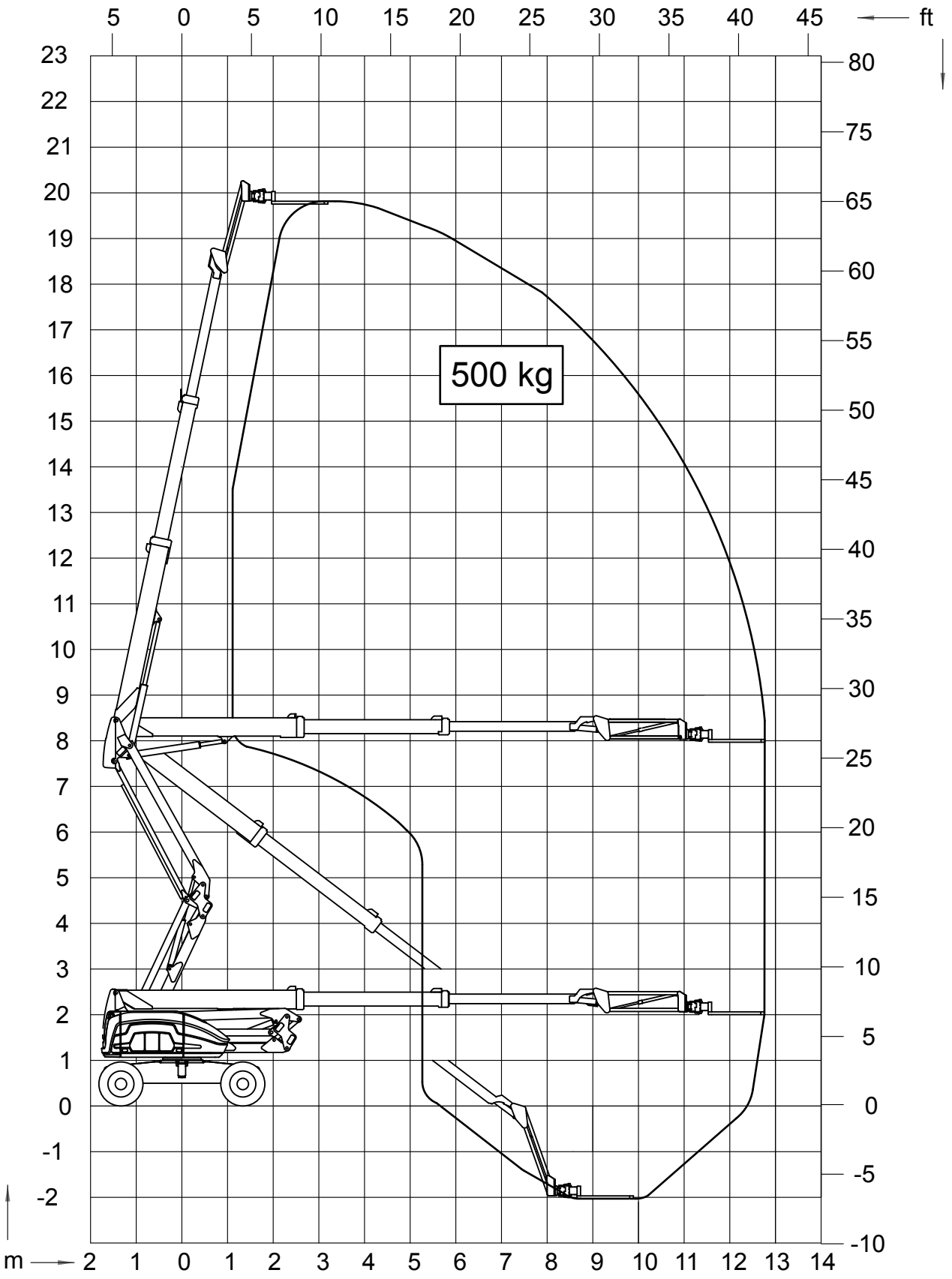
2.2. REACH DIAGRAM WITH ACCESS PLATFORM

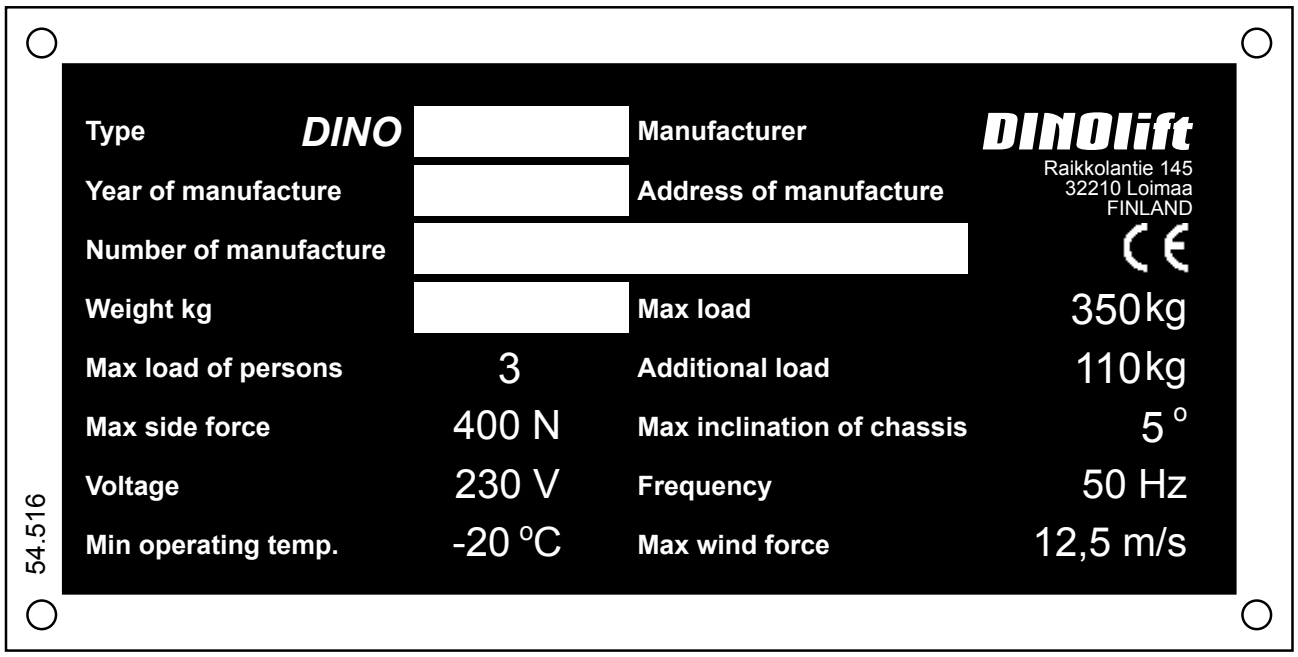


2.3. REACH DIAGRAM WITH PALLET FORKS



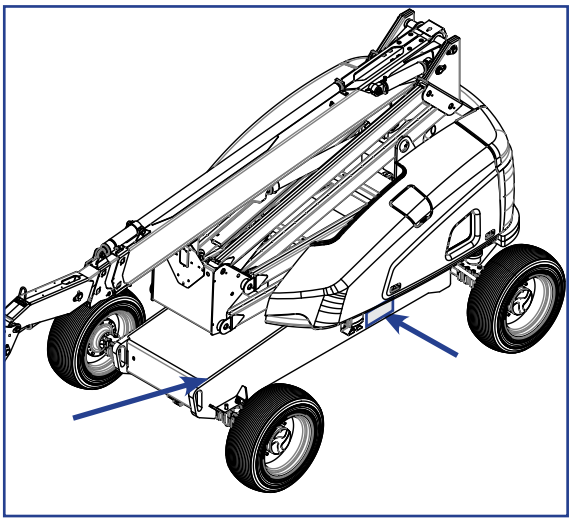
2.4. EXAMPLE OF THE MACHINE'S NAMEPLATE

The name of the manufacturer, and the production number and serial number of the machine have been marked on the nameplate as shown in the picture below.



The nameplate is located in the chassis under the turning device.

The serial number is also engraved in the chassis, in the place shown in the picture.



2.5. EXAMPLE OF EU DECLARATION OF CONFORMITY

EC-Declaration of Conformity for Machinery

Manufacturer:

Dinolift Oy
Raikkolantie 145
FI-32210 Loimaa, FINLAND

which has authorised Chief Engineer Mr. Santtu Siivola, Dinolift Oy, Raikkolantie 145, 32210 Loimaa, Finland to draw up the Technical Construction File

declares that

DINO 220XSE Access Platform no YGC 220XTS F 0650001

is in conformity with the provisions of Machinery Directive **2006/42/EC** as amended and with national implementing legislation and also fulfils the requirements of the following EEC directives: Low Voltage Directive (**2006/95/EC**), directive (**2000/14/EC**), and EMC Directive (**2004/108/EC**).

Conformity assessment procedure followed: 2000/14/EC, Annex V: Internal control of production.

Measured sound power level L_{wa} (95,5 + 1,5) 97 dB

Quaranteed sound power level L_{wa} 97 + 0,5 dB

Notified body nr. 0537,

VTT
P.O.Box 1300
FI-33101 Tampere, FINLAND

has granted the certificate no. VTT xxx/xxx/xx

In designing the machine, the following harmonized standards have been applied:

SFS-EN 280:2013; SFS-EN-ISO 12100:2010; SFS-EN 60204-1/A1

Loimaa (place) 13.08.2015 (date)

(signature)
Antti Tuura
Supervisor
(name in block letters, position)

2.6. SAMPLE OF INSPECTION PROTOCOL FOR THE ACCESS PLATFORM

DINOlift

www.dinolift.com

TEST CERTIFICATE

DATE: 2.9.2015

START-UP TESTS:

Inspection place: **Dinolift Oy** Inspector's signature: 1544 Schmidt Florian NT0578-2

BASIC KNOWLEDGE

Manufacturer: **Dinolift OY** Place of manufacture: **Finland**

Address: **Raikkolantie 145**
32210 LOIMAA

Importer:

Type of lift:	☑ Boom platform	☐ Scissor platform	☐ Mast platform	
Chassis:	☐ Car	☑ Self propelled	☐ Trailer mounted	
Boom:	☐ Articulated boom	☐ Telescope boom	☑ Articulated telescope boom	
	☐ Scissor	☐ Fixed mast	☐ Telescope mast	
Outriggers:	☐ Hydraulic turning	☐ Hydraulic pushing	☐ Mechanical	☑ No outriggers

TECHNICAL SPECIFICATIONS

Machine and type:	**DINO 220XSE**	Max. platform height:	**19,6 m**
Number of manufacture	**YGC220XSEF0650001**	Max. outreach:	**13,4 m**
Year of manufacture:	**2015**		
Max. lifting capacity:	**350 kg**	Boom rotation:	**Continuous**
Max. person number:	**3 hlö**	Support width:	**2,33 x 2,67**
Max. additional load:	**110 kg**	Transport width:	**2,55 m**
Power supply:	**Diesel**	Transport length:	**8,14 m**
Lowest temperature:	**-20 °C**	Transport height:	**2,56 m**
Weight:	**12700 kg**	Basket size:	**1,3 x 2,8 m**

Inspection points: (Y = meet standards N = do not meet standards)

	Y	N
A. STRENGTH		
1. Certificate of material	☑	☐
2. Certificate of strength	☑	☐
B. STABILITY		
1. Certificate of stability test	☑	☐
2. Working space diagram	☑	☐
C. GENERAL REQUIREMENTS		
1. User's manual	☑	☐
2. Place for safekeeping for user's manual	☑	☐
3. Machine plate - checking plate	☑	☐
4. Load plate	☑	☐
5. Warning plate	☑	☐
6. Max. outrigger load plate	☑	☐
7. Safety colours	☑	☐
D. SAFETY REQUIREMENTS		
1. Indicating device for horizontal position	☑	☐
2. Locking device and lockings	☑	☐
3. Stop for opening of support (locking for oscillating axel)	☑	☐
4. Safety distances	☑	☐
6. Position of work platform	☑	☐
7. Structure and locking of work platform	☑	☐
8. Emergency descent system	☑	☐
9. Limit devices	☑	☐

E. ELECTRIC APPLIANCES		G. SAFETY DEVICE	
1. Electric appliances	☑ ■	1. Safety limit switch	☑ ■
		2. Platform load control	☑ ■
F. CONTROL DEVICES		3. Sound signal	☑ ■
1. Protections	☑ ■		
2. Symbols / directions	☑ ■	H. LOADING TEST	
3. Placings	☑ ■	1. Overload test = 438 kg (125%)	☑ ■
4. Emergency stop	☑ ■	2. Functional test = 385 kg (110%)	☑ ■
	☑ ■	3. Braking tests, slope 5°, 350kg (100%)	☑ ■

FAILINGS AND NOTES _____

Failings have been repaired. Date: _____ Signature: _____

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The initial inspection and test loading of the Dino aerial work platforms is performed by the manufacturer. A protocol, drawn up during the inspection, will accompany the lift.

The protocols of the start-up and periodic inspections must be kept with the lift or its immediate proximity for at least five years.

3. SAFETY

All the essential safety instructions and warnings, relevant to transport, use and maintenance of the lift, are described in this chapter.

DANGER

Failure to observe these instructions and safety regulations may cause a severe injury or even death. Familiarise yourself with all the safety regulations, operating instructions and signs affixed to the machine, and follow them.

Make sure that you understand all the safety instructions and regulations. Also make sure that others operating the machine or working on the work platform are familiar with these instructions.

3.1. SAFETY INSTRUCTIONS

Only specially trained personnel with authorisation in writing, who are well familiarised with the device, and at least 18-years old, are allowed to operate the unit.

Keep the lift free of any dirt, which may impair safe operation, and impede the inspection of the structures.

The device must be serviced and inspected regularly.
Only skilled persons, familiar with the service and repair instructions, are allowed to carry out servicing and repair work.

It is strictly prohibited to use a lift which is out of order.

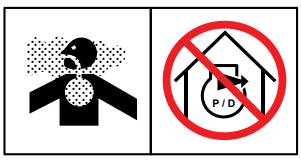
Never remove or disable any safety devices or covers of the machine.

WARNING

The device must neither be altered without the manufacturer’s consent nor be used under conditions, which do not meet the manufacturer's requirements.

The operator must be given instructions and consent from the manufacturer for all such specific work methods or conditions that the manufacturer has not explicitly defined.

Exhaust fumes of the diesel engine may be hazardous to your health. Do not run combustion engine in an enclosed or poorly ventilated area.



Protect your hearing when you operate the lift from the chassis control panel (LCB) (91 dB).

DRIVING

Beware of fixed or moving obstacles in the terrain or near the lift while driving. Make sure that you have a clear view of the driving path.

Check the terrain before driving! Do not drive in dangerous conditions. **Risk of overturning!**

Exercise extreme caution when driving with the work platform raised. Driving the lift with the platform raised is only allowed on a firm and level surface.

The inclination must not exceed 5° with the platform raised.
A warning light on the platform indicates that the inclination is too great.
Ensure that the lift cannot slide while on a gradient

The inclination must not exceed 20° with the lift in transport position.
Be careful that the platform does not hit the ground. Lift the jib arms slightly for driving on uneven terrain.

WORK AREA AND PREPARATIONS BEFORE LIFTING WORK

The lift may only be used, whilst the chassis is well supported, i.e. the tyres are supported on sufficiently firm and level ground. Refer to the Technical specification and the decals affixed to the machine for max. load on the tyres.

Always check the level position of the machine. The warning light (H17) on the platform indicates that the inclination is too great.

When working in busy areas, the operating range of the lift must be clearly marked by using either warning lights or fencing.
Also observe road traffic regulations while working on public roads.

Always ensure that the work area is clear of outsiders. Danger of getting squeezed between rotating and fixed structures.

Before starting the operation, make sure that the boom and turning device's tail overhang can spin around without obstruction.

The lift must not be used when located on the bed of a lorry, on a trailer, on board a vessel or in any other similar location.

LIFTING AND WORKING ON THE PLATFORM

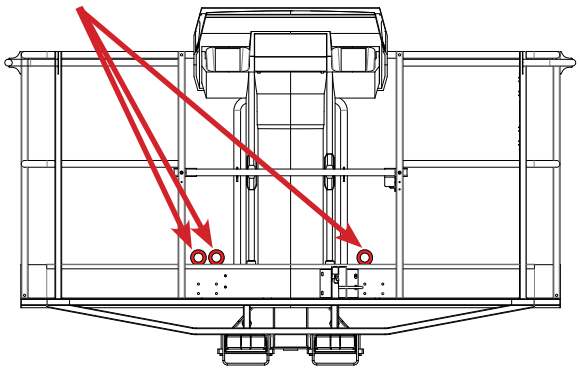
Before operating, always ensure that the safety devices and the emergency descent system are in working order.

Never use a lift alone. Make sure that there is always someone on the ground, who can call for help in case of an emergency.

The load control device prevents the use with excessive loads. Never exceed the maximum allowed load marked on the work platform. A warning light on the platform lights up when the platform is overloaded.

It is strictly prohibited to take additional load in the upper position.
Do not exceed the lateral force (400N), or load the platform vertically more than allowed.

Lifting of persons is only allowed when a suitable DINO work platform is securely fastened and the control centre is connected.



Wear a safety harness! Attach the lanyard to the prescribed anchorage points.

Notice! There is an anchorage point for each user.
Only one attachment per anchorage.
Rated capacity = 16 kN

Do not use ladders, steps or other similar equipment on the platform.

Stepping on or off the platform while platform is raised or in motion is prohibited.

Never throw or drop any objects from the platform.

The platform has a wider gate that allows placing a pallet on the platform. It is to be used for tools or materials needed during working on the platform. The work platform must not be used for transferring goods between different floors or working levels.

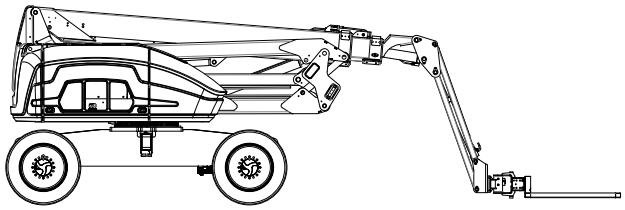
Always make sure, before lowering the platform, that the area under it is clear.

Avoid damaging the platform by lowering it on the ground, or bringing it in contact with any structures.

LIFTING AND WORKING WITH THE PALLET FORKS

Lifting work must be done according to local regulations and general lifting instructions. All worksite specific instructions and instructions given by employer on safety and training must be followed.

All material transfers must be done with pallet forks or material basket, not with work platform.



Maximum load with pallet forks is 500 kg. Load control device will stop all movements if the load exceeds the maximum allowed load.

