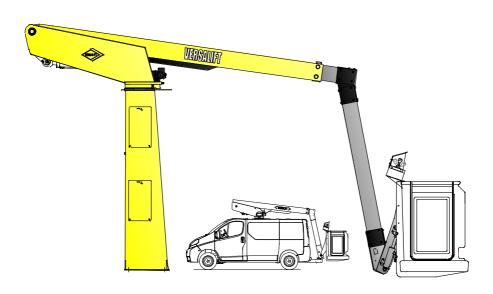
# **Operators Manual**



# NEXS Models ET26NEXS and ET30NEXS









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It is the responsibility of the operator to be familiar with all aspects of the machine and manual.



## **DAILY CHECK LIST**

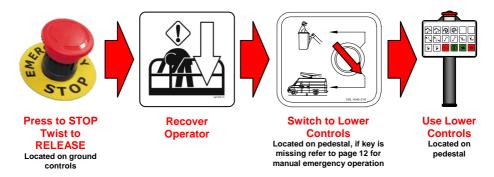
	_
Check engine oil and fluids, also ensure that the battery is sound	
Check condition and correct pressure of tyres	
Check all lamps / warning beacons for correct operation	
Check the vehicle handbrake for correct operation	
Ensure all emergency controls operate correctly	
Ensure that the Versalift is correctly stowed for travelling	
Check that all warning lights are operational	
Know vehicle travel height	
Visually check all critical fasteners and critical welds	
Check hydraulic lines for integrity and signs of wear	
Check for oil leaks and confirm the hydraulic oil level	
Ensure that there are no loose objects, or potential hazards	
Confirm operation of all controls and control selector, from ground	
Check levelling systems for damage, wear or foreign objects	
Decals should all be present and legible	
Check for evidence of lubrication regime	
Check Emergency Motor for operation	
<del></del>	

Please also refer to 'Safety Inspection' section, from page 24.

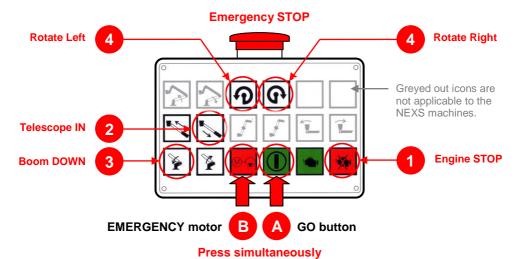


## **EMERGENCY OPERATION**

In the event that the operator in the bucket has become unable to operate the Versalift, ground personnel will need to take control of the machine, by selecting the lower controls function, using the Control Selector Switch (as illustrated), located on the pedestal.



Assuming the engine has been stopped or stalled, the emergency motor can be used by the use of both buttons 'A' and 'B' simultaneously, followed by the appropriate function button. Should the engine be still running and it is safe to do so, the ground controls can be operated without the need for emergency motor, which is button 'B'.



Do not operate the emergency motor for periods of over 30 seconds, should recovery require longer, pause for a few seconds before re-commencing. Should the emergency motor not be operating or circumstances prevent its use, please refer to MANUAL emergency recovery description from page 20.



#### INTRODUCTION

This Versalift aerial device has been designed and engineered to conveniently place personnel at work stations at height above the ground. Full controls at the platform and the complete freedom of boom movements make the Versalift a truly flexible and functional work platform.

This manual is furnished to provide practical and essential information for efficient operation of the equipment and must at all times remain with the equipment. A copy of the service and parts manual for this machine was presented to the original customer at the time of manufacture that deals with the regular maintenance and servicing of the equipment. Should additional copies of any of the manuals be required these are available on request (charges may apply).

Correct operation of this Versalift is the responsibility of the operator. Therefore it is important to read and understand this manual before attempting to operate this aerial device.

A copy of this Operators Manual MUST ALWAYS remain with the equipment, in accordance with local regulations.

This is NOT maintenance free equipment

Contact Service and Customer Support, for more information;

Versalift Distributors (UK) Ltd 1 Altendiez Way, Latimer Park, Burton Latimer, Northamptonshire, NN15 5YT.

Tel - 01536 721 010 Fax - 01536 721 111 Email - admin@versalift.co.uk www.versalift.co.uk







NOTE



#### **SAFETY**

Only properly trained operators are qualified to operate the Versalift aerial lift, in accordance with local regulations'. Operator training shall include complete instruction and understanding of this manual, employer's work rules and all related governmental regulations. Prior to operation from the personnel bucket the machine must be operating correctly, inspected and maintained in accordance with the manufacturer's instructions, all safety signs, guards and covers must be in place and in good condition.



An untrained or careless operator subjects themselves and others to death or serious injury.

There are three key risks associated with operating an aerial lift:



Electrocution can be caused by operating too close to power lines, resulting in death or serious injury.



Injury caused by falling as a result of equipment failure, not wearing a harness, or performing an unsafe manoeuvre.



There is a potential risk of crushing from being trapped beneath overhead structures.

No operating manual can address every conceivable operating hazard for the operator; therefore the prevention of accidents is greatly dependent on good judgement and common sense on the part of the operator. This attitude of safety should be very important to you, the operator. Practice anticipating accidents and operating hazards and then determine a corrective course of action to respond to the situation. This habit will sharpen your safety awareness, quicken your reaction time and prevent many accidents. **THINK SAFETY!** 

#### **Decals**

To help facilitate the safe operation of this equipment there are a number of decals that indicate hazards and give instructions on safe use, it is important that these are in situ.

Decals are installed at numerous locations on the Versalift in an effort to warn all personnel of the potential hazards during the use and operation of the Versalift. It is important that the operator, as well as any ground personnel read and understand the information on the decals. If any decal is defaced or illegible or lost, they MUST be replaced.

A pictorial summary of all the safety critical decals is illustrated to the rear of this manual from page 32 to 38, for easy reference including part numbers for when ordering replacements.



## **OPERATIONAL SAFETY**

Always maintain and check correct tyre pressures to ensure maximum vehicle stability.
Always wear a safety harness connected via a short lanyard to the designated anchor on the Versalift equipment.
Do NOT park on a hill. Use of wheel chocks and application of the handbrake are essential at all times.
Watch the booms to make sure they are clear of the vehicle and any fixed or moving obstructions or hazards.
Maintain safe clearance to electrical power lines & equipment.
Ensure correct stowage of the booms, before driving vehicle.
DO NOT EXCEED the SWL or maximum vehicle payload (GVW) as shown on data plate and decals.
Avoid working beneath structures, due to risk of crushing.
ONLY stand on the floor of the personnel bucket and do not climb out or step up within the bucket.
Always latch the door or safety bar on the personnel bucket.
Avoid parking on soft or unstable surfaces.
DO NOT operate in windy conditions greater than 12.5 m/s
DO NOT use the Versalift as a crane
DO NOT take equipment into the bucket (work platform) that could increase wind resistance, such as a notice board.



## **Operating in Windy Conditions**

The Versalift equipment should not be used in high wind conditions, such as when large tree branches are in motion, whistling can be heard in telephone wires and umbrellas hard to use.

#### Max Operational Wind Speed 12.5 m/s

Should wind speeds be less than this but still noticeable, then extra care should be taken in these conditions, to avoid potential incidents.