Lifting of persons is only allowed when a suitable DINO work platform attached!

Make sure work path is free of obstructions and persons.
Travel with the forks lowered, but lifted clear of the ground with jib. Driving is disabled when the boom is lifted from the support.

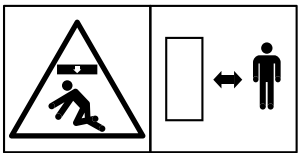
Travel at a speed suitable for the location and the load carried. The maximum speed is limited when driving from the ground with cable control unit. Avoid uneven ground, sudden stops and violent braking.

Assess the load before lifting. Check weight, size, load centre and security.

Make sure you have unobstructed view to the load and trajectory of the boom while lifting.

DANGER

Falling objects may cause serious injury or death.
Keep away from the work area while work is in progress.
Use spotters when working in busy areas.



Never leave the unit with the load raised. Always place loads on the ground before leaving the unit.

OPERATING CONDITIONS

The weather conditions, such as wind, visibility and rain, must always be taken into account so that these will not adversely affect the safe performance of the lifting operations.

The use of the lift is prohibited if
the temperature drops under -20 °C or
the wind speed exceeds 12.5 m/s

Wind speed (m/s)		Conditions on land
0	Calm	Smoke rises vertically
1-3	Light breeze	Smoke moves with the wind and the wind feels on exposed skin. Leaves rustle.
4-7	Gentle breeze	Leaves and small branches of trees are moving. Flag is flying. Wind lifts dust and loose pieces of paper from the ground.
8-13	Strong breeze	Small broad-leaved trees and large branches sway. Wind whistles as it hits houses or other fixed objects. Umbrella is difficult to use.
14-16	Strong	All the trees are swaying. It is difficult. to walk against the wind.

Do not take tools/material of large surface area onto the platform. The increase in wind load may jeopardize the stability of the device.

Beware of the live aerial power lines in the area – observe the minimum safety distances:

Voltage range (Phase to phase)	Minimum approach distance	
	Meters	Feet
0 - 300 V	Avoid contact	
300 V - 50 kV	3	10
50 kV - 200 kV	4,5	15
200 kV - 350 kV	6	20
350 kV - 500 kV	8	25
500 kV - 750 kV	11	35
750 kV - 1000 kV	14	45

These distances shall apply unless more stringent limits are given in worsite instructions or in local or governmental regulations.

This unit is NOT insulated, and does not offer protection against contact with electric current. The aerial work platform must not be used for work on electric systems.

3.2. SAFETY-RELATED NOTIFICATIONS

The following safety alert symbols and safety signal words are used in this manual.

Observe all the safety instructions that follow these symbols, in order to avoid dangerous situations and personal injuries.

This is a general safety alert symbol and it is used to alert you about a potential hazard. Observe the additional instructions given in form of text or symbols that follow this symbol.

DANGER

Red DANGER-message warns for an imminent or potential hazardous situation which, if not avoided, may result in death or serious injury.

WARNING

Orange WARNING -message is used in connection with potential risk factors, which if not avoided, under certain conditions, may result in death or serious injury.

CAUTION

Yellow CAUTION -message is used to warn about a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

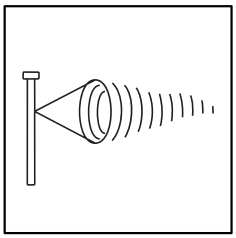
Blue notice-message is used to draw your attention to special notifications or instructions that are related to the operation or maintenance. Such messages include, for example, instructions that are related to reliability of the machine or aim to avoid material losses.


Crush hazard - moving parts

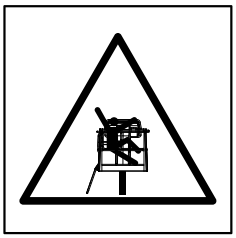

Crush hazard - moving parts

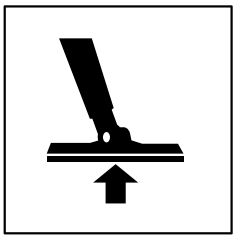

Crush hazard - falling objects


Harmful exhaust emissions

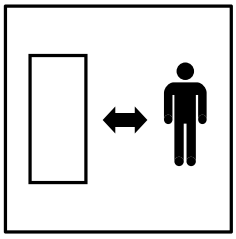

Wind speed

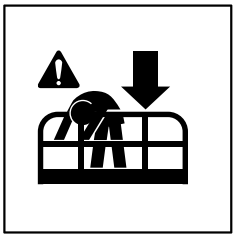

Tip over hazard

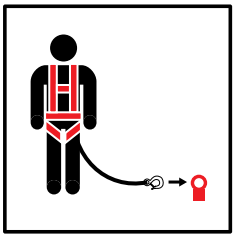

Fall hazard


Support load

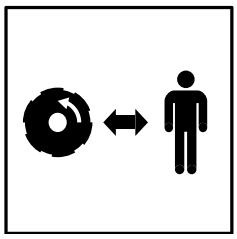

No smoking

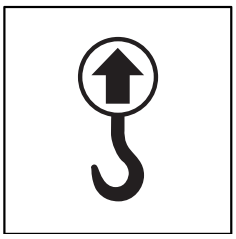

Keep safe distance from hazard

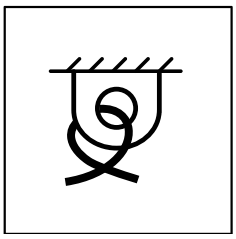

Emergency descend


Safety harness anchorage

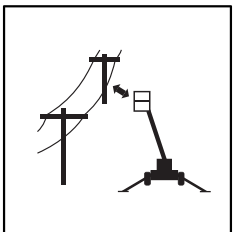

No open flame

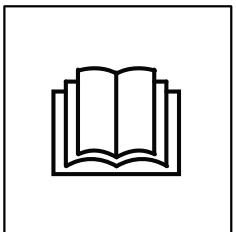

Keep safe distance from hazard

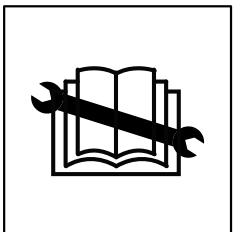

Lifting point


Tie down point

Do not run engine indoors


Keep safe distance from power lines


Read operating instructions


Read maintenance instructions

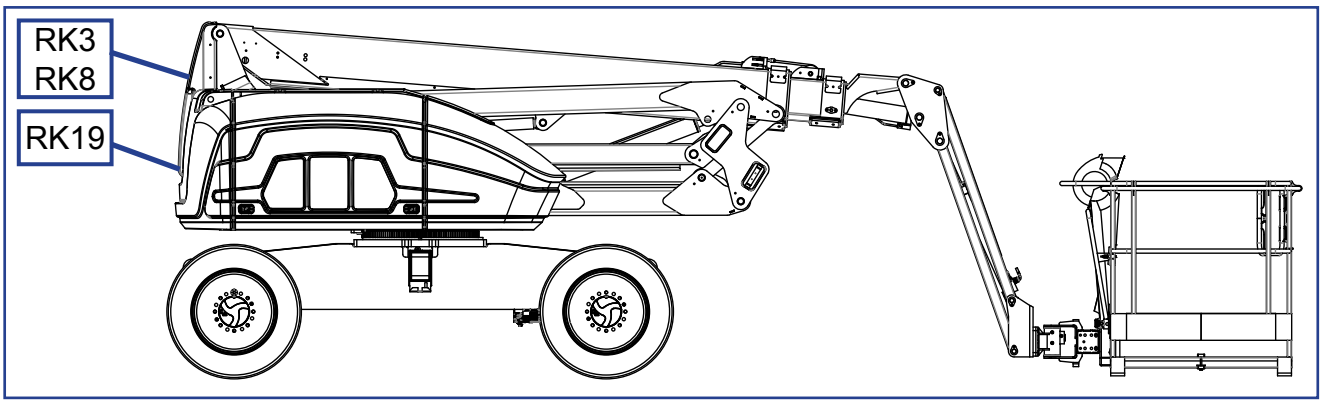
3.3. SAFETY DEVICES

1. Supervision of transport position

Transport position of the boom system is monitored with three limit switches:
- RK19 = articulated arms down
- RK3 = boom down
- RK8 = boom extentions in

The limit switches prevent driving at maximum speed if the boom or articulated arms are lifted or boom extensions have been extended. The limit switches also prevent driving from DCB-controller unless the boom system is in transport position.

The switches are located at the back of the machine according to picture. Switch RK8 is located behind the cover.



2. Chassis inclination sensors (BPE)

The inclination sensor prevents transport driving, if the lift is inclined more than 5°, and either the boom or the articulated arms have been lifted or the boom extensions have been extended.

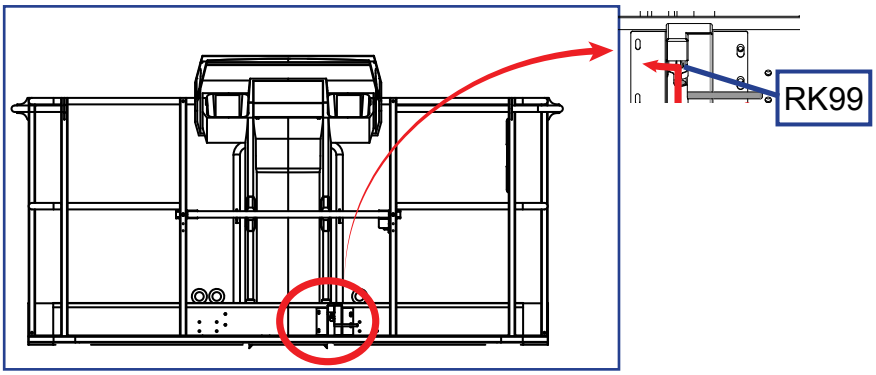
Inclination sensor is located behind the LCB-control centre under the covers.

The signal light and the buzzer indicate that the inclination of the lift is greater than 5°.
If the inclination exceeds 5 degrees and the telescopic boom is out, the sensor prevents all boom system movements.
The telescope must be retracted with emergency descend system.
The following movements can be driven when the telescopic boom is retracted:
- articulated arms down
- boom down
- jib arms up / down
- rotation of the boom
- turning of the platform

Once the boom system is in transport position, the device can be driven to a more level ground or levelled with the outriggers.

3. Platform connection control

The detachable platfom must always be securely locked and properly connected when in place. The locking of the platform is monitored by limit switches RK99 located above the locking pin and RK100 on the forks.



The electrical connectors must be connected to platform according to instructions.

If the platform is in place, but the connectors are not properly connected or the platform is not securely locked with the pin, the following movements are prevented:

- Articulated arms up/down
- Boom up/down

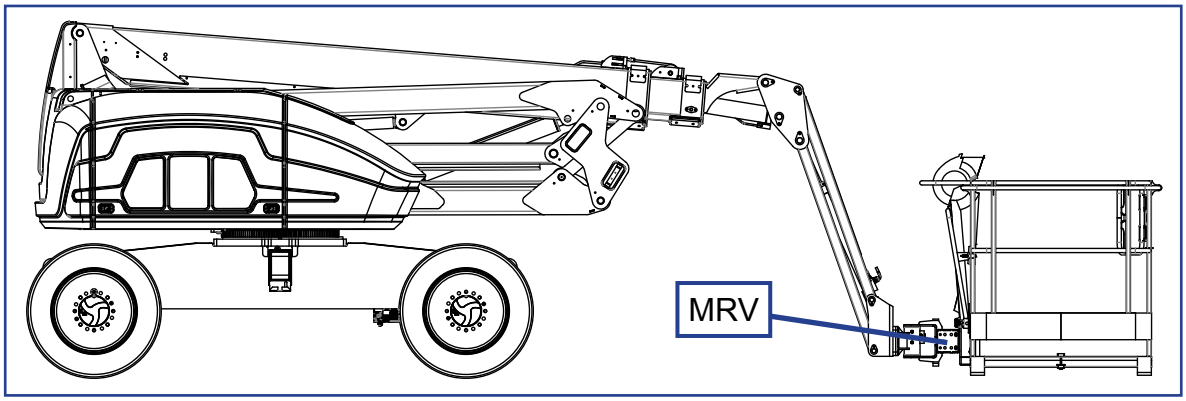
When the platform is disconnected, the electrical connectors must be connected according to instructions or the use of the lift is prevented. The connectors are color-coded to make identification easier.

CAUTION

The coupler D2 must be in place at D-coupler when the machine is used without the platform. Otherwise the CAN-BUS system may cause unexpected errors.

4. Load control device (MRV)

Overloading the lift is prevented by a load control safety device. It is located under the platform. It prevents overloading with both work platform and pallet fork operation.



Alarms for load control device:

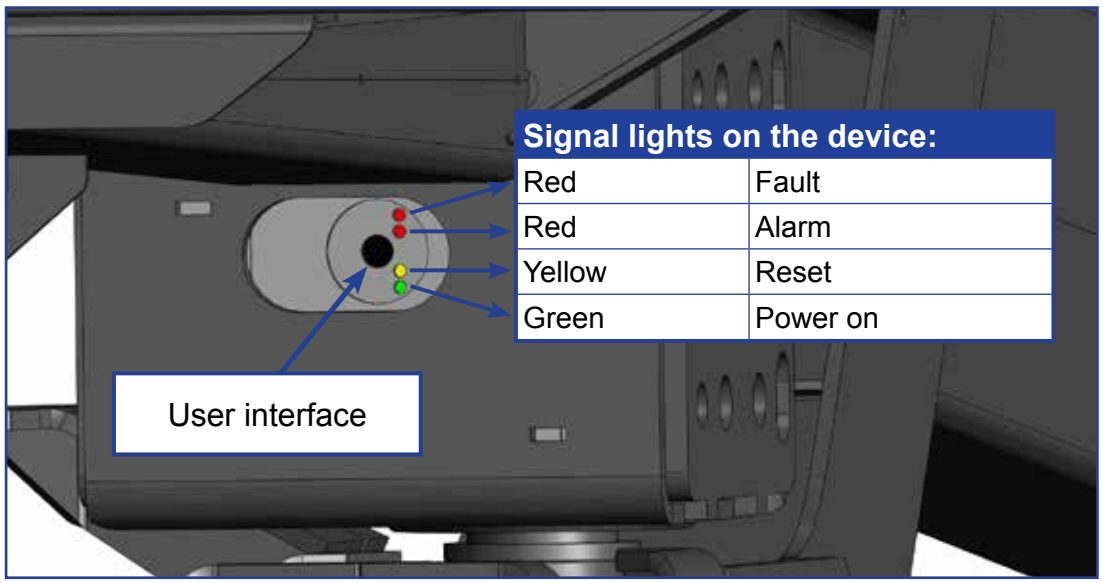
Load on platform	Signal light	Sound signal	Boom control
270 - 293 kg	On	No alarm	Normal
293 - 350 kg	Flashes*	No alarm	Normal
>350kg	Flashes*	Alarm*	Blocked

* 1s 1s

The platform load control device (MRV) prevents all the movements by turning off the power unit if the load exceeds the allowed. As a signal of overloading, red signal lights flash in the UCB control centre and an intermittent alarm signal sounds. Normal operation can be resumed after the load has been reduced.

If the load control system turns off the power unit when the work platform collides with an obstacle, the work platform shall be transferred away the collision point using the emergency descent system. Then the overload situation will be reset and the normal operation of the lift can be resumed.

The operation of the platform load control device is checked via the LED signal lights. When the work platform is unloaded, and is not in contact with any external structure, the **Yellow** signal light must be illuminated, and the **Green** signal light must flash.



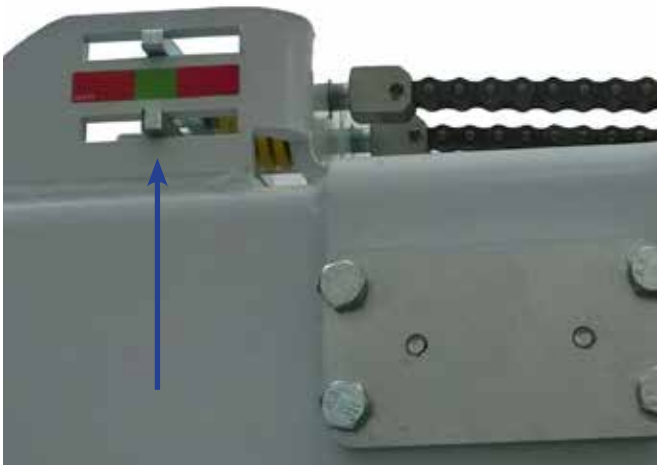
Signal ligths		Explanation
Red	Fault	System failure
Red	Alarm	Overload situation or the load has clashed with an obstacle
Yellow	Reset	Is illuminated if the unloaded weight is OK (Empty platform / pallet forks +/-15 kg). If the yellow LED is not illuminated while there is no load on the platform or forks, the use of the lift is prohibited until the device is re-calibrated.
Green	Power on	When the power is turned on the green LED is illuminated. Once the sensor is activated, the green LED starts flashing.

5. Supervision of the telescope chain

The levers at the top end of the outer boom indicate possible rupture of one of the extention chains for the telescope.

If the lever is inside the green area, the chains are intact (see adjacent illustration).

If the lever is inside the red area, one of the chains has ruptured and the lift must not be used until the chains have been replaced and the required adjustments have been carried out.



6. Platform inclination control

The platform is levelled hydraulically by means of a so-called slave cylinder system, where the master cylinder controls the slave cylinder that inclines the work platform.

The levelling system comprises the following parts:
1. Slave cylinder
2. Load regulation valve
3. Master cylinder
4. Double load regulation valves
5. Check valves
6. Electric directional valve

7. Safety devices for hose rupture

All the load-bearing cylinders are equipped with valves for rupture or leak in the hydraulic system, which prevent the load from falling.

Oscillation of the axle	Load regulation valves
Lifting cylinder of the boom	Load regulation valve
Lifting cylinder of the articulated arms	Load regulation valve
Telescope cylinder	Load regulation valves (2 directions)
Jib cylinder	Load regulation valve
Levelling system	Load regulation valves (2 directions)
Outriggers	Lock valves

8. Emergency stop buttons

Depressing of the emergency stop button stops all the movements immediately and turns off the power unit. A button can be found at each control station. Once a button has been depressed, only the emergency descent functions remain operational.

The emergency stop button locks in the lower position, and it must be released before starting the power unit.

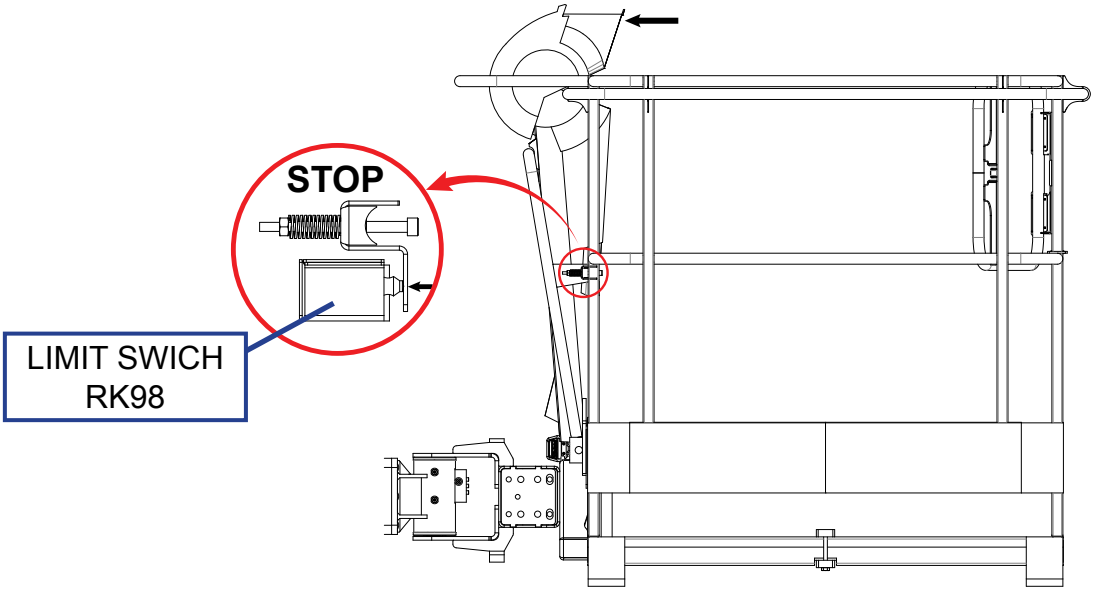
NOTICE

If the unit does not start, make sure that the emergency stop button is not in the lower position at any of the control stations.

The emergency stop button in LCB centre is equipped with an indicator light, which is illuminated when the lift is in normal operation mode. If the emergency stop function is triggered by any button or safety device, the light goes out.

9. Crush guard

Control column at the platform is equipped with a limit switch mechanism, that stops all movements in case the control column is pushed back. The device helps to protect the user from entrapment and crushing hazards while driving or working near obstructions.



Once the device stops the movements, only the emergency descent functions remain operational.

Once the pressure to the column is released, the machine can be restarted normally.

10. Emergency descent system

As a precaution against possible failure in the power supply, the lift is equipped with a battery operated emergency descent system. The emergency descent system remains operational even if the emergency stop circuit has broken.

The emergency descent system can be operated from every control centre. The diesel engine stops once the emergency descent system is started.

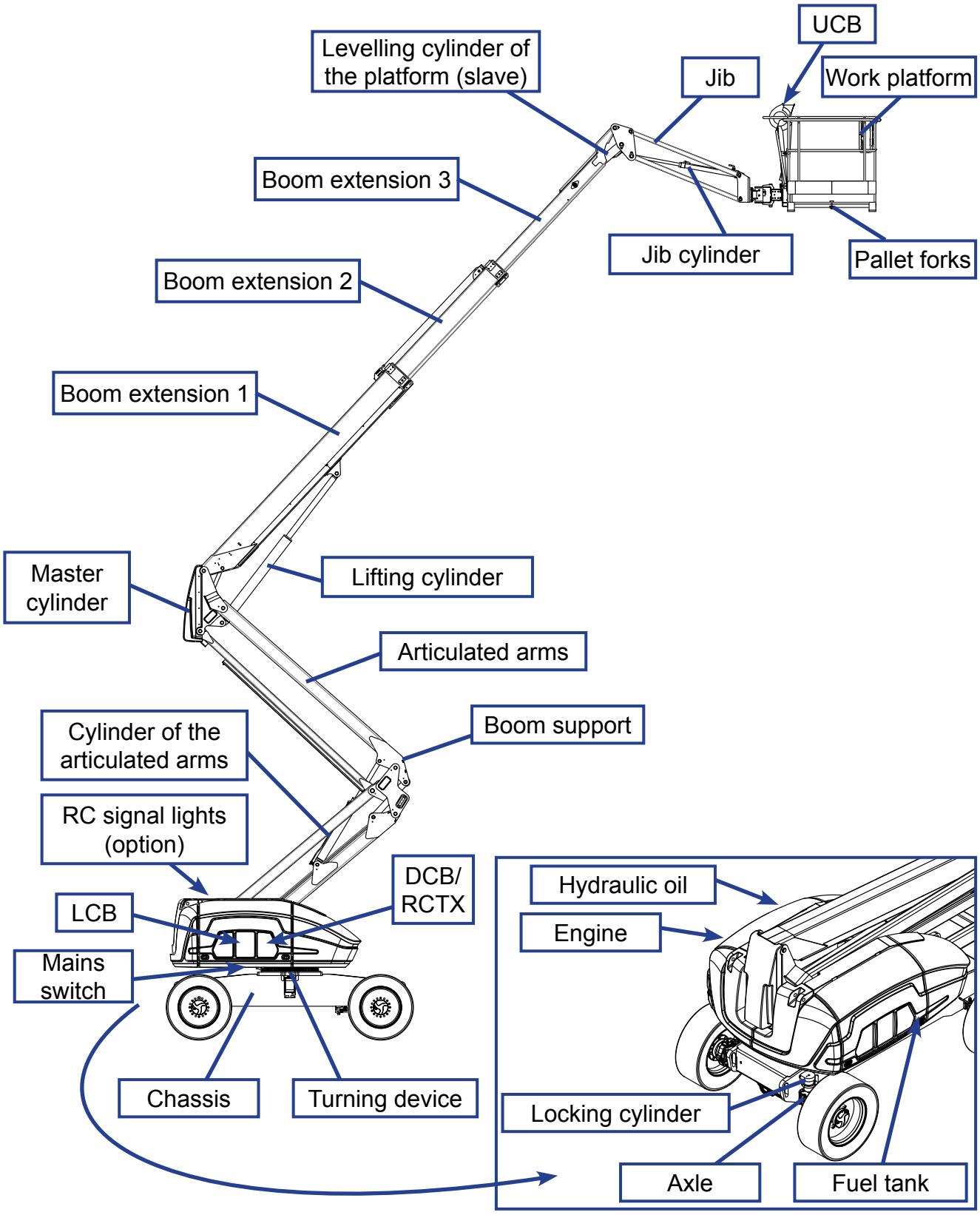
The system comprises
- battery 12 V 100 Ah
- emergency power unit 12 VDC
- battery charger: Diesel or 230 VAC (option)

The hydraulic unit comprises:
- pressure relief valve, set value 25 MPa (250 bar)
- check valve
- direct current motor 12 VDC 1300 W

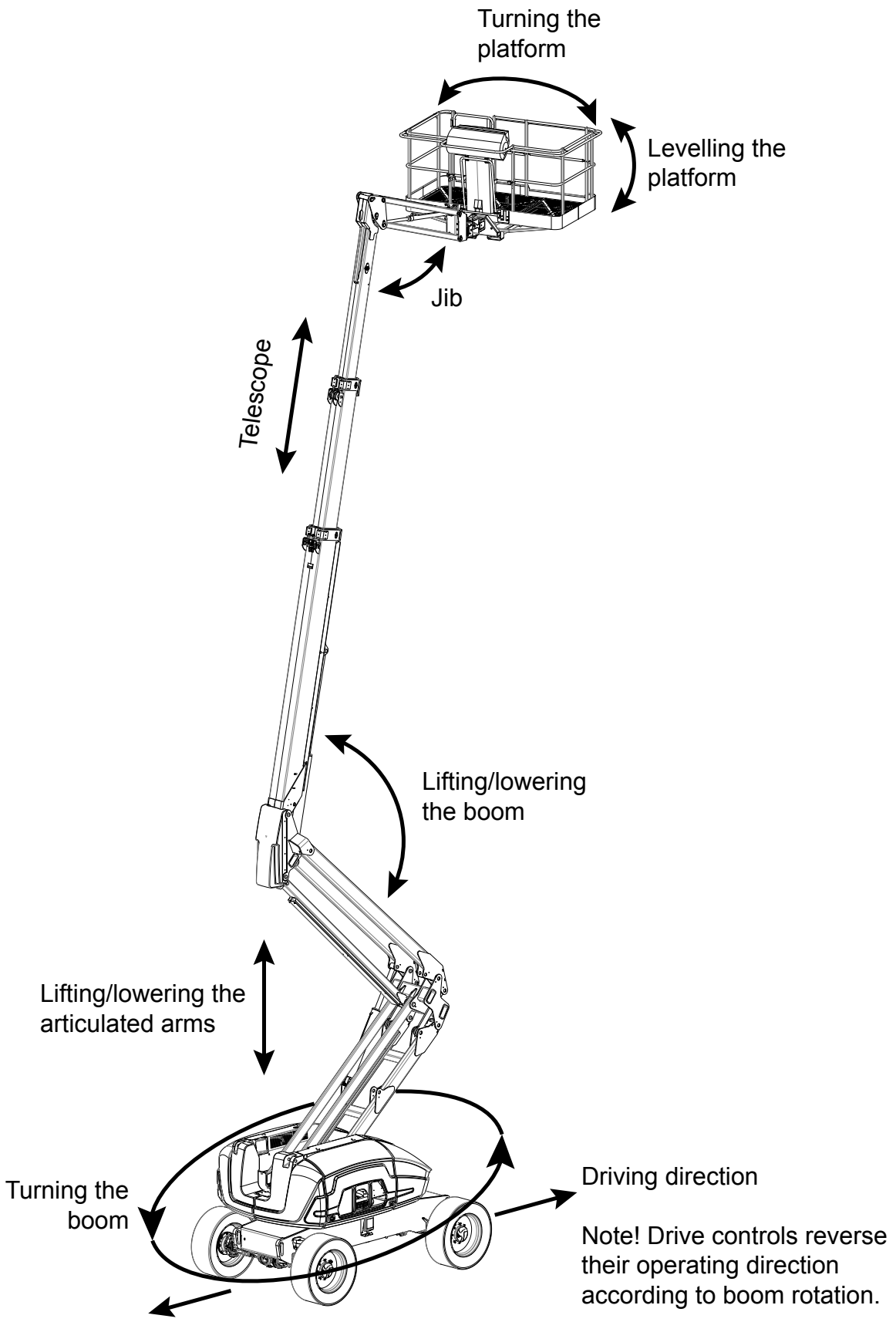
4. STRUCTURE AND FUNCTIONS OF THE WORK PLATFORM

The denominations of the machine's essential parts and concepts, which are used later in these instructions, are described on the following pages.

4.1. STRUCTURE OF THE WORK PLATFORM

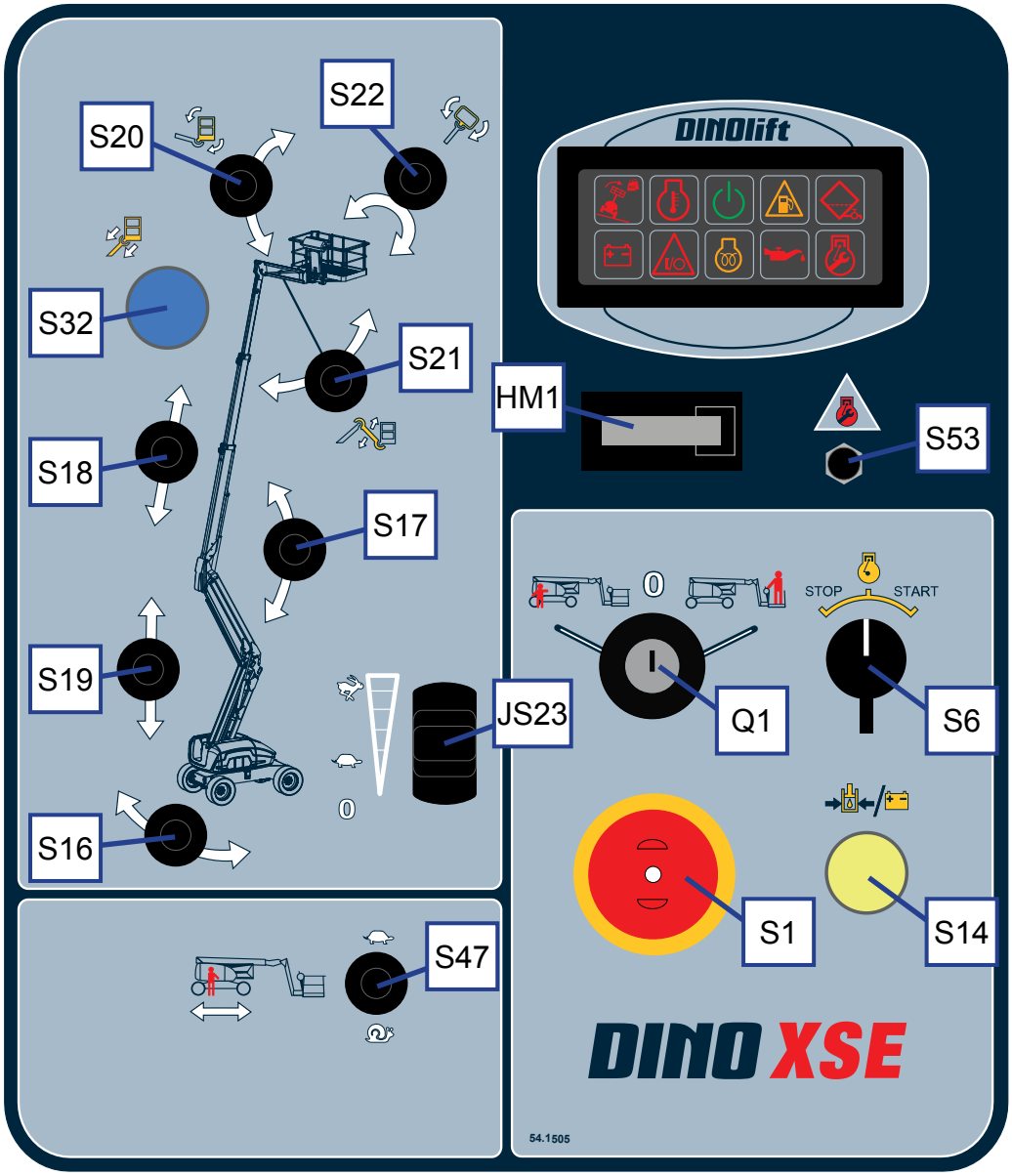


4.2. FUNCTIONS OF THE WORK PLATFORM

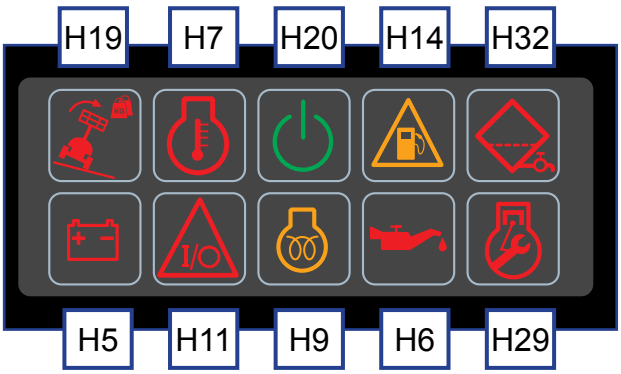


4.3. OPERATING CONTROLS FOR THE FUNCTIONS

4.3.1. Operating controls in the chassis control centre LCB

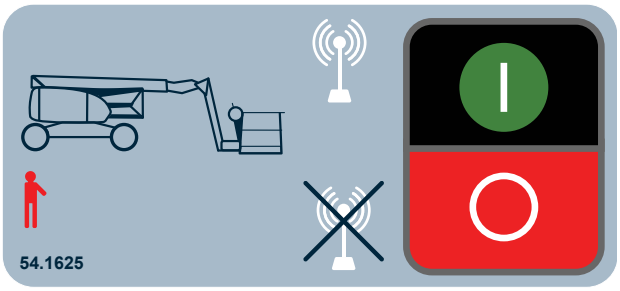


Q1	Power switch	S20	Levelling the platform
S1	Emergency stop button with indicator light	S21	Lifting and lowering of jib arms
S6	Engine start / stop	S22	Turning the platform
S14	Start button for emergency descent system	JS23	Speed selector for boom operation (continuous adjustment)
S16	Turning the boom	S32	Telescope in pushbutton (emergency descend)
S17	Lifting and lowering of boom	S47	Speed selector switch for driving
S18	Telescope in / out		Slow driving speed
S19	Lifting and lowering of articulated arms		Very slow driving speed
HM1	Hour meter	S53	Error code button (Diesel engine control system)



H5	Diesel engine - Battery charging
H6	Diesel engine - Oil pressure
H7	Diesel engine - Overheating
H9	Diesel engine - Glowing
H11	Electric system failure
H14	Low fuel
H19	Overload on platform / Chassis inclination over 5°
H20	Electric system active
H29	Diesel engine - Control system failure
H32	Fuel system water trap

Switch for remote control (option)

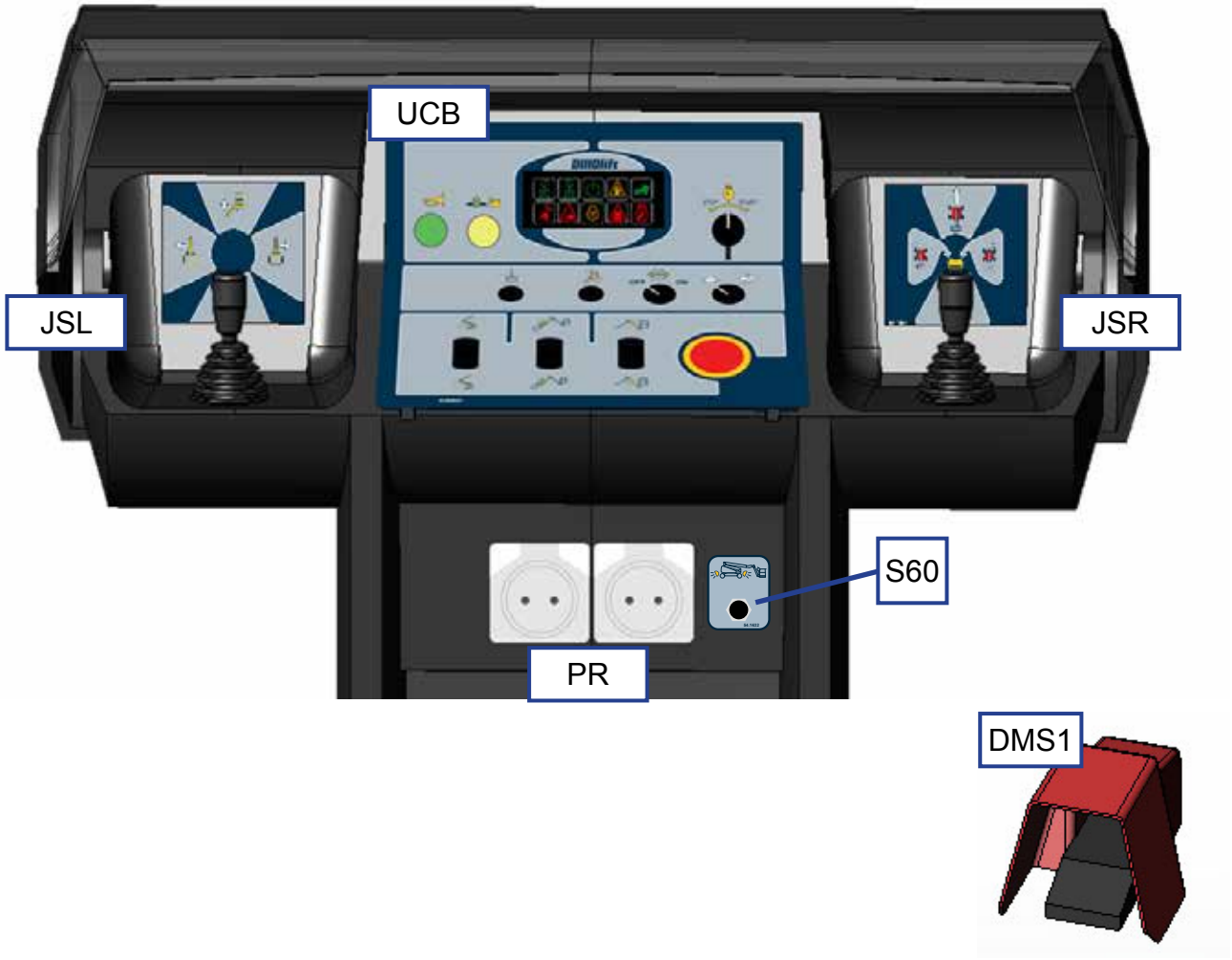


If the machine is equipped with radio remote controller, in place of switch S47 in LCB-centre is RCTX activation switch S48.