All machines have a rated wind speed at which they can work safely and as such all operators must have an anemometer to assess wind speed. For the majority of Versalift machines this is 12.5 metres per second (24 knots) that is equal to 28mph. At any wind speed higher than this, NO attempt should be made to raise or operate the platform.

Please note that the wind speed will vary according to the height above ground level. In level open areas it may increase by as much as 50% at 20m above ground level. Due allowance must be made for this if measuring wind speed at ground level before elevating the Versalift MEWP.

When there are buildings, trees or any other obstructions, wind speed can be increased by the aerodynamic effects on the wind.



It is essential in appropriate circumstances, that wind speed is measured from the personnel bucket of the Versalift and not from the ground, or adjacent building.



Do not take equipment or tools in to the bucket that have a large surface area, such as signs as this can catch the wind causing a hazard and affect the safe performance of the Versalift.

## Safety Law / LOLER

Certification of work equipment, including MEWPs is covered by The Lifting Operations and Lifting Equipment Regulations (LOLER). These regulations give legal effect to previous HSE recommendations and require every MEWP in use to be covered by a currently valid evidence of "Thorough Examination". Many workplaces now require a Report of "Thorough Examination" to be provided with the equipment.

This LOLER certificate is valid for 6months and MUST be up to date.



## **Working under Overhead Structures**

Always take great care when operating this machine beneath overhead structures, as serious injuries can result from inappropriate use. It is recommended that the control selector switch on the upper controls is returned to 'O' when not in use.

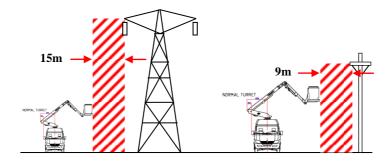
To prevent the risk of inadvertently becoming trapped always keep clear of the sides of the personal bucket and operate the booms slowly and carefully. DO NOT LEAN OUT. It is safer to manoeuvre the personnel bucket in to the appropriate position, rather than stretch and risk personal injury.

## **Overhead High Voltage Lines**

Most overhead electric lines are un-insulated and usually carry high voltage electricity, up to 400,000 volts. Unless you are operating a certified Insulated Aerial Device (IAD) then safe distances must be maintained at all times, as a simple fibreglass bucket will NOT protect you, or ground based personnel.

Not all sites are controlled and the operator must always be aware of the dangers of overhead electric lines and equipment. Many fatal accidents have occurred due to some part of a machine touching or even coming close to overhead lines.

A minimum safe distance must always be kept between the overhead lines and the closest point of the MEWP when fully extended. This distance is 15m with overhead lines mounted on steel towers and 9m with lines mounted on poles of wood, concrete or steel. These distances are measured horizontally at ground level from a position vertically below the outermost conductor at the tower or pole position.





## **OPERATING INSTRUCTIONS**

#### Introduction

This chapter provides the operator and ground crew with some recommended aerial lift operating procedures, descriptions of the controls and detailed operating information about the controls at each control station. The operator and the ground crew are responsible for knowing and applying this information to the situations that arise on the job.

#### **Qualifications to Operate**

Only properly trained operators are qualified to operate this aerial lift, in the UK this is predominately a 'Powered Access Licence' (PAL) to cover 'Static Boom 1b' type equipment, (this category used to be known as VMP 26). Details of the Powered Access Licence can be obtained through the International Powered Access Federation' (IPAF), or contact Versalift for further details and training options.



Safety legislation demands that the operator is properly trained in the operation of work equipment which includes 'Mobile Elevating Work Platforms' (MEWP). The IPAF 'PAL' card is proof of this and provides evidence of competence and history. It is also essential that operators familiarise themselves with their particular machine.

A Powered Access Licence Card is issued by IPAF and carries all the key facts companies need to know - it tells site management which equipment an operator has been trained to handle safely and efficiently.

Ensure the equipment itself has a valid LOLER certificate (see page 7).

#### **Daily Operational Checks**

Ensure that the daily checks are performed before leaving for the work site, to ensure that the equipment is fully operational and safe. These are detailed at the front of this manual on page 2 and can be photocopied.

It is in the operator's best interest that the daily check is performed, as failure to do so could result in an accident and or serious injury.

#### When Travelling

Ensure that the 'Power Take Off' (PTO) is disengaged and that all warning lights show a condition suitable for driving. Drive at a reasonable speed for given road conditions and situations, remember that you are effectively driving a heavily laden vehicle with a high centre of gravity, so excessive speed will affect the vehicles cornering and braking performance. Avoid potholes and violent manoeuvres which may adversely stress the Versalift structure.



Please note that all installations are STRICTLY designed for operation within the vehicles GVW. A spare payload decal is provided to ensure compliance with this safety critical measure.

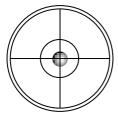


#### Positioning of Vehicle

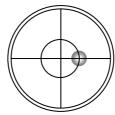
Park the vehicle on firm, level ground whenever possible and apply handbrake fully. Do not operate the equipment on a slope greater than 5° (approximately 1m rise in 12m) as a slope reduces the vehicles stability and places additional stresses on the equipment. An inclinometer is provided in the cab and the flyboom to show when the vehicle is within the 5° slope requirement. Use wheel chocks provided at all times, whether or not you are working on a flat or a 5° surface, for your own safety NEVER operate without wheel chocks or on slopes over 5°.



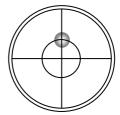
## INCLINOMETER - Slope condition indicated by bubble position



Operating slope level



Maximum operating slope 'lateral'



Maximum operating slope 'longitudinal'

## **Before Leaving Cab**

Assuming that the vehicles engine is running perform the following checks;

Check that the parking brake / handbrake is fully applied.

Ensure vehicle transmission is in NEUTRAL or PARK for automatics

Turn on BEACONS / LIGHTBARS if fitted

PTO is engaged and amber warning light is on

Leave ignition in the RUN position



#### **After Leaving Cab**

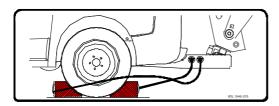
Check the Versalift equipment for damage which may have occurred during transit, this should include the personnel bucket (work platform) for cracks. Also verify that the weather conditions are compatible with safe working, see 'Operating in Windy Conditions' on page 7.

It is ESSENTIAL to chock the wheels of the vehicle, as the handbrake systems on some vehicles apply the brakes by locking the drive shaft behind the transmission. Thus should the weight be reduced from one or both of the rear wheels, by the position of the lift, the vehicles differential may disengage and reduce the rolling resistance of the vehicle. In the case of jackless operation models, wheel chocks MUST be used.



Use the wheel chocks provided, at all times. Please note that INTERLOCKS will prevent the machines use otherwise.

To ensure the safe operation of the machine at all times the wheel chocks provided have coiled leads for plugging in to the rear step that operate an interlock. Chocks should be placed as shown to ensure best operation of the Versalift.



Set up adequate cones or barricades to mark the boundaries of the work site and alert pedestrians and motorists to the hazard.

#### **Aerial Lift Operations**

The following emphasise some overall operating practices and concerns for aerial lift operation and is written in an order of probable use while operating from the ground, then at the platform and close to power lines or equipment.

Only use the ground controls when the platform operator gives permission or is incapacitated. Always have a clear sight of the platform or have someone responsible to signal platform movements.