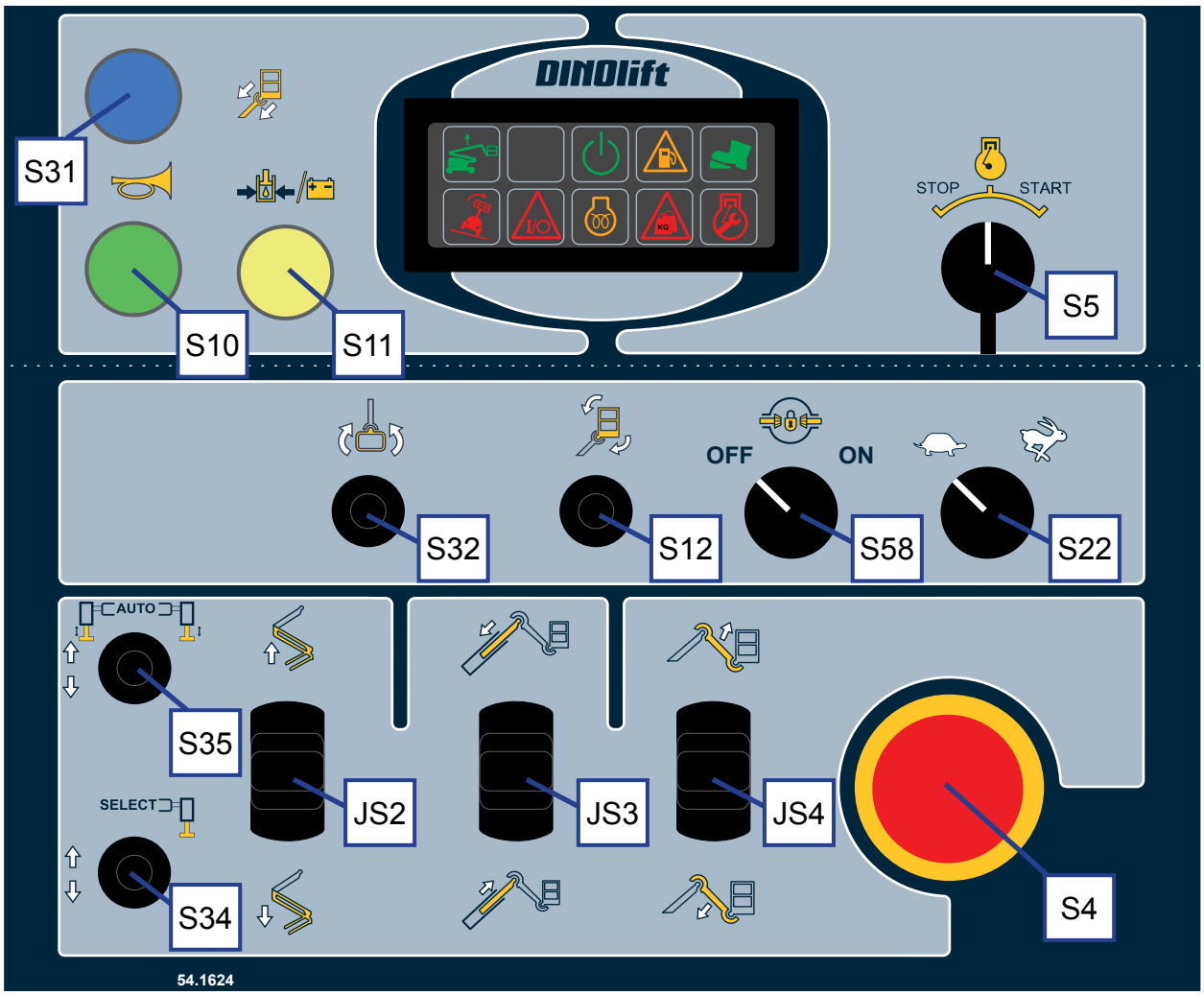
4.3.2. Operating controls on DCB controller

S3	Emergency stop
S24	Control activation button
S25	Turning of wheels
S26	Drive forwards
S27	Drive backwards

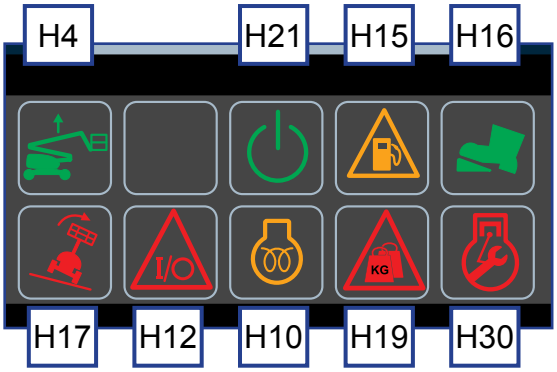
4.3.3. Operating controls in the platform control centre UCB



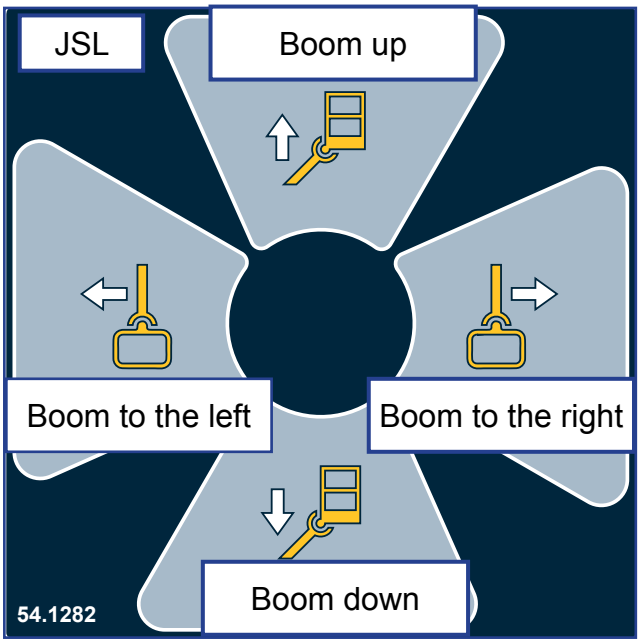
UCB	Control panel of the platform centre
JSL	Control lever for boom
JSR	Control lever for driving
PR	Socket outlet 230 VAC/10A (2 pcs.)
DMS1	Activation pedal
S60	Switch for the driving lights

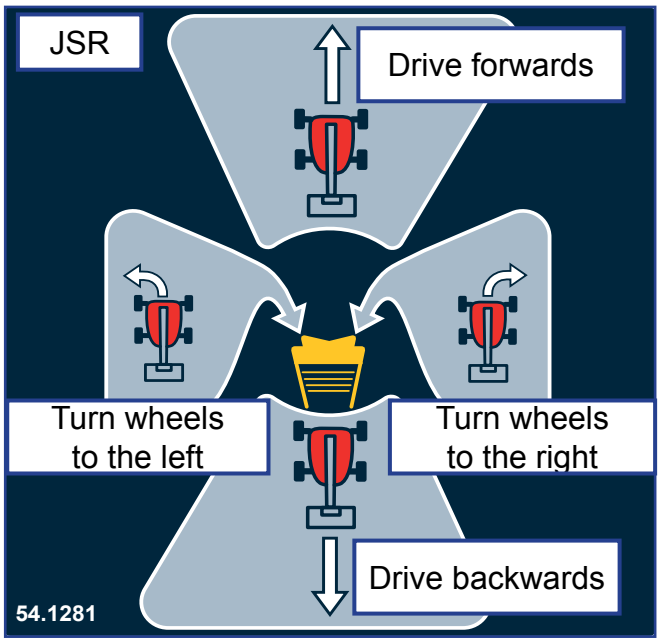


S4	Emergency stop button
S5	Engine start / stop
S10	Sound signal
S11	Emergency descent
S12	Inclination of work platform
S22	Transfer speed range slow / fast
S31	Telescope in pushbutton
S32	Platform rotation
S34	Operation of outriggers up / down (option)
S35	Outriggers up / down, Automatic levelling (option)
S58	Differential lock
JS2	Articulated arms up / down
JS3	Telescope in / out
JS4	Jib arms up / down



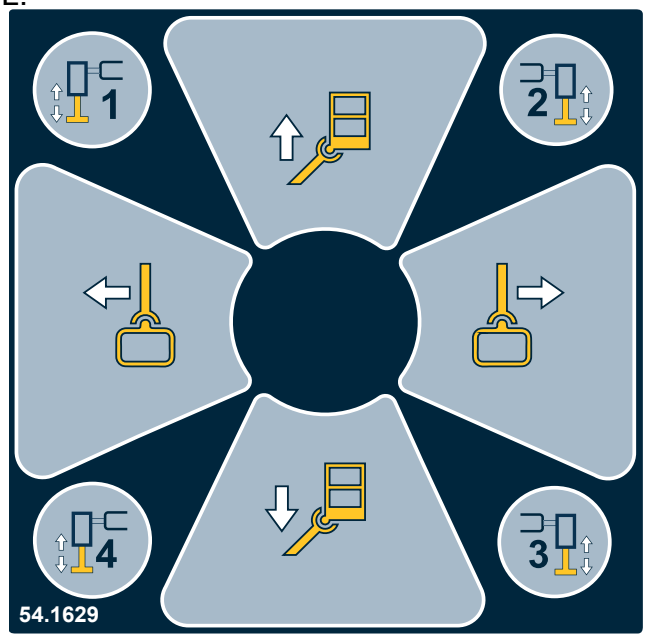
H4	Boom operation allowed
H10	Diesel engine - Glowing
H12	Electric system failure
H15	Low fuel
H16	Pedal depressed
H17	Chassis inclination over 5°
H19	Overload on platform
H21	Electric system active
H30	Diesel engine - Control system failure



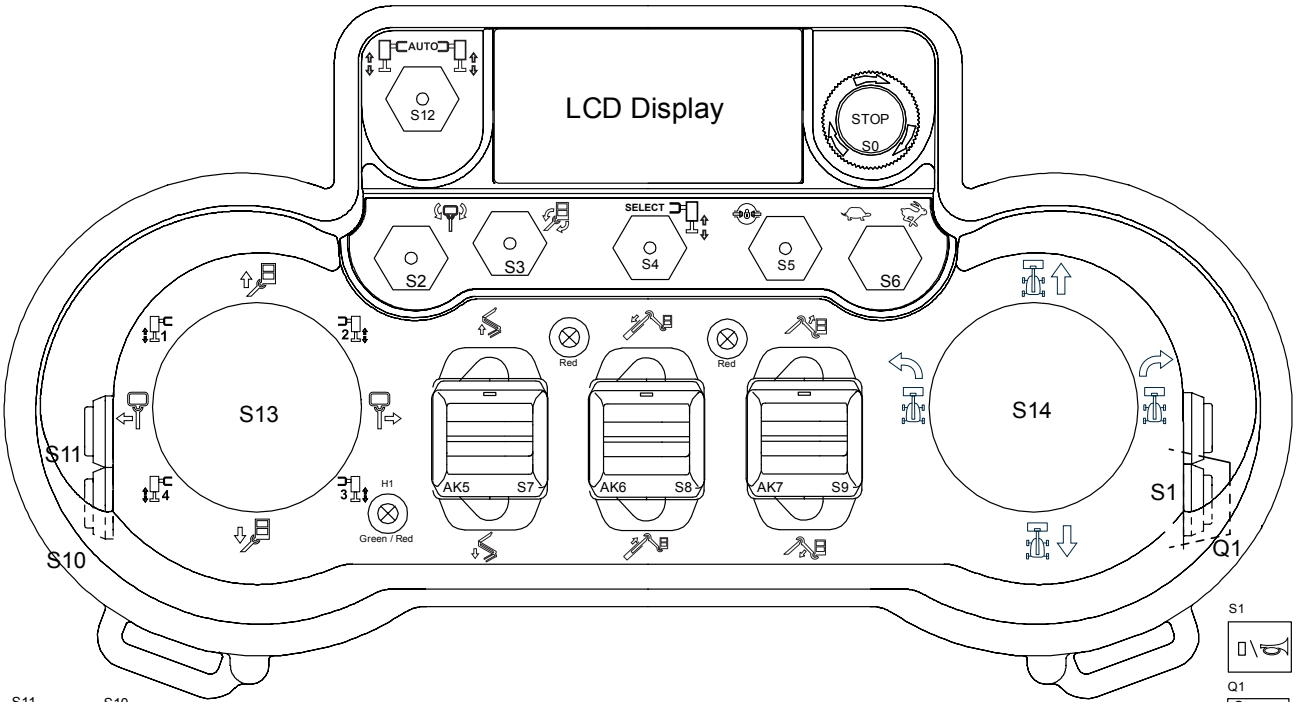


Operating the outriggers with JSL (optio)

The direction of the movement is chosen with switch S34. The outrigger to be driven is chosen with joystick JSL.



4.3.4. Operating controls on RCTX control centre (optio)



Q1	Key switch	
S0	Emergency stop button	
S1	Sound signal / sound signal reset	
S2	Platform rotation left / right	
S3	Inclination of work platform	
S4	Operation of outriggers up / down (option)	SELECT
S5	Differential lock	
S6	Transfer speed range slow / fast	
S7	Articulated arms up / down	
S8	Telescope in / out	
S9	Jib arms up / down	
S10	Engine stop	STOP
S11	Engine start	START
S12	Outriggers up / down, Automatic levelling (option)	AUTO
S13	Boom up / down	
	Boom to the left / right	
S4 + S13	Outrigger operation (option) (Functions as with S34 + JSL on UCB-control centre)	1 2 4 3
S14	Drive forwards / backwards	
	Turn wheels to the left / right	

5. OPERATION

5.1. START-UP

NOTICE

All the regular servicing measures must be carried out before using the lift.

The operator must do a worksite inspection and daily maintenance:

- at the beginning of each workday
- before operating the lift at a new worksite
- when the operator changes in the middle of a workday

5.1.1. Worksite inspection

1. General information
   - Is the lift suited for the intended job?
   - Is the performance of the lift sufficient for the job? (reach, loadability etc.)
   - Is the lighting on the worksite sufficient?
   - Is the position of the lift safe?
   - Is the terrain suitable for using the lift (evenness and load-bearing capacity)?

Soil material	Density	Max. ground pressure kg/cm²
Gravel	High density	6
	Medium density	4
	Loose	2
Sand	High density	5
	Medium density	3
	Loose	1.5
Fine sand	High density	4
	Medium density	2
	Loose	1
Sand/ mud	High density (very hard to work)	1.00
	Medium density (hard to work)	0.50
	Loose (easily worked)	0.25

DANGER

Risk of overturning! Do not use on soft, uneven or unstable ground.

2. Documents
   - Are the Operation and Service Instructions for this lift present? (Manufacturer´s instructions)
   - Are inspections and servicing carried out in accordance with the instructions and have the defects affecting the safety been checked as repaired? (Inspection protocols)

3. Structure (Visual inspection and operational test)
    - General condition of the lift
    - Operation and protection of the controls
    - Emergency stop, signal horn and limit switches
    - Electrical appliances and wiring
    - Oil leaks
    - Load markings and signs

4. Operator
    - Is the operator old enough?
    - Has the operator received the required training?

5. Special issues on the worksite
    - Are there any additional regulations relevant to the worksite or the work?

5.1.2. Starting

1. Check, that the main switch BMS is switched on. This switch is located in the chassis below the lower control centre LCB.

2. Check, that the emergency stop buttons (S1 and S4) are not pressed down.

NOTICE

The engine control system is protected by a start delay after stopping. If the engine has been running and it is stopped, it can not be restarted until 8 seconds after stopping.

To start from the LCB panel:

3. In the LCB centre, turn the selector switch Q1 to position LCB

4. Wake the electric system by keeping the speed selector switch turned for about 2-3 seconds.
   - The signal light H20 “Electric system active” will be illuminated.

   - If the engine is cold, the glowing will be used automatically. The signal light for glowing will remain illuminated until glowing of the engine is completed. As soon as the light is switched off, the engine is ready to start

5. Turn the start switch S6 to the right to the position START and keep it in this position until the engine starts.

   - Make sure that no signal light other than the light H21 remains lit

NOTICE

The machine is equipped with an automatic economy function. The electric system will be switched to sleep-mode, if the operating controls have not been used for 30 minutes. The control system must be reactivated with the start switch. The reactivation can be done either from the chassis control centre or from the platform control centre.

To start from the UCB panel:

3. In the LCB panel, turn the selector switch Q1 to position UCB. Take the keys with you to the UCB centre on the platform.

4. Wake the electric system by keeping the activation pedal pressed for about 2-3 seconds.
   - The signal light H21 lights up

- If the engine is cold, the glowing will be used automatically. The signal light for glowing will remain illuminated until glowing of the engine is completed. As soon as the light is switched off, the engine is ready to start.

5. Turn the start switch to the position START and keep it in this position until the engine starts.

6. While the engine is running, only lights to illuminate should be:
   - signal light H21 “Electric system active”

   - signal light H4 “boom operation allowed”

CAUTION

If any of the warning lights remains illuminated, turn off the engine and find out the reason. Repair the faults before re-start.

7. After starting, allow the engine to warm up at low revolutions for a few minutes before loading it.

NOTICE

To avoid damaging the recharger electronics of the diesel engine, do not disconnect the mains switch while the diesel engine is running!

If the signal light for diesel engine control system remains illuminated or flashes, contact service personnel to help identify the fault.

Signal light functions:

1. The light remains lit for about 2 seconds after engine is started.
   If the light goes out after 2 seconds, the system is operating correctly
   If the light remains lit continuously, the system is faulty. The operation can be continued under certain conditions. The engine must then be checked by a mechanic authorised by DEUTZ.
   If the light flashes, there is a serious fault in the system. In this case, switch the engine off immediately
2. In case of error, depress the switch S53, and the signal light will flash the error code.

3. Contact authorised service representative for interpretation of the error code. We recommend turning to the service staff of the dealer

5.1.3. Stopping the engine

To switch off the engine, turn the switch to the STOP position.

The engine can also be switched off with the emergency stop buttons on all control stations

NOTICE

The battery will only be recharged when the combustion engine is running. Allow the combustion engine to run also between the operations to maintain sufficient charge level of the battery.

5.2. DRIVING

The lift can be driven from two control stations. With the platform attached, the UCB control station on the platform should be used. Drive functions from DCB station are limited.

DANGER

Check the terrain before driving! Do not drive in dangerous conditions. Risk of overturning!

Exercise extreme caution when driving with the work platform raised. Driving the lift with the platform raised is only allowed on a firm and level surface.

The inclination must not exceed 5° with the platform raised. A warning light on the platform indicates that the inclination is too great. Ensure that the lift cannot slide while on a gradient.

The inclination must not exceed 20° with the lift in transport position. Be careful that the platform does not hit the ground. Lift the jib arms slightly for driving on uneven terrain.

The oscillation of the oscillating axle is enabled when the turning device is parallel to the chassis (0° or 180°). If the turning device is turned to the side, the cylinders will lock the oscillating axle to inrease stability to the side.

5.2.1. Driving from UCB control station on the platform

1. In the LCB panel, turn the selector switch Q1 to position UCB. Take the keys with you to the UCB centre on the platform

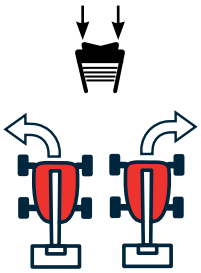
2. Activate controls with activation pedal. The pedal must be kept active throughout the operation. The signal light H16 will be illuminated and the functions of the control switches are activated.

   NOTE! If you keep the foot switch depressed for 10 seconds without using any of the movements, the signal light H16 will start flashing, and you must re-activate the foot pedal.
3. Select the desired speed range (slow/fast) with the speed selector switch. The high-speed position is enabled only when the boom is in the transport position (see point “Operation of the safety devices”).

4. Drive using the right control lever (JSR).
   The driving speed is controlled steplessly by turning the operating lever JSR backwards or forwards in the desired driving direction.

   NOTE! The driving direction will change if the turning device is reversed with respect to the chassis. The driving direction will, however, not be changed until the control switch is released, and turned again. The change takes place, when the turning device is turned about 90 degrees to the side.
5. Steer the machine with pressing the switches at the end of the control lever JSR.

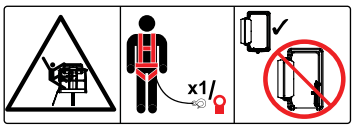
   NOTE! The turning direction of the wheels will change if the turning device is reversed with respect to the chassis. The turning direction of the wheels will, however, not be changed until the control switch is released, and pressed again. The change of direction takes place, when the turning device is turned about 90 degrees to the side.

Fast transport driving is only allowed in the transport position and from UCB panel. The boom must be lowered and parallel to the chassis, the boom extensions fully retracted and the jib arms have to be lowered near to the ground.

The turning device and the jib arms can be operated during transport driving.
The oscillation of the axle is enabled only when the turning device is parallel to the chassis. (0° or 180°).

DANGER

Risk of falling! Wear a safety harness while on the platform, and fix it to the point marked for them.
Check that the gate of the platform remains closed during operation.



5.2.2. Driving from DCB control station on the ground

The maximum speed is limited when driving from the ground with DCB controller. Driving is disabled when the boom is lifted from the support. Jib arms, turning device and platform/fork rotation can be operated in DCB drive mode.

1. Turn the power switch Q1 in LCB panel to ground control position

2. Select drive speed (slow/very slow) with switch S47 in LCB panel

3. Take out DCB control from the storage locker
4. Activate drive controls with activation button. The button must be kept active throughout the operation.
5. Drive forwards or backwards with drive control buttons. The machine will move at selected speed.

6. Steer the machine with the steering switch.

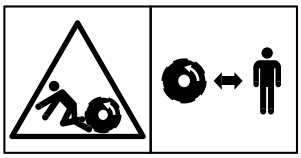
NOTE! The driving and turning directions will change if the turning device is reversed with respect to the chassis. The directions will, however, not be changed until the control switch is released, and used again. The change takes place, when the turning device is turned about 90 degrees to the side.

During driving:
1. Travel with the forks lowered, but lifted clear of the ground with jib arms.
2. Travel at a speed suitable for the location and the load carried.
3. Avoid uneven ground, sudden stops and violent braking.

WARNING

The rotating wheels cause a crushing hazard!
Keep a safe distance from the wheels during driving.
Check that the area is clear from outsiders.

Make sure that the DCB controller cable is not tangled in the wheels.



5.2.3. Using the differential lock

The differential lock may be used for increasing grip under slippery or soft conditions. The differential lock locks up the wheels on the steering axle to rotate at equal speed.

To engage the differential lock, turn the switch to the position ON. The lock will not engage until the joystick JSR is brought momentarily in its neutral position.


ON

The differential lock is released by turning the switch to OFF.
Always release the differential lock if it is no longer needed.


OFF

NOTICE

Using the differential lock impairs the manoeuvrability of the machine.
Avoid using the differential lock unnecessarily.

5.3. SUPPORTING THE LIFT WITH OUTRIGGERS (OPTION)

Outriggers can be used to level the machine on a slope. The levelling capability of the outriggers is:

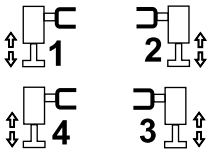
Ground inclination	Inclination, the chassis can be levelled to
< 7°	level position (0°)
7° - 12°	within boom operating range (5°)

The machine may be used either with or without the outrigger support. If the outriggers are used, the machine must be fully supported by them and sufficient pressure must be on all four outriggers.

The support outriggers may only be operated, while the articulated arms and boom are on the support and the telescopic boom is fully retracted.

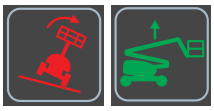
To raise and lower the outriggers individually:

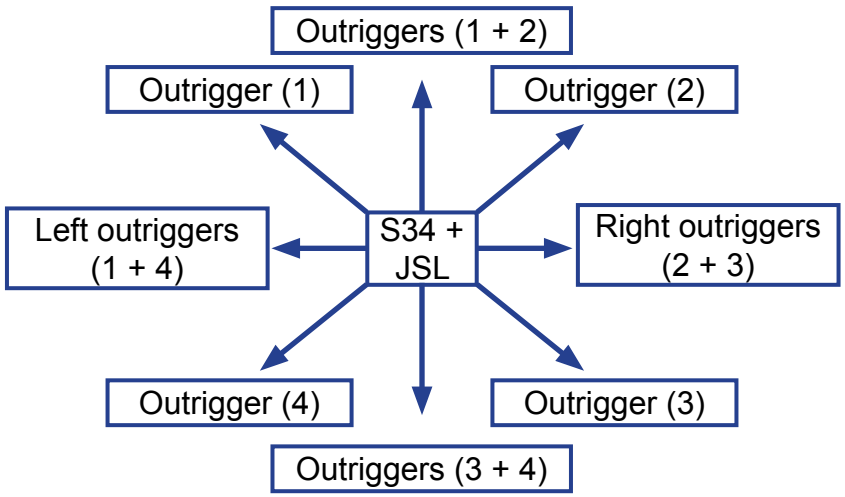
1. Select the outrigger you want to operate by turning the control lever. Each outrigger can be used separately or they can be used two at a time.



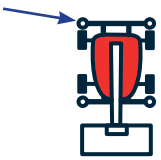
2. Select direction of movement by turning the control switch.

3. The chassis is levelled within operating range, when red inclination warning light is OFF. On UCB control centre, green light for boom operation must be ON.





NOTE! Outrigger operating controls reverse their operating direction according to boom rotation. Example: If the boom is turned 180° in respect to the chassis, turning the outrigger control lever to direction 1 will still operate the outrigger on the left near the counterweight.



The directions will, however, not be changed until the control switch is released, and used again. The change takes place, when the turning device is turned about 90 degrees to the side.

To use the outrigger with automatic levelling function:

1. Select direction of movement by turning the control switch.
2. Keep the levelling operation activated until the movement stops. Verify the level position of the lift as instructed above. Readjust manually, as necessary.

While using outriggers
- ensure the unobstructed operating range.
- the wheels are off the ground and the footplates are lower than the wheels
- the outriggers are firmly supported and cannot slide on a gradient

When raising the outriggers make sure they are fully retracted before driving. Avoid damage caused by contact to the ground.

DANGER

Risk of turning over the lift! Using the lift is prohibited unless it is properly supported.
Observe the effect of ice, possible rain and inclination of the surface on the support force (the outriggers must not slip on the surface).
As required, test the stability by turning the boom around loaded but the telescope fully retracted. If you notice during the test, that the chassis inclines, you must not continue the use.

5.4. WORKING WITH THE ACCESS PLATFORM

WARNING

Carry out all the daily maintenance routines and inspections in accordance with the maintenance instructions before operating the lift. Failure to check the safety devices may cause a serious injury or make the consequences of an accident worse.

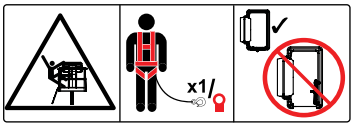
All faults observed in safety devices must be repaired before use.

1. In the LCB panel, turn the selector switch Q1 to position UCB. Take the keys with you to the UCB centre on the platform
2. Attach the safety harness to the anchor point on the platform.
3. Activate controls with activation pedal. The pedal must be kept active throughout the operation. The use of the foot pedal is explained in detail in chapter “Driving from UCB control station on the platform”.
4. Start operation. The boom movements operate as described in the following table

Lever	Movement	Movement speed	Symbol
JSL - up / down	Boom up / down	Stepless adjustment	
JSL - left / right	Turning device rotation clockwise / counter-clockwise	Stepless adjustment	
JS2 - up / down	Articulated arms up / down	Stepless adjustment	
JS3 - up / down	Telescope in / out	Stepless adjustment	
JS4 - up / down	Jib arms up / down	Stepless adjustment	
S36 - left / right	Turning the platform clockwise / counter-clockwise	Constant speed	
S12 - up / down	Platform levelling	Constant speed	
The movements can be used simultaneously.			

DANGER

Risk of falling! Wear a safety harness while on the platform, and fix it to the point marked for them.
Check that the gate of the platform remains closed during operation.

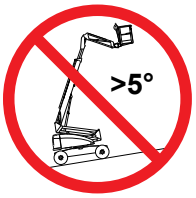


DANGER

Risk of overturning! Do not overload the machine.

Never add persons or load onto the platform, while the red overload light is illuminated. The platform load control prevents all the movements if the platform is overloaded.

Do not operate the boom if the inclination of the unit exceeds 5°. The signal light H17 and the buzzer indicate that the maximum allowed inclination has been exceeded.



It is strictly prohibited to take additional load in the upper position.
Do not exceed the lateral force (400N), or load the platform vertically more than allowed.

When moving the platform, remember the following

- beware of high voltage power lines
- do not touch open electric wires
- do not throw objects from the platform
- do not damage the lift
- do not damage other devices

CAUTION

Crushing hazard! Keep a safe distance to the moving parts of the lift and to buildings and other obstructions around the lift. Hands and legs must be kept inside the work platform while the platform is moving. Also beware of any obstacles above the platform.

NOTICE

During the operation, the work platform is kept level by means of a hydraulic levelling system. If you have to correct the position of the work platform repeatedly during the operation to keep it horizontal, the levelling system is not operating properly.
Staying in a level position is a safety feature of the platform, and any faults, observed in its operation, must be repaired without delay.

Working in the same position for a long time

- It is not necessary to let the engine run if the platform is kept for a longer period of time in the same position
- It is, however, recommended to let the combustion engine run now and again between the operations, to ensure that the battery remains well charged.
- Check the stability and condition of the base regularly during the operation, taking into account the weather and ground conditions

Lowering the platform to the transport position

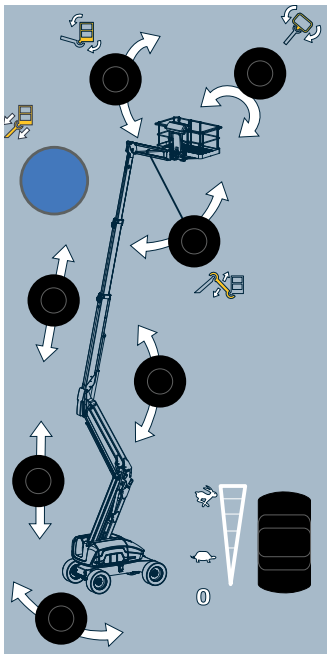
Always retract the telescope completely and turn the platform perpendicular to the boom before lowering the boom onto the transport support.

5.4.1. Operating the boom system from LCB panel

1. Turn the power switch Q1 in LCB panel to ground control position

2. Select the movement with the control switches

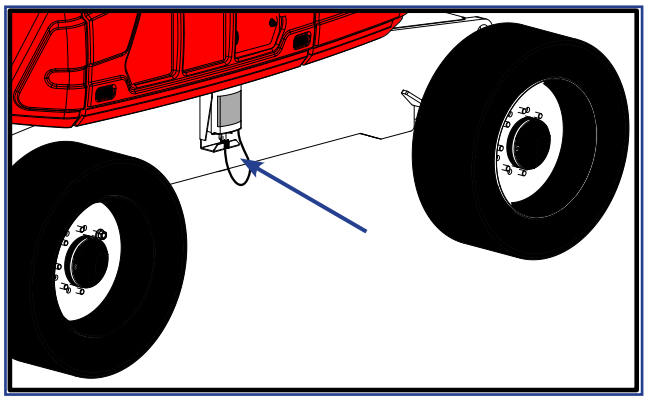
Turning the boom	S16
Lifting and lowering of boom	S17
Telescope in / out	S18
Lifting and lowering of articulated arms	S19
Levelling the platform	S20
Lifting and lowering of jib arms	S21
Turning the platform	S22



3. To operate the movement, turn the speed selector.
   The movement speed is steplessly adjusted.
   When the selector is released, it automatically returns to 0 position and the movement stops.

5.4.2. Socket outlets on the platform

1. The socket outlets (2 pcs.) that are intended for powering electric tools, are located on the platform, below the UCB centre. (230V/ 50Hz/ 16A).
2. The power supply cord, fault current safety switch box and cable reel stand are located on the chassis (see pictures).



NOTICE

Be careful that the power supply cable does not get under the tyre or cling to any obstacles when driving the lift.

5.5. USING THE RCTX CONTOLLER (OPTION)

Storage for radio controller and charger for transmitter battery are located in the storage space next to LCB control station.

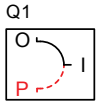
NOTICE

Always check the transmitter for any physical damage before any operation. Never operate a transmitter with worn or damaged parts. For further instructions, check radio remote controller manual.

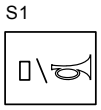
To start operation:

1. Turn the power switch Q1 in LCB panel to ground control position

2. Switch on power to the RCRX receiver via the button S48.
   The flashing signal lights indicate that the receiver is active. If the lift does not receive a control signal from the transmitter, all its operations will stop and the engine will be switched off.
3. Make sure that the transmitter battery is fully charged.
4. Depress the STOP pushbutton on RCTX transmitter.
5. Be sure that all controls, joysticks or paddle levers are in the Off (neutral) position.
   NOTE: If any control, joystick or paddle lever is NOT is the Off (neutral) position when the Start/Horn button is pushed, the transmitter will not turn on.
6. Rotate the key switch to position “I”. A short buzzer signal will sound.



7. Wait for the second buzzer signal (approx. 3 seconds). After a brief self-test, the green LED on the transmitter control panel will flash.This indicates that the transmitter is working.
8. Disengage the E-stop pushbutton.

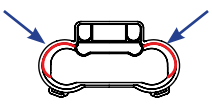


9. Push the green pushbutton “Start/horn” on the transmitter.
   Text DINOLIFT will appear on screen once the system is operational.

10. Start the engine by pushing the START pushbutton until the engine starts.
11. Test all machine functions to check that they correspond with the transmitter functions.

NOTICE

Hold the transmitter with at least one hand while operating. The underside of the transmitter handles have sensors that work as activation control. The transmitter controls will stop all operations in case the hold is released from both handles.



If the transmitter is not used for 10 minutes, it turns itself off.

To restart transmitter
- turn the key switch off and then back on
- press the Start / Horn button

To stop operation:
1. Depress the STOP pushbutton
2. Rotate the KEY SWITCH to position “O”.
3. Remove the KEY CAP.
4. Store the KEY CAP in a safe place to prevent unauthorized use.

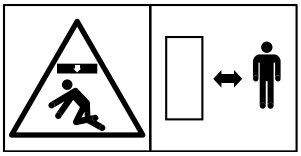
SAFE MODE
In safe mode, the reciever shuts down and all machine movements will be stopped.

The safe mode is activated, if
- the transmitter goes into Sleep mode
- there is radio signal interference
- transmitter is out of operating range
- emergency stop button is activated
- emergency stop circuit failure is detected
- battery is low

If a buzzer sounds during operation, it means a low battery condition.
The transmitter will automatically go into safe mode after 30 seconds. Make sure that the lift is in a safe position before the controller shuts down.
To restart your transmitter, replace the discharged batteries, and start the transmitter.

DANGER

Falling objects or moving parts may cause serious injury or death!
Keep away from the work area while using the radio remote controller.