In extremely cold weather, ensure that the engine is at full operating temperature before using the platform. For operating in colder climates please refer to hydraulic system inspection on page 28 of this manual.

Be aware of the operating environment and existence of overhead power lines (see page 8), before commencing work.



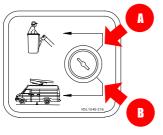


If the Versalift has not been used for an extended period of time, then the lift must be operated from the lower controls through its full range of motion several times before an operator enters the platform and uses the machine. This procedure allows the operator to confirm the lift is operating correctly and to purge any air that may have become trapped in the hydraulic system.

#### **Control Selector**

Prior to commencing operation of the Versalift equipment, hydraulic power must be switched to the appropriate action required, of either ground control or aerial control.

The control selector is located to the side of the grey control box, mounted to the pedestal and selection can be directed to either the upper or lower controls, denoted by the illustration of an operator in the personnel bucket (upper) or a van (lower), respectively. The control selector is a two position switch that is lockable to prevent unauthorised use and is designed so that the Lower and Upper controls cannot be operated simultaneously.



**UPPER** - Normal operational position, as provides power to the upper controls, isolating lower controls.

**LOWER** - provides power to the lower (ground) controls. Also facilitates **EMERGENCY OPERATION** from ground.

#### Harness

Safety regulations require the operator to be secured with a personnel restraint system to the lift. The lanyard shall be attached to the safety harness and the other end connected to an identified anchor point located on the personnel bucket.



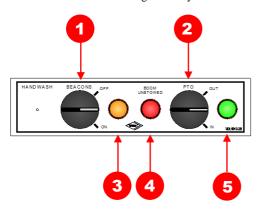
Never operate aerial equipment without wearing an approved personnel restraint system attached to the specified anchor point. Failure to properly secure the harness and lanyard can result in death or serious injury in the event of a fall from the platform.



#### **Cab Controls**

From the Cab Control Panel the Versalift can be powered up and beacons activated. The facia should look similar to the illustration below and is usually located to the dashboard in clear line of sight (the example given can be found on the Vauxhall Vivaro).

If not already done so, with the engine running engage the PTO by turning switch 2 to IN, it is good practice to have the clutch depressed at this point and to slowly release it when a change in engine idle speed indicates that the PTO is engaged. The PTO warning lamp 5 should now be lit to indicate it is working correctly. Turn on the warning beacons.



Typical cab controls panel

- Beacons switch
- PTO Switch
- 3. Beacons ON warning light
- 4. Boom unstowed warning light
- PTO is engaged light



Exit the cab and put the control selector switch to either 'Upper' or 'Lower' controls. You are now set to operate the Versalift equipment.

#### **PTO Switch**



Transmission PTO's such as found on the Iveco Daily and Mercedes Sprinter, have a separate manufacturers PTO selector switch and can usually be found beside the steering column and can typically be identified by the symbol illustrated. Operation remains the same as above.





When you have finished working with the platform, the Booms should be stowed and the PTO pump switched to the OUT position. Remove the chocks. Ensure that the Boom unstowed indicator is not lit and that all other lights are extinguished and that no BUZZERS are sounding.

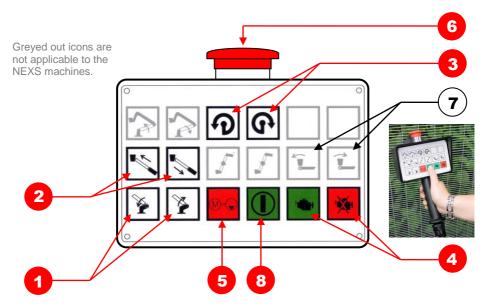


Do not try to disengage the PTO pump when the platform is in use



#### **Lower Controls**

From the lower hand held controls, full manipulation of the Boom and personnel bucket is possible, either on normal or emergency power, as long as the Control Selector is set to lower controls (B), as described on page 12.



- 1. Outer Boom Raise/Lower
- 2. Inner Boom Telescope IN/OUT
- 3. Slewing (Rotation) CW/CCW
- 4. Engine Start/Stop

- 5. Emergency Motor
- 6. Emergency STOP
- 7. Bucket Levelling Deactivated<sup>#</sup>
- 8. GO Button Keep Pressed



Never reverse lift motions with a sudden reversal of the control switch. Allow the boom to stop first and then move the boom in the opposite direction.



Avoid reaching the end of the boom range at excessive speeds. Structural damage or instability may result.

To operate the lower controls the GO button (8) must always be depressed and each function can then be operated as required, ensuring that you have clear site of the Boom and personnel bucket at all times by utilising the wander lead and standing clear of the vehicle.

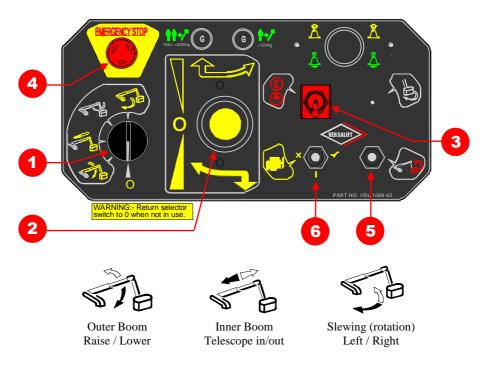
# - The bucket levelling button has been deactivated to prevent unauthorised use in accordance with local HSE regulations, but is useful for cleaning and personnel evacuation in the case of an emergency. This switch has been repositioned INSIDE the unit and is accessed by removing the facia panel.



#### **Upper Controls**

From the upper controls, full speed controlled manipulation of the booms and personnel bucket is possible, either on normal or emergency power, as long as the Control Selector on the pedestal is set to upper controls (A), as described on page 12. Rotating the boom selector switch (1) determines which function is to be controlled, followed by the movement of the self centring joystick (2) will move the platform in that direction, at the speed determined by the movement of the joystick, by pulling up on the dead man switch first. Platform movement stops when the joystick returns to the neutral position or when the extent of travel is reached, tripping a micro-switch, in which case only movement in the opposite direction is possible.

Return Boom Selector Switch to the 'O' position when Booms are not in use, to reduce the likelihood of human error.



- 1. Boom Selector Switch
- 2. Joystick
- 3. Emergency Motor

- 4. EMERGENCY STOP
- 5. Bucket Levelling
- 6. Engine STOP/START

**NOTE** - The upper controls illustrated above, are standard for the NEXS, with some functions not applicable to the machine and are therefore not described above.



#### Personnel Bucket (Work Platform) Levelling

To operate the bucket levelling function (5), you will need to put the boom selector switch to the 'O' position first, operate the switch in the direction required first and then operate the joystick to carry out the function.

#### **Engine Start/Stop**

The vehicle ignition must be in the START position before the switch can be operated. The engine START / STOP control (6) is operated by a three-position toggle switch labelled with an engine's symbol at the upper controls. When operated it activates the engine starter or cuts the engine ignition. The engine start/stop function will work at any time except when the Emergency Stop Function (4) is operated and remains un-released.

To START the engine from the upper controls, place the engine toggle in the START position (symbol of a tick) and hold the toggle in that position until the engine starts. Release the toggle and allow it to return to the centred or neutral position.

To STOP the engine from the upper controls, hold the engine toggle to the STOP position (symbol of a cross) until the engine has stopped. Release the toggle and allow it to return to the central or neutral position.