Make sure you have unobstructed view to all moving parts while lifting. Make sure work path is free of obstructions.

NOTICE

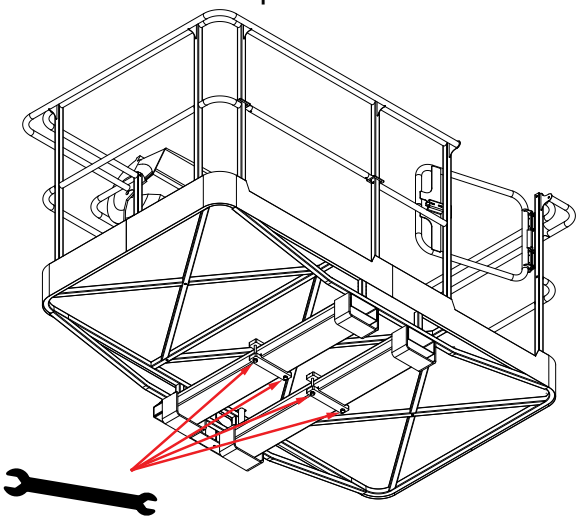
Boom functions can only be used with the radio controller when the machine is in material handling mode. Connecting the work platform disables the boom functions and only driving with the machine in transport position is allowed.

5.6. REMOVING AND ATTACHING THE PLATFORM

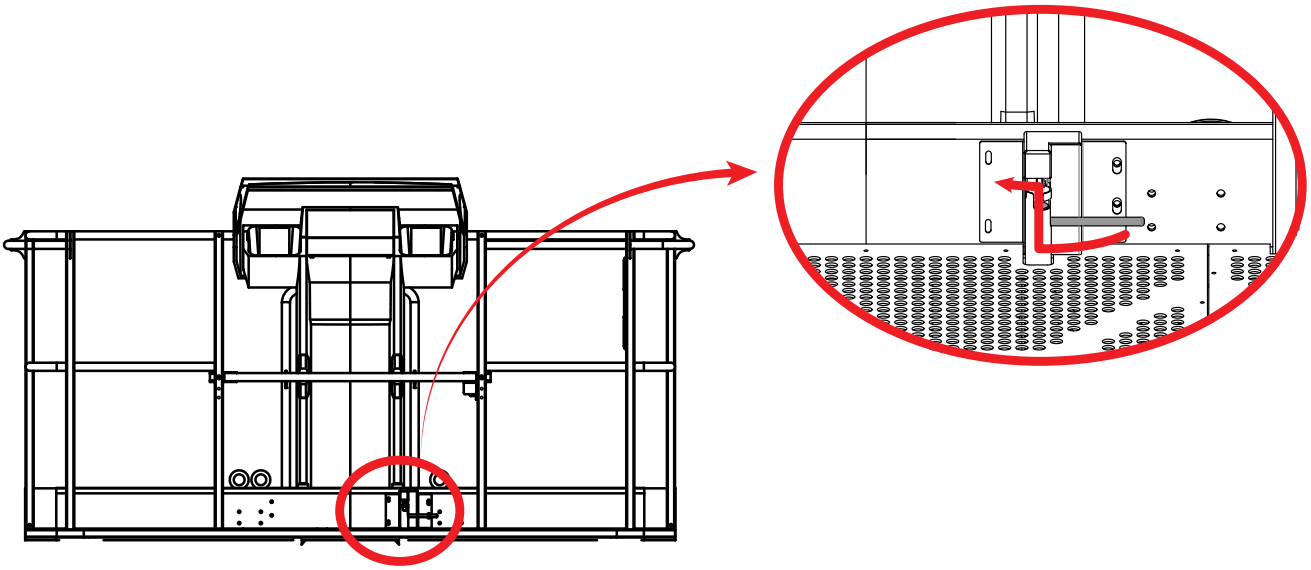
The machine has a detachable work platform.

To remove the platform:

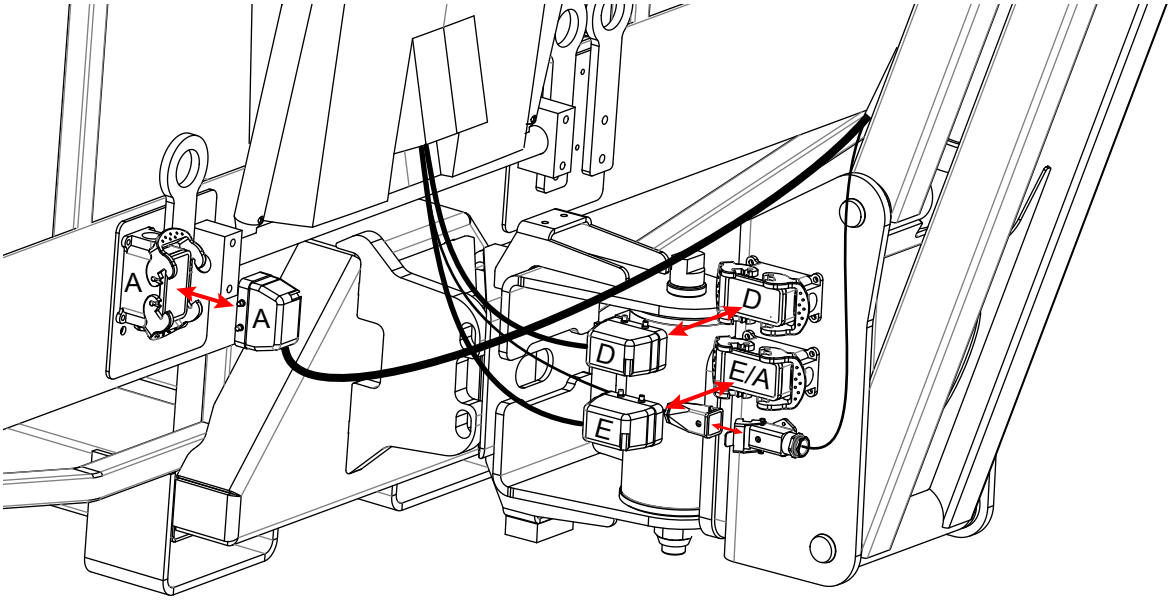
1. Lift the jib arms so that you can safely go under the platform.
2. Loosen the four (4) M12 bolts under the platform.



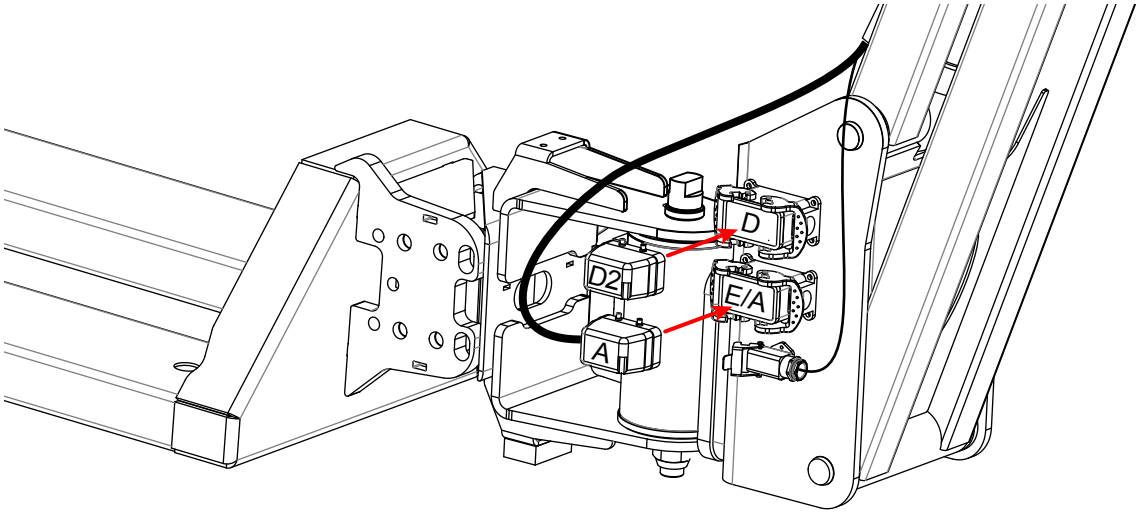
3. Open the locking mechanism on the platform



4. Disconnect the quick connectors connecting the UCB centre to the the wiring harnesses in the boom



5. Reattach the quick connector A and put connector D2 in place according to the picture. The connectors are color-coded.



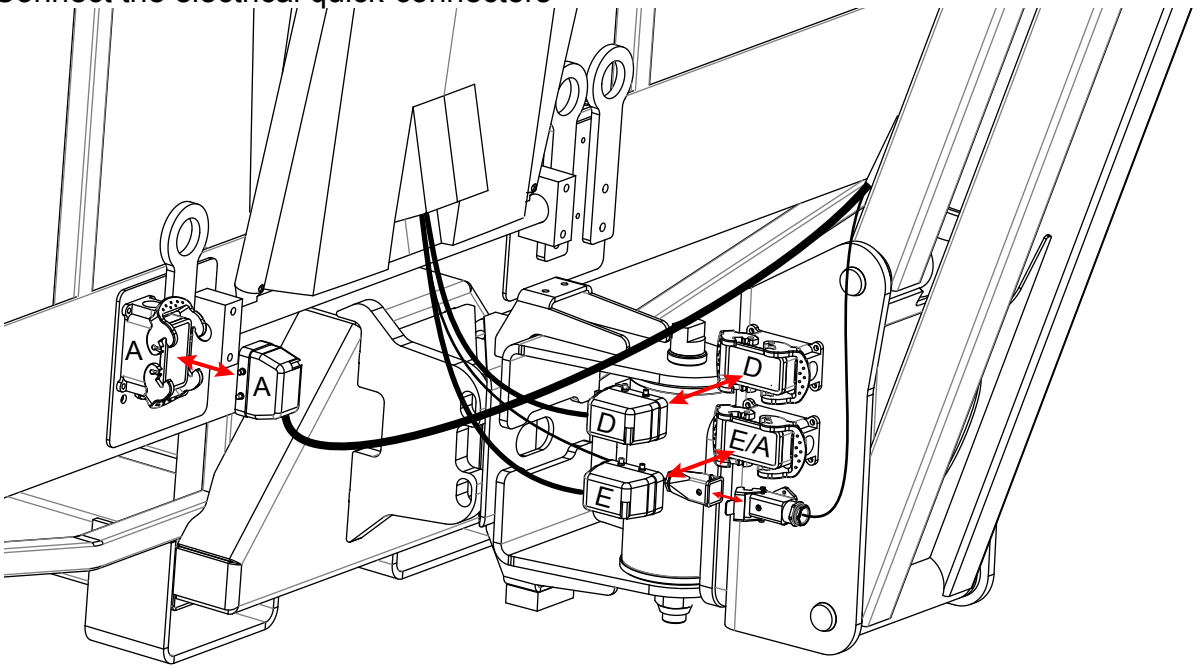
CAUTION

The connector D2 must be in place at D-connector when the machine is used without the platform. Otherwise the CAN-BUS system may cause unexpected errors.

6. Put the connector D and E to the empty connectors on the platform to protect them from dirt, water and damage.
7. Lower the platform on the ground and pull the pallet forks out from under the platform.

To re-attach the platform

1. Slide the pallet forks in place under the platform.
2. Lift the platform up carefully
3. Connect the electrical quick-connectors



4. Lower the platform down and secure the platform in place with the locking mechanism. Note! The locking mechanism has a safety limit switch that prevents the use of the machine unless the platform is properly locked and connected.

5. Tighten the four locking bolts under the platform

6. Check, that the platform is securely attached and that all the controls work properly.

WARNING

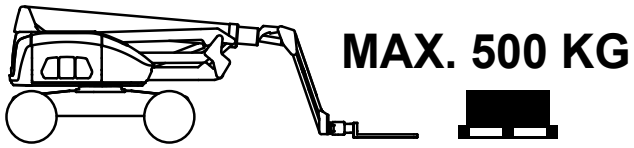
Never use a platform that is not specifically designed as an access platform to DINO XSE machine. Using unsuitable equipment for lifting of persons may cause serious injury or death.

5.7. MATERIAL HANDLING

The machine has a material lifting capability with pallet forks or with material basket.

Pallet fork operation allows normal lifting functions controlled from LCB centre.
Driving is only allowed from DCB centre at a limited speed and only when the boom is on the support.

Maximum load with pallet forks is 500 kg.
Load control device will stop all movements if the load exceeds the maximum allowed load.



WARNING

All instructions concerning operating conditions, inspections and safety devices must be followed regardless of whether the lift is used for lifting of persons or material.

The operator must be specially trained for the use of the machine and have proper training to perform lifting work.

Lifting work must be done according to local regulations and general lifting instructions. All worksite specific instructions and instructions given by employer on safety and training must be followed.

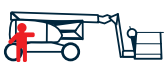
Before lifting, make sure that
- the weight of the load is under the maximum load of the machine
- the pallets are in good condition and appropriate size. The length of the load must not exceed the length of the forks.
- the load is made stable by strapping or wrapping to prevent individual objects from falling.
- the load is well arranged on the pallet and can be safely lifted.

Take extra precautions if the load is long, slippery, or if the center of gravity is high.

If the load can not be properly secured on the pallet, a material basket should be used to minimize hazards caused by falling objects.

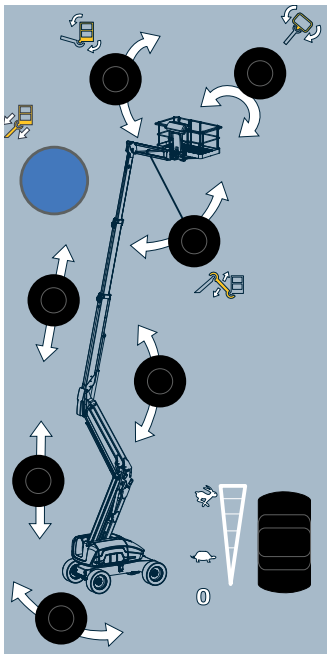
5.7.1. Lifting with pallet forks

1. Turn the power switch Q1 in LCB panel to ground control position

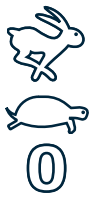


2. Select the movement with the control switches

Turning the boom	S16
Lifting and lowering of boom	S17
Telescope in / out	S18
Lifting and lowering of articulated arms	S19
Levelling the platform	S20
Lifting and lowering of jib arms	S21
Turning the platform	S22



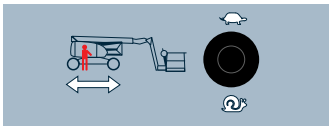
3. To operate the movement, turn the speed selector.
The movement speed is steplessly adjusted.
When the selector is released, it automatically returns to 0 position and the movement stops.



4. Pick up the load.
   - make sure the forks arms are fully insterted under the pallet
   - center the load evenly on the forks
   - Engage loads squarely until the load rests against the load backrest

5. Tilt the forks back back slightly to stabilize the load. An elevated load must never be tilted forward.

6. Drive the machine near the target drop off place. Note that the drive functions only work with the main boom on the support. Only turning device, jib arms and fork rotation can be operated in DCB drive mode

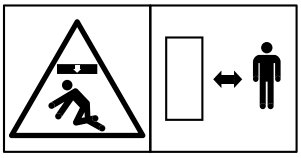


7. Lift the load to drop off place using LCB controls

8. Set the load down and carefully pull the forks from undet the pallet.

DANGER

Falling objects may cause serious injury or death.
Keep away from the work area while work is in progress.



Make sure that the work area is clear of outsiders. Use spotters when working in busy areas.

Avoid all sudden movements. Make sure that the forks do not tilt forwards or backwards so that the load is at risk of sliding off.

Make sure you have unobstructed view to the load and trajectory of the boom while lifting.

Make sure work path is free of obstructions.

Never leave the lift with the load raised. Always place loads on the ground before leaving the unit.

5.8. AT THE END OF THE WORKDAY

1. Remove all loads from the lift.
2. Retract the boom extensions completely, and bring the boom into the transport position.
3. Drive the machine to a safe and level surface for parking.
4. Make sure that the lift will stay in that position. Avoid parking on a gradient (if necessary, use chocks to prevent the machine from breaking loose)
5. Let the engine run for a while without load before turning it off so as to lower its internal temperature.
6. Stop the engine
7. Turn the selector switch to position 0 and the mains swith OFF.
8. Close and lock the operating control covers.
9. Prevent unauthorized use of the lift by removing the ignition key

5.9. IN CASE OF EMERGENCY

5.9.1. When at risk of losing the stability

Reduced stability can be caused by a fault in the lift, the wind or other lateral force, collapse of the standing base or negligence in providing sufficient support. In most cases one sign of reduced stability is the inclination of the lift.

If the signal light lights up, the instability is caused by excessive inclination or instability of the ground.

1. Reduce the outreach to the side by retracting the telescopic boom. Avoid abrupt movements.
2. Drive back to a more level ground

3. If the boom is not on the support, lower it down to be able to drive where inclination exceeds 5°

If the reduced stability is caused by something else:

1. If there is time, try to find out the reason for the reduced stability and the direction of its effect. Warn other people on the worksite using the alarm signal.
2. If possible, reduce the load from the platform in a safe manner.

3. Reduce the outreach to the side by retracting the telescopic boom. Avoid abrupt movements.

4. Turn the boom away from the danger zone to the direction where stability is normal.

5. Lower the boom.

If the stability has been lost as a result of a fault in the lift, repair such a fault immediately.

Do not use the lift until the fault has been repaired and the condition of the lift has been verified.

5.9.2. In case of overloading

The engine shuts down and the movements stop, the red signal light H17 is flashing and the buzzer sounds intermittently

1. Reduce the load from the platform.

2. If a collision with an obstruction has caused the overload, retract the telescope with the emergency descend system.
3. The red signal light is turned off and the sound signal stops as soon as the overload situation ends. After this the machine can be operated normally.

5.9.3. In case the power supply is interrupted

As a precaution against possible failure in the power supply, the lift is equipped with a battery operated emergency descent system. The emergency descent can be operated from every control centre.

Only boom movements can be used with the emergency descent system.
Note that the movements are much slower with the emergency descent system.

When the emergency descent system is started, the electric motor and the combustion engine will stop.

1. Start the emergency descent system via the pushbutton. The emergency descent system is operational only when the pushbutton is being depressed.

2. Retract the telescope completely.

3. Lower the boom, articulated arms and jib arms using the operating levers.

4. Turn the boom to transport position

5. Establish the reason for interruption of the energy supply.

Always check the condition of the emergency descent system before starting to use the lift.