The vehicle transmission MUST be in neutral /park before using engine start/stop, otherwise can cause movement which can destabilise the Versalift and risk serious injury.

## **Emergency Stop Button**

The Emergency stop button (4) is controlled by a red mushroom control button with yellow background. To stop the lift in an emergency, push the button down. This kills the vehicle engine and removes power from all lower control switches. This button remains in the STOP position until twisted clockwise to release. Use the engine Start/Stop to regain operation.



#### EMERGENCY MOTOR OPERATION

In case of vehicle engine or hydraulic pump failure it is possible to use the Emergency Motor switch function (3) identified by an 'E' symbol and selecting the required boom function, operate emergency motor switch and operate joystick to carry out these function. The emergency motor should not be operated for longer than 30 Seconds continuously, as continuous use drains the vehicle battery and damages (over heats) the emergency motor. To turn off the emergency power, release the emergency switch.

Emergency stop switch is controlled by a red mushroom control button. To STOP the platform in an emergency, push the button down. This stops the vehicle engine and removes all power from the platform controls. This button remains in the stop position until twisted clockwise to release. Full emergency operation instruction can be found at the rear of this manual.



#### Stowing the Versalift

When stowing the Versalift ready for road travel, retract the inner boom completely and rotate the outer boom assembly until it is centred over the boom hitch socket, or use the guide arrows located to the turret and top of the pedestal. Finally carefully lower the Versalift assembly into the boom hitch socket.



Always watch for personnel, members of the public and obstructions, whilst lowering the Versalift as there is a risk of serious injury or damage to the equipment.

The joystick control should be released to neutral as soon as the flyboom has dropped in to the boom hitch socket, whereupon the boom selector switch should then be put in the neutral position. To complete the storing procedure, remove any wheel chocks and retract the stabilisers (if so equipped).



## **EMERGENCY OPERATION**

Emergency operation may be required if an operator is injured or the hydraulic system malfunctions. The purpose of this chapter is to help operators become proficient with the controls and features designed to accommodate emergency operation and to describe some procedures for responding to emergency situations. In an emergency, the first priority is always the safety of the personnel involved and before any attempt is made to rescue personnel make sure the unit has not become energised by an external electrical power source.

Identifying the problem and initiating emergency procedures promptly will help to reduce or possibly prevent injuries. It is also important to follow standard work practices and safety regulations. In the case of a two-man crew, it is essential to keep the second person informed of any emergency situation, or if any emergency control is activated.



Isolate power lines before commencing recovery if the Versalift has come in contact with a live line, failure to do so will more than likely result in additional casualties.

In most cases it is possible to affect a safe descent or recovery by use of the emergency motor and use of the hand held lower controls when the operator is incapacitated. The following section will cover this aspect, followed by fully MANUAL emergency operation.

## **Equipment Failure**

The Versalift can be safely returned to the stowed position, by the use of the Emergency Motor switch function and upper controls by the operator at any time.

Ensure that the vehicles engine is switched off by using the switch in the upper controls, should the Emergency STOP button have been pressed, release it by turning anti-clockwise.



In case of vehicle engine or hydraulic pump failure it is possible to use the Emergency Motor switch function (3) identified by an 'E' symbol and selecting required boom function, operate emergency motor switch and operate joystick to carry out these functions.

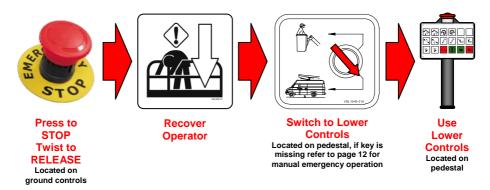
Hold the emergency motor switch 'on' whilst operating boom functions, releasing the switch will stop the motor.

The emergency motor should not be operated for longer than <u>30</u> <u>Seconds continuously</u>, otherwise this drains the vehicle battery and damages (over heats) the emergency motor.



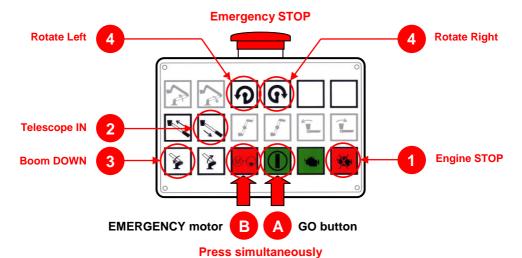
#### **Incapacitated Operator**

In the event that the operator in the bucket has become unable to operate the Versalift, ground personnel will need to take control of the machine, by selecting the lower controls function, using the Control Selector Switch (as illustrated), located on the pedestal.



Assuming the engine has been stopped or stalled, the emergency motor can be used by the use of both buttons 'A' and 'B' simultaneously, followed by the appropriate function button.

If the engine is still running and it is safe to do so the ground controls can be operated without the need for emergency motor, button 'B'



Do not operate the emergency motor for periods of over 30 seconds, should recovery require longer, pause for a few seconds before re-commencing. Should the emergency motor not be operating or circumstances prevent its use, refer to MANUAL recovery on following pages.



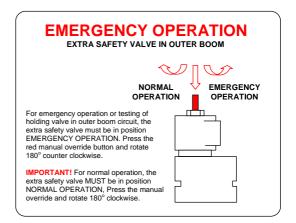
## **EMERGENCY OPERATION – Manual Control**

## **Hydraulic System Operational**

Should the function control switches fail to respond at the lower and upper controls, the lift may still be operated manually by the use of push buttons on the control valve block that are located on the turret, with each valve having a pictogram denoting its function. To use this emergency facility the main hydraulic power must still be operable and engine running.

Before using the emergency control valve block and for manual emergency operation, an additional safety valve in the outer boom (main boom) hydraulic circuit must be switched to EMERGENCY OPERATION, it is located on the inside of the turret wing.

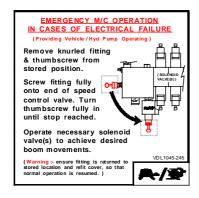
To turn the valve to emergency mode, press the red manual override knob and rotate 180° counter clockwise.

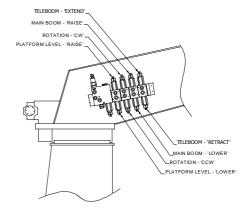


To gain access to the emergency control valve block, it will be necessary to remove the protective cover. Please exercise extreme caution when working on a vehicles roof, it is recommended that you hook your harness to the machine, as a precaution.



Boom movement using the push buttons on the turret can only be performed when the variable speed valve is electrically energised from the upper or lower controls. It is possible to manually activate this valve as shown in nearby decal, illustrated below left.









When performing manual operation of the Versalift, be aware that the Teleboom cut out switches will not function, so retract the boom before commencing any other functions and for maximum safety rotate the boom over the rear of the van.



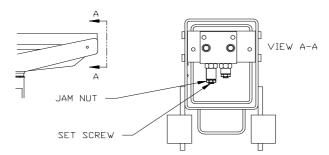
Make certain that all obstructions and personnel are clear of the path of boom travel, before attempting to lower the booms using this method. If rotation is required see page 22.