5.9.4. In case of malfunction, when even the emergency descent system is not operational

If not even the emergency system is working, try to warn other personnel present on the site or call for more help. When help arrives, they should try to:

- restore the power supply required for normal operation
- make the emergency descent system operational by, for example, changing the battery
- resume the lift's normal operation by other means

Do not use the lift until the fault is repaired!

5.10. SPECIAL INSTRUCTIONS FOR WINTER USE

The lowest allowed operating temperature of the lift is -20 °C.

In cold conditions, carry out the following special actions in addition to the normal start-up procedure

1. Let the engine run for a few minutes before starting the movements.
2. To ensure the proper operation of the valves, do a few warm-up movements to change warm oil in the cylinders.
3. Check that the limit switches and the emergency descent devices are operational and clean (from dirt, snow, ice, etc.).
4. Protect the control centre and the platform from snow and ice whenever they are not in use.

Always keep the lift free from dirt, snow etc.

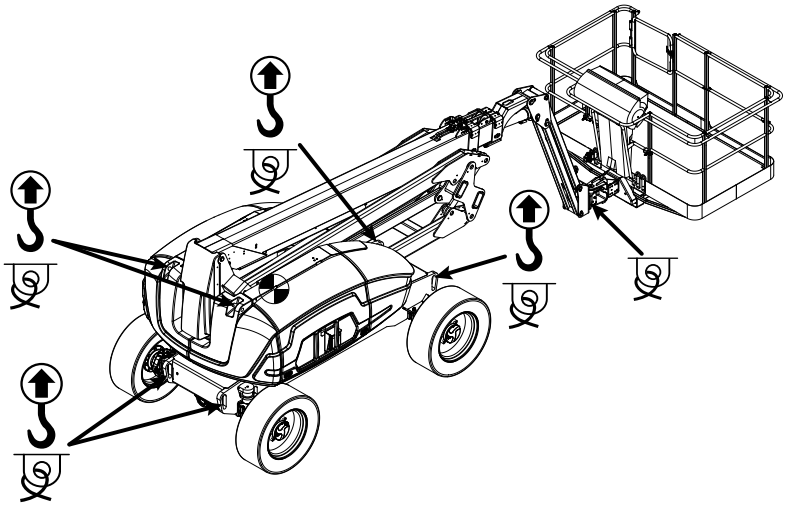
5.11. LONG-TERM STORAGE

Clean the machine carefully, lubricate it and apply protective grease to it before putting it into storage for a longer period of time (see point “Lubrication plan”). Repeat the cleaning and lubrication procedures when you resume the operation.

The periodic inspections must be executed following the steps described in the instructions.

5.12. INSTRUCTIONS FOR TRANSPORT

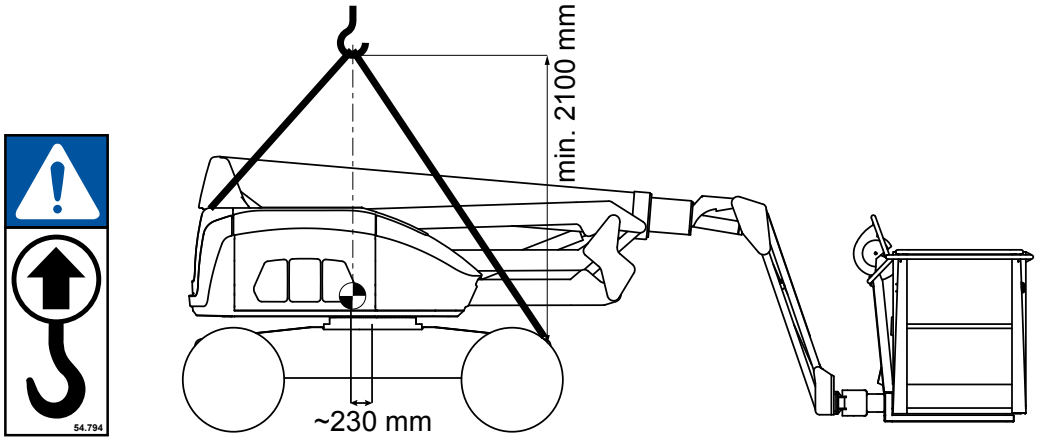
The lift must be in the transport position when lifting, towing or tying it down for transport.
All lugs for lifting and tying down are marked in the machine.



Remove all loose material from the top of the frame structures and the work platform.
All protective covers must be closed and locked.
Make sure that if the detachable work platform is in place, it is securely locked.

5.12.1. Lifting

The device can be lifted using the lugs shown in the picture. The lifting lugs are located symmetrically on both sides of the lift (4 on the chassis and 2 on the turning device).
When lifting the device, the lifting accessories shall be attached as shown in the picture. On the platform side lift from the chassis lugs and at the rear use the upper lugs on the turning device.

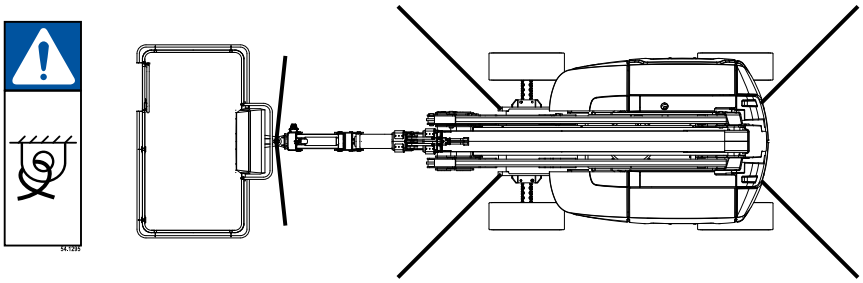


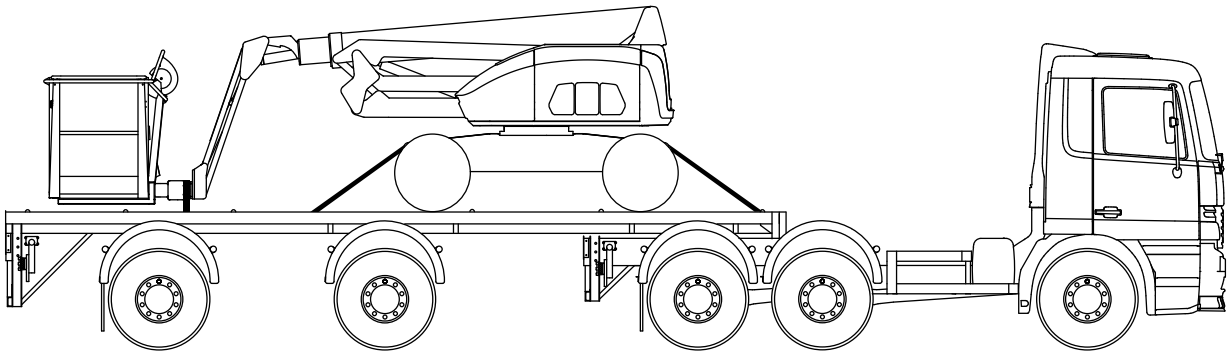
Use for lifting a suitable crane with sufficient capacity and relevant accessories.
Make sure that the lifting equipment can support the weight of the machine! Check the weight of the in the technical specifications.

Be careful not to damage the device during the lifting operation.

5.12.2. Tying down

Tie down the lift at four (4) tying down points on the chassis. Also to tie the boom to prevent the turning device from turning accidentally.





CAUTION

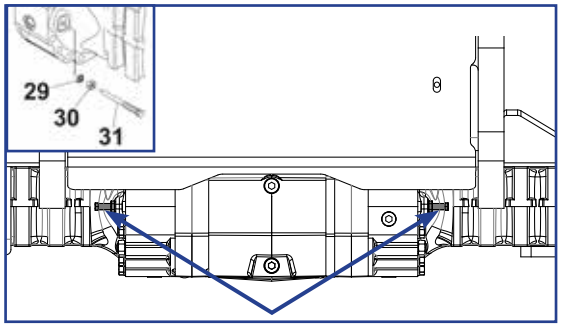
Risk of falling! Tie down the lift to the vehicle for the transport. The chassis of the lift is fitted with specific, marked lugs for tying. To avoid structural damage, use only the marked tying points.

5.12.3. Towing

The unit must not be towed faster than 1.2 km/h, or for more than 3 minutes without a pause.

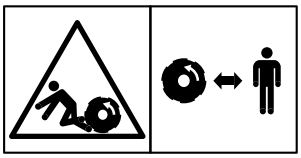
The following measures shall be carried out before towing the lift:

1. Drive the machine to a safe and level surface
2. Bring the boom system to the transport position
   If a fault in the diesel unit prevents normal operation of the boom system, the lift must be driven to the transport position using the emergency descent system.
3. Chock the wheels
4. Release brakes manually:
   - Loosen the nuts (30) (2 pcs on each side).
   - Move the nuts (30) backwards by approximately 8 mm
   - Tighten screws (31) so as to fasten them onto the pressure plate.
   - Using a wrench, tighten the screws (31) in an alternative sequence by 1/4 turn at a time so as to compress the Belleville washers and disengage the braking disks. Tighten maximum by one turn!

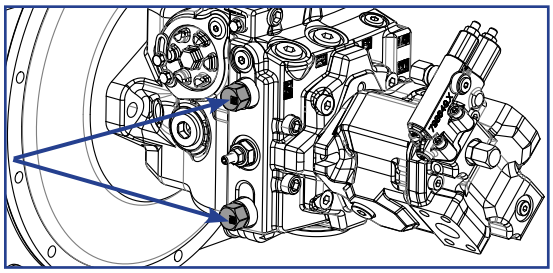


WARNING

Releasing the brakes may cause unintended movements!
The brakes must not be released on a gradient. Use chocks under the wheels.

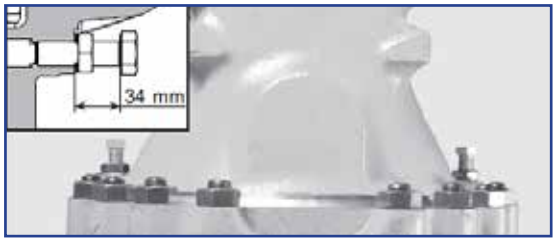


5. Switch the pump to free circulation by turning the bolts in the picture (2 pcs.). Unscrew counter-clockwise three (3) rounds.



After towing:

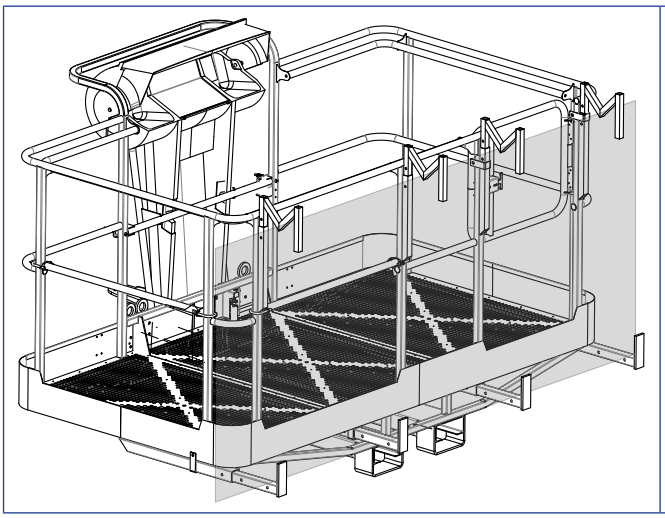
1. Resume operation of the brakes by adjusting the screws (31) to obtain distance of 34 ± 0,5 mm between axle machined surface and screw underhead. Lock into position with nuts (30)

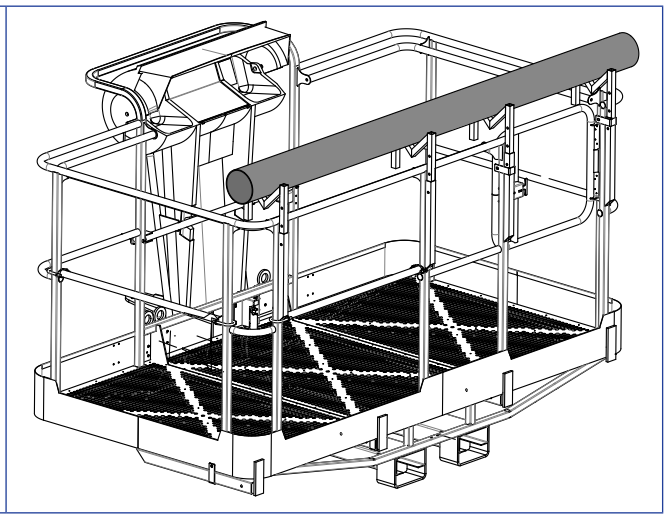


2. Deactivate the free circulation of the pump by tightening the bolts (2 pcs).

6. DINO SKY RACK (OPTION)

Dino Sky Rack is a DINO accessory intended for lifting of panels of sheet material and pipes.





	Technical specifications
Max. allowed load on rack	100 kg
Max. panel area	3 m^2
Max. panel height	1250 mm
Max. wind speed during operation	8 m/s
Weight of the Sky Rack	12 kg

Before operation:

- Check, that the upper and lower supports are not bent or otherwise damaged.
- Check that the locking pins are in place in all supports.

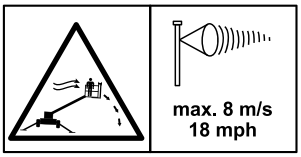
Lifting panels:

1. Place the lower supports to their desired positions. Secure all supports with locking pins.
2. Load the panel on the rack
    - center the load on the platform
    - place it on at least two of the lower supports
1. Turn the upper supports outside of the platform railing. Place the supports on desired height so that the panel can not tip over. Secure all supports with locking pins.
2. If necessary, secure the panel with straps so that it can not fall off during lifting.

Lock upper and lower supports in their shortest position when the rack is not in use.

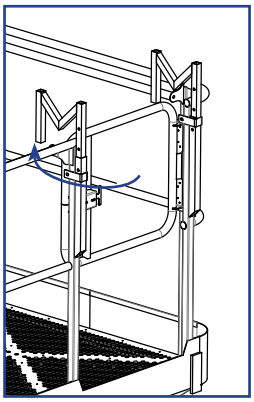
DANGER

Tip over hazard!
The panels will increase the area exposed to wind and decrase the stability of the machine. Follow all instructions on maximum panel size and operating conditions.



Lifting pipes:

1. Turn the upper supports inside of the platform railing and place the supports on desired height. Secure all supports with locking pins.
2. Load the pipe on the rack
   - center the load on the platform
   - place it on at least two of the upper supports
3. Secure the pipe with straps so that it can not fall off during lifting



WARNING

The weight of the Sky Rack assembly, load on the rack and load on the platform must not exceed the maximum allowed load on the platform of the machine!

Maintenance

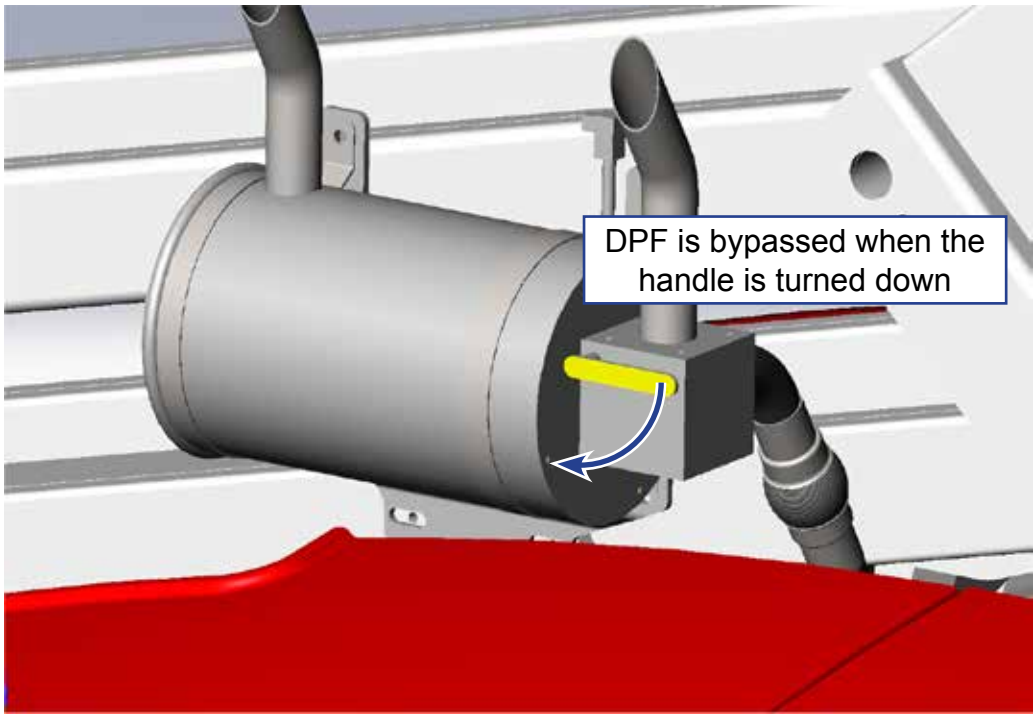
- Check supports for bent, crushed or missing parts
- Replace damaged or missing parts
- Replave illegible or missing decals

BLANK

6.1. DPF DIESEL PARTICLE FILTER (OPTION)

The machine may be fitted with BPdiesel particle filter, type 250-1.22.

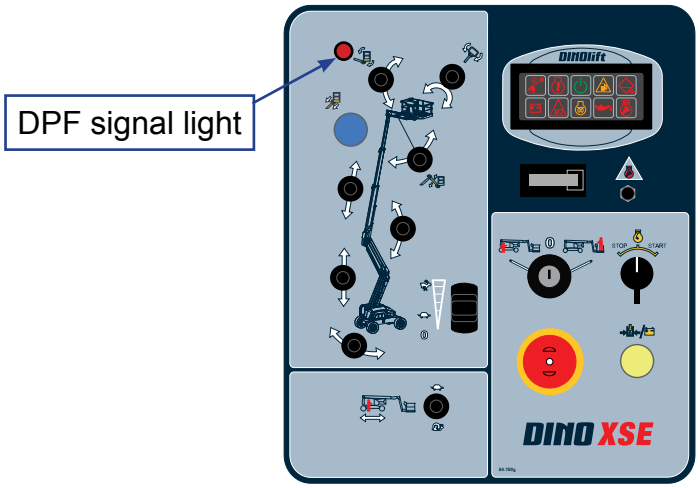
The Diesel particle filter is fitted with a manually operated bypass valve.



⚠ CAUTION

The use of the filter may be mandatory in some countries or specific regions or work areas.
Use the filter / bypass system according to local legislation!

The change interval of the Diesel particle filter cartridge is about 250 hours. The red “DPF” LED in the LCB centre indicates that the cartridge needs to be replaced.