#### **Hydraulic Power Sources Inoperable**

If all the hydraulic power sources become inoperable, the Outer/Teleboom assembly can still be lowered using the set screw on the holding valve located at the cylinders. The boom drifts down as the hydraulic oil passes through the holding valve. The speed of the boom on its descent increases as the set screw is turned to the OUT position. This method is only effective if the Outer/Teleboom is sufficiently raised to allow the force of gravity to pull the boom assembly downward. Manual adjustment of the setscrew on the holding valve can only be used in lowering the boom. When the holding valve setscrew is used to lower the boom, re-adjustment of the holding valve is required before further use.

#### Retracting the Teleboom

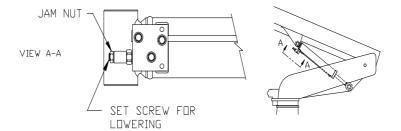
To retract the Teleboom, carefully loosen the jam nut (counter-clockwise), with a 9/16" wrench, on the appropriate holding valve, as illustrated below. Slowly turn the setscrew clockwise (using 5/32" hex) until movement begins. To stop boom movement, turn the setscrew counter clockwise.





#### Lowering Outer (Main) Boom

To lower the Outer Boom, carefully loosen the jam nut (counterclockwise), with a 9/16" wrench, on the appropriate holding valve, as illustrated below. Slowly turn the setscrew clockwise (using 5/32" hex) until movement begins. Stay clear of the boom as it travels down. To stop movement, turn the setscrew counterclockwise.





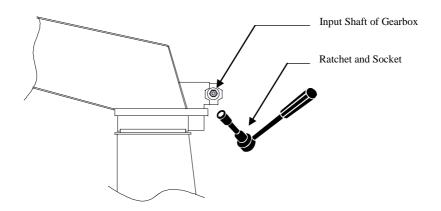
Avoid high pressure hydraulic oil spray, as this can puncture or become embedded beneath the skin, or contaminate the eyes. These conditions require IMMEDIATE medical attention.



Great care is required when releasing holding valves, due to the potentially sudden and rapid movement of booms.

#### **Manual Rotation**

The lift rotation system can be actuated manually. Use the hex socket extension on the gearbox input shaft to manually align the boom with the cradle. Actuating the lower rotation control will reduce the effort required for rotation of the aerial lift.





#### **Scenarios**

#### Complete hydraulic line failure

The ET-NEXS lift design uses holding valves to lock the position of the cylinders in the event of a complete hydraulic line failure. This safety feature prevents the booms from dropping. The holding valve set screw and manual rotation described on previous pages can be used to recover the lift.

#### Continuous loss of hydraulic oil

If there is a continuous loss of hydraulic oil from the aerial lift, operate hydraulic power source only while attempting to stow the aerial lift to conserve hydraulic oil. If the operation of any lift function becomes impossible, then use the holding valve set screw and the manual rotation procedure, described above.

#### **Control Valve Failure**

If the aerial lift motion cannot be stopped by releasing the master control switch, operate the Emergency Stop button to kill the engine and stop lift motion. Manually attempt to centre the control valve at the turret by depressing the opposite function to that which is stuck. If the control valve will not return to neutral, the aerial lift can be lowered by using the holding valves, described above.



## **Safety Inspection**

This aerial lift is designed to provide years of reliable service with minimum maintenance, but a routine safety inspection program is required to ensure a safe and extended aerial lift service. The operator is responsible for detecting maintenance problems during the daily visual inspection, reporting the need for adjustments or repairs, verifying that maintenance is performed at the suggested intervals and determining if the aerial lift is in a good, safe operating condition. All aerial lift equipment should be serviced by a qualified aerial lift engineer and the importance of accurate documented maintenance records cannot be emphasised enough.

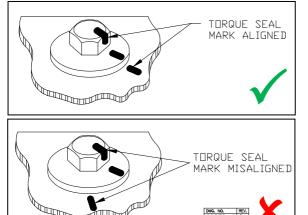
The equipment must be given a thorough visual inspection every day to detect problems before they become serious. During this inspection the operator shall look for anything out of the ordinary that might indicate a problem. Particular attention must be paid to the points highlighted on the daily check list shown on page 2 and described in more details as follows.

#### **Bolts**

Critical fasteners are identified for the ET-NEXS on the following page. As all major sections of the Versalift are bolted together, it is vital that these bolts remain tight. Inspect all the bolts for signs of loosening.

Pay particular attention to bolts holding pin retainer tabs, bolts holding pin retainer washers, pedestal mounting bolts and the rotation bearing bolts. Check the retaining rings and the bolts on the Jack cylinder pins and the torsion bar mounting bolts.

Certain critical bolts are torque seal marked to provide a quick means of detecting any loosening. Do not use the lift if a torque seal mark has been broken. The bolt must be replaced with a new bolt of equal grade and torqued into position to specifications by qualified personnel. A torque chart for fasteners can be found in the separate ET-NEXS Service Manual.



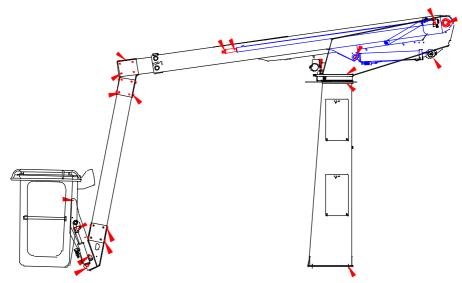
Torque Seal Mark in ACCEPTABLE condition

Torque Seal Mark in misalignment UNACCEPTABLE condition



#### **Critical Fasteners**

The following illustration shows those fasteners to which particular attention must be paid as an operator during visual checks of the machine prior to operation, for your own safety any defects should be reported to your supervisor for further action. More detailed information is contained in the service manual provided with the machine at the time of purchase.



Pay close attention to the bolts fixing the bucket to the flyboom and the structure of the bucket itself in this area.

## **Personnel Bucket Damage**

Check the bucket for signs of damage and cracking, particularly in the area where it is attached to the fly boom. It is also important to check the fittings such as door latch or drop bar depending on type of bucket fitted. Failure to examine the bucket on a regular basis may mean that critical damage is missed and there is risk of serious injury and component failure.

#### **Control Selector**

Check that this switches function between upper and lower controls.

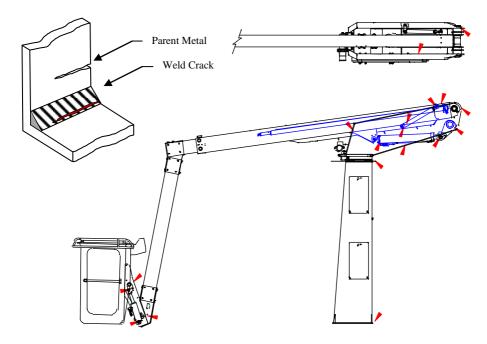
#### **Loose Objects**

Inspect the booms and bucket for loose objects (tools, spare parts, etc.) that might fall when the booms are elevated.



#### **Critical Welds**

All critical welds are identified on the illustrations below and should be inspected for possible signs of fatigue, evidenced by hairline cracks. Some critical welds that warrant special attention are located where the turret wings are welded to the base plate, the cylinder mounts are welded to the boom, the cylinder mounts are welded to the turret, the welds on the platform support and on the mounting hardware including the pedestal extension.



Inspect the machine structure for dents, damage and weld cracks usually identified by discolouration, parent metal cracks or other visible discrepancies.

#### **Hydraulic Lines**

Hydraulic lines should be inspected for loose connections and frayed jackets. Carefully examine the hoses, especially any portion of hose subject to flexing and particularly the hoses at the platform.

#### Oil Leaks

Oil leaking onto the floor of the vehicle or on the ground is an obvious sign of an impending problem. A hydraulic leak will create a slippery surface which is potentially hazardous. When a hydraulic leak is encountered, it must be repaired by the proper service personnel and the unit must be cleaned of excess hydraulic oil. If a hydraulic leak is not repaired, the oil in the reservoir will be depleted and pump damage may occur.



#### **Vehicle Tyres**

Check tyres for the correct inflation and for damage to sidewalls. Low pressure or damaged tyres are unsafe while driving the vehicle or operating the lift.

#### **Hydraulic Oil Level**

Check the hydraulic reservoir oil level in the sight gauges located on the side of the pedestal and add appropriate oil if necessary. It is important to maintain the proper hydraulic oil level because a full reservoir will minimise the operating temperature and in the event of a hydraulic line leak, a full reservoir gives the operator more time to lower the platform safely. See following section on Hydraulic System Inspection for more detailed information.

#### **All Controls**

Operate all the lift, cab and ground controls through the full range of motion to verify the controls are functioning properly.

#### **Levelling System**

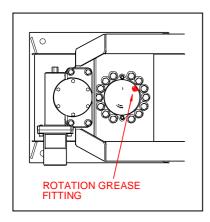
Inspect the master cylinder, slave cylinder, hoses and fittings for damage, wear or foreign objects which may prevent proper operation. Refer to the separate ET-NEXS Service Manual for these components.

#### **Decals**

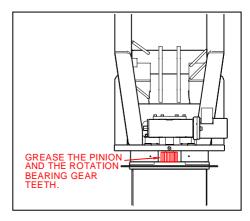
Ensure that all safety critical decals as portrayed on pages 32 to 38 are present and legible.

#### Lubrication

This aerial lift incorporates non-lube bearings at most points of motion, these bearings require no lubrication to provide satisfactory service. The Rotation Gearbox is pre-lubricated and requires no additional lubrication. However, there are two key items that require a monthly lube and as such should be verified by the operator that this has been performed to ensure a well maintained and safe machine.



**Rotation Bearing** 



**Pinion and Rotation Teeth** 



## **Hydraulic System Inspection**

All hydraulic systems require inspection at regular intervals to ensure safe, efficient performance and extended life. The following brief points are given as indicators of a well maintained machine so that operators can judge if the aerial lift is fit for purpose. The illustration below and on the following page, shows were to locate and identify each key component.

#### **Return Line Filter**

The 10 Micron Return Line Filter should be replaced after the first 30 days of operation and every 6 months thereafter. The Return Line Filter is mounted beside the hydraulic reservoir tank inside the pedestal and can be conveniently changed without draining the reservoir.

#### **Pressure Filter**

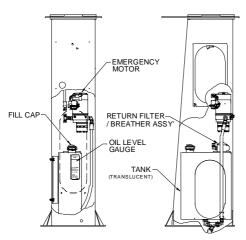
The pressure filter has a condition indicator, which shows a red dot when contaminated and needs to be changed. This is located inside the pedestal above the oil tank and should be checked regularly.

#### **Hydraulic Oil**

This lift uses quality hydraulic oil that provides good service and operation in temperatures of over  $15^0 \, \text{F} (9^0 \, \text{C})$  and was free from contaminants and water on manufacture. For extremely cold weather, hydraulic oils meeting or approaching military specifications MIL-H-5606 can be used. However, if such cold weather oil is used at higher temperatures, the result may be a reduction in pump efficiency and the pump's operating life may be significantly shortened.

#### Sight Gauges

The hydraulic fluid level can be easily checked by removing the access panel on the pedestal and monitoring the tanks oil level gauge. Add oil if the level drops to the lower level when all cylinders are retracted.

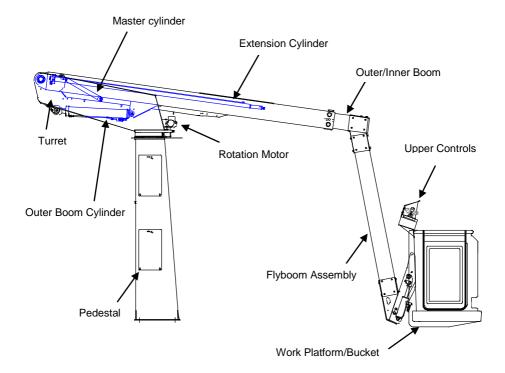


For more detailed and comprehensive information on this matter and others relating to the servicing of the Versalift equipment, please refer to separate SERVICE MANUAL supplied to the operating company for this vehicle when originally purchased. Extra copies are available from Versalift Distributors (UK) Ltd on 01536 721 010 for more detail, charges may apply.



## **ET-NEXS GENERAL SPECIFICATION**

The Versalift Minitel NEXS model range is available in two models, designated ET26NEXS and the ET30NEXS. An end mounted one man bucket is provided on these models. The following information is a brief description of the major components to facilitate a basic understanding of the equipment thereby aiding operation and reporting of incidents.



### Low Voltage Insulation

Available as a cost option, this feature includes a combination of insulators, non conductive hoses, wire insulation and appropriate wire connections to provide low voltage insulation, certified to VDE 0682-742 dielectrically tested. Equipment so fitted and certified is identified by a 'Low Voltage' decal applied to the main boom.

All such low voltage insulation machines MUST be tested every year, 1kV leakage and 3kV flashover, otherwise the compliance will become invalid.



## **ET26NEXS Specification**





9.2m

6.0m

The figures illustrated here are typical values, based on common installations, as each vehicle type and Versalift equipment specification will affect the dimensional characteristics in too many ways to cover all variations here. 'Standard' is a typical example such as that found on a Vauxhall Vivaro; 'High Roof' represents particular van type which requires a taller pedestal, such as a Ford Transit.

#### **Versalift Information**

Height to bottom of platform Maximum working height Maximum working outreach Typical stowed travel height Weight of lift

Standard	High
7.2m	7.4m
9.2m	9.4m
6.0m	6.0m
2.8m	3.0m
2600kg	2850kg

#### **Hydraulic System**

Operating pressure Flow rate Filtration Power source 175 bar (2540 Psi)

8 Litres per minute (2 Gpm)

10 Micron return and pressure filter PTO Pump, fan belt or gearbox driven

#### **Boom Action**

Rotation options
Inner boom extension
Outer boom travel

360° or 420° non-continuous and fully continuous

up to 1.70m @ 50° and over

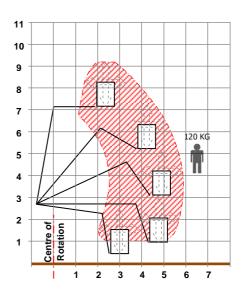
 $-8^{\circ}$  to  $+80^{\circ}$ 

#### **Dimensional Information**

Teleboom length, retracted 2.98m
Teleboom length, extended 4.53m
Height above roofline 0.77m
Overall stowed length 4.39m

All dimensions are subject to system application and may vary accordingly.