7. FAULT FINDING

FAULT	REMEDY

1. The engine does not start, none of the signal light are illuminated

The key switch Q1 or mains switch is not connected.	Turn on the main switch and ensure that the key switch is in the correct position.
Battery is flat.	Recharge the battery.

2. The engine does not start, signal lights are operational

One of the emergency stop buttons has been left in the lower position. The signal light in LCB-centre Emergency Stop button is off.	Release all emergency stop buttons. Re-start the engine.
Overload control for the platform has stopped the engine. Alarms by signal light and buzzer. 	Remove excess load from the platform
Platform control centre crush guard has stopped the engine. (The signal light in LCB-centre Emergency Stop button is off.)	Remove the load affecting the control centre and restart
The platform is in place but it is not locked properly (The signal light in LCB-centre Emergency stop button is off.)	Check, that the locking pin is securely in place
The platform is detatched and the electric connectors have not been put in correct place at the end of jib arms.	Check, that the electric connectors are connected properly.
Reciever for the radio control is switched on.	Turn the radio control transmitter on and start with the radio controller. OR Switch the radio control transmitter off.
Glowing is not ready.	Let the automatic system finish glowing the engine before restart. The glowing is ready when the signal light goes out. 
Battery is almost flat.	Recharge the battery.
Withdrawal period of the protection relay for DEUTZ engine starting is not completed	Keep the START-STOP switch in STOP -position for 2 seconds. Then wait 6 seconds before restarting.

3. Diesel engine cranks but does not start

Fuel tank is empty.	Refuel and bleed the fuel supply system.

FAULT	REMEDY

4. The engine starts but stops after a while

Low oil pressure. (Signal light in LCB centre)		Check the engine oil level.
Engine overheated. (Signal light in the LCB centre)		Allow the engine cool down and check the coolant level. Ensure the circulation of cooling air.

5. None of the platform movements is operational though the motor is running

Key switch Q1 in LCB centre is in wrong position	Select the correct operating location using the switch Q1.	
UCB centre: Pedal (DMS) is not active	Re-activate the pedal, and check that the signal light is illuminated.	
LCB centre: Speed selector swith is not turned	Keep the speed selector switch turned while driving the movement.	
Chassis inclination is over 5° - inclination signal light is illuminated. The telescope is out. The inclination sensor prevents all movements if the inclinaton is over 5° and the telescope is extended.	Lower the boom and articulated arms. Drive to more level ground or level the chassis with the outriggers.	

6. Disturbance of platform movements - only some of the movements are operational

Driving prevents movements: • Boom up / down • Telescope in / out • Lifting and lowering of articulated arms	Stop driving and try again
Chassis inclination is over 5 degrees - inclination signal light is illuminated. The telescope is in. The following movements are prevented: • Boom up • Articulated arms up • Telescope in / out	Lower the boom and articulated arms. Drive to more level ground or level the chassis with the outriggers.
The following movements are prevented: • Boom up / down • Lifting and lowering of articulated arms	Work platform is in place, but the connectors are not connected to the platform control centre.

FAULT	REMEDY
Driving does not work	
Key switch Q1 in LCB centre is in wrong position	Select the correct operating location using the switch Q1.
UCB centre: Pedal (DMS) is not active	Re-activate the pedal, and check that the signal light is illuminated. 
Driving is prevented, if the lift is inclined more than 5 degrees, and the boom and articulated arms are not down and telescope is not retracted.	Lower the boom onto the support/retract the boom extensions completely.
LCB centre or radio controller: Driving is prevented if the boom and articulated arms are not down and telescope is not retracted.	Lower the boom onto the support/retract the boom extensions completely.
The followind boom movements prevent driving: • Boom up / down • Telescope in / out • Lifting and lowering of articulated arms	Stop using the boom system movements and continue driving.
Driving is slow	
UCB centre: the boom does not rest on the support, or the telescope is extended	Lower the boom onto the support/retract the telescope completely.
Driving is operated from LCB centre or with radio controller	The fastest driving speed can only be operated from the platform. Move to the platform and drive the machine from UCB centre.
Selector switch for speed is in the wrong position.	Select a faster speed range. Notice! The driving speed is always limited when driving from the LCB control centre.

In all other fault conditions, the lift must be submitted to a qualified DINO service provider.

To avoid malfunctions

- Follow the operating instructions
- Beware of dangerous situations, which can damage the lift
- Keep the lift clean and protect it against moisture

NOTES

8. MAINTENANCE SCHEDULE

Maint.	Schedule	Person responsible	Reference
A	Daily	Operator	Operating instructions
B	1 month / 100 hours*	Competent person who is familiar with the lift	Maintenance instructions
C	6 months / 400 hours*	Competent person who is familiar with the lift	Maintenance instructions
D	Annually / 800 hours*	Skilled technician who is well familiar with the structure and operation of the lift	Maintenance instructions
E	As needed	Skilled technician who is well familiar with the structure and operation of the lift	Maintenance instructions
* Service must be performed every indicated month or operating hour interval, whichever comes first.			

NOTICE

In addition to the daily maintenance routines according to the maintenance schedule, every operator is obliged to perform a site-specific worksite inspection.

T = Test / Check (general checking of condition).
P = Thorough Inspection. To be performed follwing the separate procedure described in the maintenance instructions.
V = Grease
S = Carry out the replacements or repairs as described in the instructions.

	Maintenance measures	A	B	C	D	E
1	Frame structures, boom system and platform	T	T	T	P	
2	Safety limit switches	T	T	T/V	P	
3	Overload safety devices			T	P	S
4	Bearings of the boom and the articulated arms		V	V	T/V	
5	Bearings of jib arms		V			
6	Bearings of jib cylinder		V			
7	Bearings of the levelling cylinders		V	V	T/V	
8	Bearings of the lifting cylinders		V	V	T/V	
9	Sliding surfaces and rollers of the telescope		T/V	T/V	T/V	
10	Bearing of telescope cylinder			T/V	T/V	
11	Condition of cylinders				P	
12	Flyer-chain			V	P/V	
13	Checking and adjusting the play between slide pads and surfaces		T	T	T	
14	Turning device			V	P/V	
15	Electro-hydraulic rotary adaptor				T	
16	Drive functions			T	T	
17	Axles and wheels	T	T/V	T	S	
18	Articulation bearings of axle oscillation		V			

	Maintenance measures	A	B	C	D	E
19	Articulation bearings of pivot joint of wheel		V			
20	Cardan shaft joints		V			
21	Diesel engine and fuel system	T	T	T	S	
22	Hydraulic oils	T	T	T	S	
23	Hydraulic hoses, pipes and connections	T	T	T	P	
24	Condition and attachment of battery and wiring		T	T	P	
25	Hydraulic pressure				P	
26	Operation of load regulation valves			T	T	
27	Operation and condition of platform's levelling system		T	T	T	
28	Operating controls and signal lights	T			P	
29	Emergency descent, emergency stop and sound signal	T	T	T	T	
30	Decals, signs and manuals	T	T	T	T	
31	Test loading				P	
32	Anti-corrosion treatment				T	S
33	Special inspection					S

Always lubricate the lift and apply a protective grease film immediately after the washing.

The lift must always be subjected to a special inspection after an exceptional event. Special inspection is required if the lift has been damaged in a manner,which may affect its load-bearing capacity or safe operation. Consult the maintenance manual for more detailed instructions.

NOTICE

Separate operating and maintenance instructions for the engine, issued by the manufacturers of the component, are delivered with the lift. Consult these manuals for more detailed instructions.

NOTICE

Under demanding conditions where moist, corrosive substances or corrosive climate may speed up the deterioration of the structures and induce malfunctions, the maintenance intervals must be shortened, or the influence of corrosion and malfunctions must be reduced by using appropriate protective means.

8.1. SCHEDULE FOR INSPECTIONS REQUIRED BY THE AUTHORITIES

Inspections must be performed in accordance with local, state or federal regulations, legislation, directives, standards. The manufacturer recommends following inspections, as required by local authorities in platforms country of origin.

A pre-use inspection must be done before taking the platform to use for the first time and before first start-up after major repairs and alterations.

A thorough inspection and a test loading of the lift must be carried out at least once every twelve (12) months.

The platform should undergo a major inspection within ten (10) years after having been originally put into service. A major inspection includes non-destructive testing and inspection while dis-assembled.

A special inspection should be done if the platform has been exposed to exceptional circumstances which may have affected the structural integrity of critical components.

The inspections should be carried out on regular basis throughout the service life of the lift. If the lift is used under extreme conditions, intervals between the inspections shall be reduced.

The overall operating condition of the lift as well as the condition of the safety-related control devices shall be established in the regular inspections. Particular attention shall be paid to changes which affect the operational safety.

During inspections the notifications given in previous inspections, practical experience from use and information on performed repairs should be taken into account and can be implemented for better safety.

Major and special inspections shall be carried out by a competent person or competent body, who is familiar with the operation and structure of the lift. The competent person sould periodically update their knowledge and be able to demonstrate their competency if so required.

A report should be made of the inspections and the reports should be kept with the unit stored in the space reserved for it.

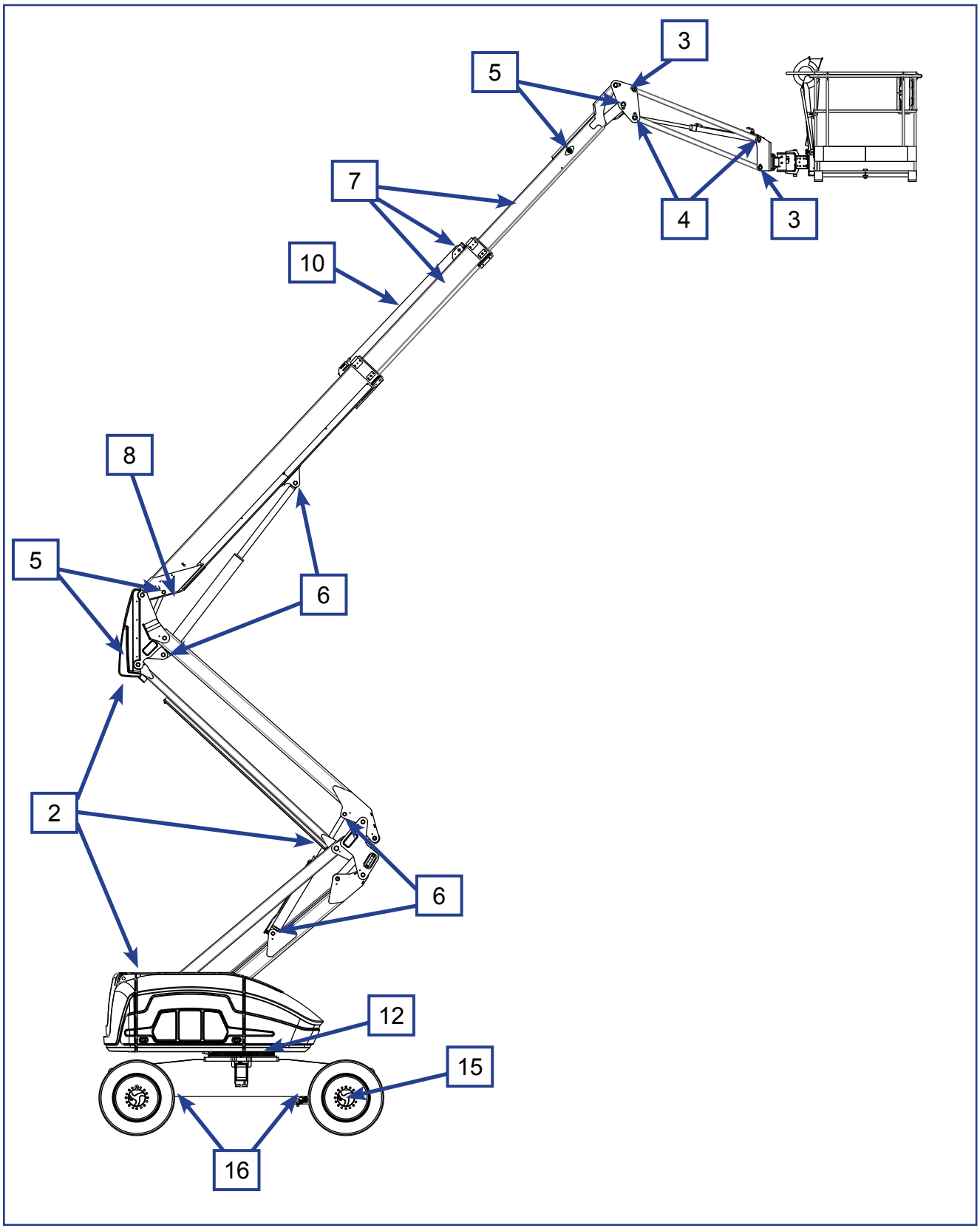
The report should include
- information about the inspection
- data of repair welds (date, what whas repaired and repaired by whom)

When the lift is ready for operation after annual inspection, the date of inspection shall be marked on the inspection plate affixed to the lift.

NOTICE

Check the regulations for the inspections and the competence of the inspector with the local authorities.

8.2. LUBRICATION PLAN



Grease nipples are marked in the machine with this label unless they are in a clearly visible place.

9. ROUTINE MAINTENANCE DURING OPERATION

The maintenance operations, that are the responsibility of the operator, are described in this chapter.

The more demanding maintenance operations that require special skills, special tools or specific measurements and adjustment values are instructed in the separate Maintenance Instructions. In such maintenance and repair cases, the operator shall contact an authorized service provider, the distributor or the manufacturer.

Make sure that all the service and maintenance procedures of the lift are performed in time and according to the given instructions.

WARNING

Any such faults, observed during operation or periodic service, which affect the operational safety of the unit, must be repaired before the lift is used next time.

Keep the lift clean. Clean the lift especially carefully before services and inspections. Impurities may cause serious problems, for example, in the hydraulic system.

Use original spare parts and consumables. Consult the spare parts list for more detailed information about the parts.

If the lift is operated under demanding conditions (in exceptionally humid or dusty environment, corrosive climate, etc.) the intervals between the oil changes and the other inspections shall be shortened to meet the prevailing conditions in order to maintain the operational safety and reliability of the lift.

The timely performance of the periodic servicing and the inspections is absolutely mandatory, because neglecting them may impair the operational safety of the lift.

The guarantee will not remain valid, if the servicing and the periodic inspections are not performed.

9.1. FIRST SERVICE

After the first 20 working hours:

- Change the pressure and return filters.
- Check the transmission oil levels.
- Visually check that the hoses or connectors do not show leaks or chafing.
- Check the tightening torque of the attachment bolts:
  - wheel bolt – 360 Nm (M18, 32 pcs.).
  - attachment bolts of the steering axle – 520 Nm (M20, 2 pcs.).
  - U-bolts of the fixed axle – 230 Nm (M20, 2 pcs.).
  - oscillating axle's locking cylinder bolts –62 Nm (M12, 8 pcs).

The first transmission oil change and brake adjustment must be done after 100 working hours.

9.2. INSTRUCTIONS FOR DAILY MAINTENANCE AND INSPECTIONS

9.2.1. Check the condition of chassis, the boom and the work platform

Check visually the condition of the access routes, the work platform, the platform gate and the handrails.
Check visually the condition of the boom and the frame structures.

Check that the platform is securely locked in place and that the electrical couplers are connected.

9.2.2. Condition of the wheels

Inspect visually the condition of the tread of the wheels.

9.2.3. Check the diesel engine and the fuel system

1. Check the fuel level.
2. Check the cleanliness of the pre-filter
3. Check the amount of water gathered in the water trap of the fuel. Drain accumulated water from the tap screw.
4. Check the cleanliness of the diesel engine cooler element. If necessary, clean the cooler by blowing compressed air over it. Be careful not to damage the cooler.
5. Check the oil level in the diesel engine. Top up oil, if necessary.

9.2.4. Check the hydraulic oil level

Check the hydraulic oil level with the platform in the transport position. Top up oil, if necessary.

9.2.5. Check the hydraulic hoses, pipes and connectors

Check visually the hydraulic hoses, pipes and connections.
Make sure that there are no visible oil leaks.

Replace any externally damaged hoses and clashed pipes or fittings.

9.2.6. Check the safety devices

Check that the inclination sensor works properly.
- Tilt the sensor to one side.
- The alarm should sound a warning
- Driving and boom functions should be disabled. Only telescope in should be operational.

Check that the load sensing system is in operation.
When the platform / pallet forks are not loaded, the signal lights must be according to the table.

LED		System status
RED LED	OFF	No faults detected
RED LED	OFF	The system is not overloaded
ORANGE LED	ON	Empty weight is calibrated correctly (±15 kg)
GREEN LED	flashes	The sensor is operational

If the machine has outriggers, test the correct operation of safety limit switches that prevent the boom and outrigger movements unless the platform is in a correct position.

1. Platform must be in transport position, outriggers up.
2. Lift the boom from lower controls so that the boom is not on the support. **All boom system functions should work.**
3. Drive the outriggers. **The outriggers must not work in any position of the control device.**
4. Lower the boom back down and drive one of the outriggers down.
5. Lift the boom from lower controls. **The boom, articulated arms or telescope must not work in any position of the control device.**
6. Drive all the outriggers down.
7. All boom functions should work.

9.2.7. Check operating controls and signal lights

Check that all the controls are intact and that all warning and signal lights work.

9.2.8. Check the operation of the emergency descent, the emergency stop and the sound signal

Test the operation of the emergency stop, the emergency descent system and the sound signal from both the chassis control centre and the platform control centre.

- lift the boom about 1-2 metres (using lever 8) and extend the telescope 1-2 metres (using lever 9) keeping the emergency stop button depressed – the movement shall now stop
- using the emergency descent, retract first completely the telescope, then lower the boom
- pull up the emergency stop button
- test the operation of the sound signal

9.2.9. Decals, signs and manuals

Check that all the signs, warning decals and pictorials on the control centres are in place, intact and clean.

If the labels have started to come off or tear apart, or if the symbols or texts are illegible, then the decals must be replaced.

Product numbers of the decals are visible on the decals or the product numbers of new decal sets can be found in the spare part list.

Check that the instruction manuals accompanying the platform are correctly stored on the platform and that they are legible.

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10. CHANGE OF OWNER

For the owner of the lift:

If you have purchased a used DINO lift from some other than the manufacturer, please post your details to the manufacturer using the form on this page, and send it to:

info@dinolift.com

This information makes it possible for us to provide you with the safety bulletins and other campaigns relevant to your machine.

Note! It is not necessary to inform about a rented machine.

Machine model: DINO _____

Serial number: _____

Previous owner: _____

Country: _____

Date of purchase: _____

Current owner: _____

Address: _____

_____

Country: _____

Contact person

Name and position in the company: _____

Telephone: _____

E-mail: _____

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