Suitable for most vehicles of 2.9 tonnes GVW or over and sufficient spare payload and wheelbase. A typical example would be the Vauxhall Vivaro 2.9T with a wheelbase of 3098mm, for specific models and examples please call Versalift. Please note that NOT all vehicles are suitable.





## **ET30NEXS Specification**





10.5m

The figures illustrated here are typical values, based on common installations built to date, as each vehicle type and Versalift equipment specification will affect the dimensional characteristics in too many ways to cover all variations here. 'Standard' is a typical example such as that found on a Vauxhall Vivaro; 'High Roof' represents particular van type which requires a taller pedestal, such as a Ford Transit.

High

8.7m

6.2m

3.0m

2820kg

10.7m

#### Versalift Information

Height to bottom of platform Maximum Working height Maximum working outreach Typical stowed travel height Weight of lift<sup>1</sup>

## **Hydraulic System**

Operating pressure Flow rate Filtration

Power source

## 175 bar (2540 Psi)

Standard

8.5m

6.2m

2.8m

2660kg

10.5m

8 Litres per minute (2 Gpm)

10 Micron return and pressure filter PTO Pump, fan belt or gearbox driven

#### **Boom Action**

**Rotation Options** Inner Boom Extension

Outer Boom Travel

## 360° or 420° non-continuous and fully continuous

up to 2.3m @ 50° and over

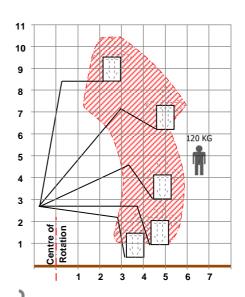
 $-8^{\circ}$  to  $+80^{\circ}$ 

#### **Dimensional Information**

Teleboom length, retracted	3.59m
Teleboom length, extended	5.93m
Height above roofline	0.77m
Overall length	4.93m

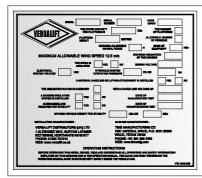
All dimensions are subject to system application and may vary accordingly.

Suitable for most vehicles of 2.9 tonnes GVW or over and sufficient spare payload and wheelbase. A typical example would be the Vauxhall Vivaro 2.9T @ 3498mm, for specific models and examples please call Versalift. Please note that NOT all vehicles are suitable.





#### **DECALS located to the PEDESTAL**



#### **Data Plate**

Label located to the pedestal, providing background information, technical data and date manufactured.

Measures 280mm x 180mm

VDL 1045-365



**Use of Lower Controls in Emergency** 

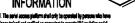
Label located to pedestal near lower controls, providing description of use in an emergency. Measures 220mm x 140mm

VDL 1045-361

Openie PLATFORMOROUND CONTROL SELECTOR bay senich to LOWER CONTROLS Using the lower control openies the required earliefs in own on the platform in the desired devokes, whilst elevation openies the required earliefs in own on the platform in the desired devokes, whilst elevation openies the 18 the platform of the platform of the EMERICACHY CONTROL earlier to openies the battery proved gump. The platform of the platform of the room from the seconds. Rest pump for two minutes between openiess.

ALWAYS ENSURE THE OPERATORS MANUAL IS STORED IN THE VE If beliery power is lost it will be necessary to lower the booms by another method. These





- been trained and conflied as competent to operate HV analyting social devices.
- 2. Never allow an unsuborhed person to operate the Versellit or
- infinitere with the contrate. Operation is your responsibility.
- 4. Extend outliggen actions solid looking before operation and maintain
- a from leading while operating.
- The maximum communities chessis inclination in 5°.
- 7 Harisan elizable wholesand is 49.5 min
- 8. Maximum phillions capacity is 200kg for each phillions
- 9. Maximum alternable marroel load is 400M for each platfo
- 2. Machine in decimals manufacture to 4004 and second particular. 10. Salety belt and largered must be used.
- 11. Raise the Seems to clear chalcusters below
- 11. Passe no seems to cour destructure actice rouse; 12. Be carely not to counte into traffic team.
- 15 as divin not to change use the same in
- 13. Them is no insulating value intended in the floreglass picture
- A. Always maintain a aufo distance from Itro electric conductors
- 16. Communicate any amergency situation to the entire cross.

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#### **Safe Operation**

Located on the pedestal, listing 'safety operation information' relevant to the particular SWL of the Versalift equipment.

Measures 140mm x 200mm

VDL 1045-225 for SWL 120kg



## IMPORTANT NOTICE

ALWAYS OPERATE THE EMERGENCY MOTOR DAILY FOR 15 TO 20 SECONDS TO ENSURE CORRECT OPERATION. FAILURE TO DO THIS MAY CAUSE IT TO FAIL WHEN YOU NEED IT MOST.

#### SEQUENCE OF OPERATION 1) SPEED FUNCTION

2) MODE FUNCTION 3) EMERGENCY MOTOR

#### **Emergency Motor Use**

Label is located to the pedestal, offering advice on use of the emergency motor.

Measures 125mm x 48mm

VDL 1045-359

#### CHANGE OF OWNERSHIP

TO ENSURE NEW OWNERS ARE IN RECEIPT OF LATEST INFORMATION BULLETINS RELEVENT TO THIS MACHINE. CONTACT ADDRESS BELOW TO REGISTER NEW OWNER DETAILS SO THAT DATA-BASE CAN BE UPDATED ACCORDINGLY.

Versalift Distributors (UK) Ltd, 1 Altendiez Way, Latimer Park, Burton Latimer, Northants. NN15 5YZ

> TEL:- 01536 721010 www.admin@versalift.co.uk

#### **Change of Ownership**

This aluminium plate is fixed to the pedestal, so that new owners can register for updates.

Measures 90mm x 100mm

VDL 1045-246



#### **CE Approval**

Located on the pedestal and showing CE information.

Measures 65mm x 150mm

VDL 1045-71

#### MAXIMUM VEHICLE PAYLOAD PAYLOAD = XXXkg

INCLUDES: DRIVER, PASSENGER, TOOLS AND EQUIPMENT.

THIS MUST NOT BE EXCEEDED AT ANY TIME.

Failure to comply with this notice and subsequent damage and or claim is

totally the responsibility of the user.

VDL 1045-236

#### Max Payload

Decal is located on the pedestal, advising maximum permissible payload.

Measures 200mm x 90mm



#### **DECALS located to the BUCKET**



DO NOT USE THE PLATFORM WHEN THE WIND SPEED IS IN EXCESS OF:

12.5 m/s MAXIMUM ALLOWABLE MANUAL FORCE 200 N

VDL1045-22

#### Use of Platform

Label located in the bucket (work platform), illustrating safe use and max wind speed. Max allowable manual force of 200N (20kgf) applies to force on the bucket by the operator exerting pressure via an external source.

Measures 200mm x 200mm

VDL 1045-228

SWL 120 Kg

#### Safe Working Load

Label located to the door of the bucket, illustrating designated SWL for the particular machine.

Measures 360mm x 120mm

VDL 1045-222



#### **Danger of Crushing**

Label fixed areas where there is risk from crushing or entrapment, from slewing turret or bucket (work platform).

Measures 80mm x 80mm

VDL 1045-73

CAUTION CLOSE DOOR SECURELY

#### Close the Door

Label is affixed to the door of the walk in bucket (work platform), as a reminder.

Measures 100mm x 30mm





#### **Danger of Electrocution**

Label is located in the bucket (work platform), as a warning to possible risk of electrocution.

Measures 75mm x 85mm

VDL 1045-34



#### **Boom Docking**

Label is located on the flyboom, as a reminder on correct docking procedure.

Measures 110mm x 135mm

VDL 1045-193



#### **Wear Safety Harness**

This sign is located within the bucket (work platform), reminding the operator of the need to use a full safety harness whilst using the machine. Measures 113mm x 130mm



#### WARNING

ALWAYS TAKE GREAT CARE WHEN OPERATING THIS MACHINE BENEATH OVERHEAD STRUCTURES.
TO PREVENT BECOMING TRAPPED ALWAYS KEEP CLEAR OF THE SIDES OF THE PLATFORM AND OPERATE THE BOOMS SLOWLY AND CAREFULLY.

#### **Overhead Structures**

This warning decal is located within the personnel bucket, alerting the operator to dangers of working under overhead structures

Measures 150mm x 85mm

VDL 1045-377

## **NOTICE**

THE A-WEIGHTED EMISSION SOUND PRESSURE AT THIS WORKSTATION DOES NOT EXCEED: 70~dB

VDL1045-379

#### **Sound Emissions**

This decal advises that the Versalift equipment operates within permissible levels Measures 130mm x 70mm

VDL 1045-379

#### **Decals Located to the to the Versalift**



#### **Emergency Rotation**

Label can be found to the turret and shows the position of the manual rotate.

Measures 70mm x 60mm

VDL 1045-30



#### Manual Descent

Label is located under the cover on the turret to the valve block, describing operation for manual descent.

Measures 95mm x 95mm



## EMERGENCY CONTROLS INSIDE

## **Emergency Controls**

Label is located to the housing for the emergency manual valve controls on the turret.

Measures 70mm x 40mm

VDL 1045-109

## **WARNING**

THE MAXIMUM OUTRIGGER LOAD ON THE GROUND IT MAY NEED TO SUPPORT IS XXXX Ka

VDL1045-378

#### **Outrigger Pressure**

This warning decal is located adjacent to the outrigger (stabiliser) and describes the max load exerted by the outrigger upon the ground.

Measures 100mm x 60mm

VDL 1045-378

#### **Decals fitted inside cab of vehicle**

TRAVEL HEIGHT = 2.8 Metres

9 Feet - 2 Inches

#### **Travel Height**

Label fixed to the inside of the windscreen. Measures 300mm x 75mm

VDL 1045-81 to suit equipment

DO NOT DRIVE VEHICLE WITH PTO ENGAGED

#### Do Not Drive with PTO Engaged

Label fixed to the dash. Measures 158mm x 34mm

VDL 1045-26

This vehicle is suitable for operational use with the DRIVER and ONE PASSENGER ONLY.

Failure to comply with this notice and subsequent damage and

or claim is totally the responsibility of the user.

VDI 1045-235

## **Driver & Passenger Only**

Label fixed to the dash. Measures 165mm x 54mm

VDL 1045-235

## IMPORTANT NOTICE

THIS EQUIPMENT SHALL ONLY BE OPERATED BY TRAINED PERSONNEL WHO HOLD A CERTIFICATE OF COMPETENCY ISSUED BY A RECOGNISED AUTHORITY

. VDI 1045-85

#### Trained Personnel

Label is located in the vehicles cab, advising on operator competence.

Measure 180mm x 80mm



BEFORE USING THE AERIAL LIFT.
THE VEHICLE MUST NOT BE AT AN ANGLE OF
MORE THAN 5° IN ANY DIRECTION.
KEEP THE BUBBLE INSIDE THE CIRCLE.

VDL1045-228

#### Inclinometer

Decal is located in the vehicle cab and flyboom for jackless machines.

Measures 78mm x 32mm

VDL 1045-226

#### IMPORTANT NOTICE

ALWAYS OPERATE THE EMERGENCY MOTOR DAILY FOR 15 TO 20 SECONDS TO ENSURE CORRECT OPERATION. FAILURE TO DO THIS MAY CAUSE IT TO FAIL WHEN YOU NEED IT MOSTI

#### **Use of Emergency Motor**

Label is affixed to the ground controls and upper controls cover.

Measures 110mm x 35mm

VDL 1045-339

#### WARNING

DO NOT USE THIS MACHINE IF THE CERTIFICATE OF THOROUGH EXAMINATION IS MISSING OR EXPIRED



Tel. 01536 721010 Fax.01536 721111

#### **LOLER Certificate**

Label can normally be found to the bulkhead of the vehicle, in close proximity to the holder for the LOLER certificate.

Measures 120mm x 160mm

VDL 1045-172

#### IMPORTANT NOTICE

THIS VEHICLE IS NOT TO BE DRIVEN UNLESS THE BOOMS ARE SECURED IN THE TRAVELLING POSITION

VDL1045-199

#### Secure the Booms

Label can be found in the cab of the vehicle, warning of boom stowage.

Measures 120mm x 45mm

VDL 1045-199

## **Decals fitted to Equipment within vehicle**

#### INSTRUCTIONS FOR WHEEL CHOCKS

To enable this machine to operate both wheel chocks must be correctly placed and the coiled leads connected to the sockets provided in the rear step.

#### WARNING

It is MANDATORY that this is carried out before attempting to operate the machine



#### Use of Wheel Chocks

Decal is located in close proximity to the wheel chock stowage point.

Measures 175mm x 160mm



## **Owner's Warranty**

The Versalift aerial platform lift is engineered and designed to perform as stated in the published specifications. Only quality material and workmanship are used in the manufacture of this product. With proper installation, regular maintenance and periodic repair service, the equipment will provide excellent service.

Those parts of the **Versalift** which are manufactured by the parent company **Time Manufacturing Company** and **Versalift Distributors UK Ltd** are warranted for one full year from date of purchase. This warranty is issued only to the original user and promises that the manufactured products are free from defects in material and factory workmanship in normal use, provided that they have been operated in accordance with the Operators manual supplied and serviced according to the manufacturer's instructions as detailed in both the Operators and Service manual

Manufacturer's obligation under this warranty is limited to correcting without charge at its factory any part or parts thereof which shall be returned to its factory or one of its authorised service agents, transportation charges prepaid, within one year after being put into service by the original user and which upon examination shall disclose to the Manufacturer's satisfaction to have been originally defective. Correction of such defects by repair to, or supplying of replacements for defective parts, shall constitute fulfilment of all obligations to original user.

This warranty shall not apply to any of the Manufacturer's products which must be replaced because of normal wear and tear, which have been subject to misuses, negligence or accident, or which shall have been repaired or altered outside of the Manufacturer's factory unless authorised by the Manufacturer.

The Manufacturer shall not be liable for loss, damage, or expense directly or indirectly from the use of its product or from any cause.

The above warranty supersedes and is in lieu of all other warranties, expressed or implied and of all other liabilities or obligations on part of Manufacturer. No person, agent, or dealer is authorised to give warranties on behalf of the Manufacturer or to assume for the Manufacturer any other liability in connection with any of its products unless made in writing and signed by an officer of Manufacturer. In particular but without prejudice to the general provisions of the conditions of sale, no responsibility is assumed for incidental or consequential damage by reason of any warranty express or implied.







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