

# Operators Manual

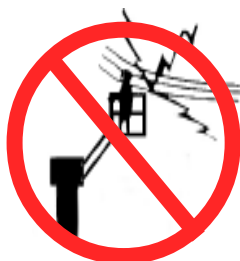
## MB20/26

MB 20N SERIAL No. 0001 TO CURRENT  
MB 26 SERIAL No. 0001 TO CURRENT

### WARNING

All personnel shall carefully read, understand and follow all safety rules and operating instructions before operating or performing maintenance on any UpRight aerial work platform.

### SAFETY RULES



**THIS MACHINE IS NOT INSULATED.**  
Operation of this machine within 3 metres of power lines or cables is PROHIBITED.



**DO NOT** operate the mast or drive with the platform elevated unless on a firm and level surface.



**NEVER** position the platform without first checking for overhead obstructions or other hazards.



Sitting, standing or climbing on the platform rails is PROHIBITED.

**PROHIBITED:** Use of this machine without fitting of the fall restraint to the person and anchor point and use of the machine with the platform safety drop-bar in the raised position.

**PROHIBITED:** All persons, other than those in the platform, from approaching within 1 metre of the machine.

**DO NOT** operate this machine without first having surveyed the work area for surface hazards such as holes, kerbs, bumps and debris.

**PROHIBITED:** Platform working loads in excess of 215 kg, (max. 2 persons).

**DISTRIBUTE** all loads evenly on the platform.

**PROHIBITED:** Fitting of such items as sign-boards, flags or ropes etc. to the cage or jib.

**PROHIBITED:** Operation of the machine without prior safety training, use by medically unfit persons or by persons who have not read and fully understood the operating instructions in this manual.

**PROHIBITED:** Driving of this machine on soft, uneven ground or on floors with a localised bearing capacity of less than 15 kg/cm<sup>2</sup> (213 psi).

**PROHIBITED:** Use of this machine in winds exceeding 27 mph (12.5 m/s - Beaufort Force 6)

**PROHIBITED:** Use of ladders or scaffolding on the platform.

**PROHIBITED:** Attachment of overhanging loads; size increasing of the working platform; use of this machine as a crane or for any other application involving additional loads or forces.

**PROHIBITED:** Any changes or modifications to the operating or safety systems.

**INSPECT** the machine thoroughly for missing decals, cracked welds, loose hardware, hydraulic leaks, damaged cables, loose wire connections or wheel bolts. **DO NOT** use damaged equipment. (Contact UpRight Intl. Ltd. for instructions).

**PROHIBITED:** Climbing down any elevating assembly with the platform elevated.

**PROHIBITED:** Servicing while the platform is elevated unless first blocking/supporting the elevating assembly.

**PROHIBITED:** Recharging of batteries near open flames or at a source of sparks.

**PROHIBITED:** Replacement of any component or part with anything other than original UpRight replacement parts (unless specifically agreed by the manufacturer).

**PROHIBITED:** Unattended storage (long or short term) of the machine with the Platform in the raised position or with the Brakes disengaged.

**PROHIBITED:** Use, other than emergency down functions, of the machine while the alarm sounds.

# Introduction

## SCOPE

This manual includes the procedures and responsibilities for the inspection, transportation, preparation and safe operation of the **MB20N & MB26 Work Platforms**. The Maintenance & Spare Parts Manual covers preventative maintenance and trouble-shooting. The term MB20/26 is used throughout the text of this manual.

## MB 20/26 PURPOSE & LIMITATIONS

The purpose of this machine is to provide fast and safe access to difficult-to-reach areas. The machine may be used only on firm and level ground. Refer to the Specifications section at the back of this document for the machine's parameter and access limitations.

DO NOT use on soft ground or on slopes greater than **2 degrees**.

DO NOT use the lifting mechanism to raise or lower goods or persons except within the cage and subject to the weight limitations.

DO NOT enter the platform from a structure, rack or other platform.

## PLATFORM

The MB20/26 is a self propelled, fast acting aerial work platform, designed to raise persons to a platform floor height of 6.00 m (~ 20 ft.). The accessible height however is approximately 8.00 m. The platform upper payload limit is **215 kg**. The unit offers the ability to reach over obstacles but must be used on firm and level ground. The platform is large enough for two operators and has a free-draining perforated floor with 150 mm toeboards. Hand-rails are constructed from aluminium alloy tubing and a safety drop-bar is provided at the entrance. Safety harness anchor points are also fitted in the floor of the platform.

## UPPER CONTROL BOX

The upper control box or primary control box is fitted to the front of the platform. It features a Joystick which provides proportional control from zero to pre-programmed maximum for all functions including drive and steer.

A safety Interlock Switch or 'deadman grip' is

incorporated into the Joystick. It must be activated at all times in order to operate any function. This feature allows for one-handed operation. A complete explanation of control functions can be found in the section headed 'Operation'.

## LOWER CONTROL BOX

The lower control box or secondary control box is fitted to the mast cover at arm level. It features a deadman toggle switch and selector toggle switches to provide pre-programmed speeds for all functions except drive and steering. This control station is used primarily for service-type operations including pre-operation inspection. It should never be used to position a manned or unmanned platform. It may be used in the event of emergency, however, to lower the manned platform.

## ELEVATING ASSEMBLY

The platform is raised and lowered by a combination of jib and telescoping mast actions. The main hydraulic cylinder, mounted within the masts, lifts the first mast directly. The other masts are connected by a system of heavy duty plate chains and pulleys to ensure sequential lifting. A parallel system of heavy duty straps ensures that the masts descend in the proper sequence and also ensures that any one mast cannot be held in suspension by an obstacle during descent.

The jib cylinder provides a lifting arc to the jib and platform. All hydraulic functions are carried out using remote solenoid-operated control valves. Each cylinder features an integral holding valve to prevent uncontrolled descent in the case of a hose burst.

## ROTATION GEAR

The complete mast, jib and platform can be rotated to provide up to 2.6 m (8.5 ft.) of working outreach. This dimension is measured from the centreline of rotation. Rotation is carried out by means of an integral hydraulic motor driving a worm drive unit about a heavy duty slewing gear.

# Introduction

## **DRIVE & STEER SYSTEM**

An electronic controller, mounted in the chassis, is pre-programmed to adjust the upper speed limits of each individual function.

The controller limits the rotational speed of the electric motor and oil pump, thereby limiting the maximum oil flow rate.

The following functions are controlled and driven by the electrohydraulic system:-

- Traction Drives ( Fwd & Rev) masts stowed

- Traction Drives ( Fwd & Rev) masts raised

- Steering

- Mast Elevation & Descent

- Mast Rotation

- Jib Elevation

The following functions are gravity operated and are determined by built-in flow orifices:-

- Jib Descent

## **POWER SYSTEM**

The power system (prime mover) incorporates four 6V batteries driving a 4kW electrohydraulic pump.

The pump drives all hydraulic cylinders and the traction drive motors. A single multi-valve control block divert oil pressure to the actuators. The oil flow rate is limited by the pre-programmed speed setting on the motor but is determined by the position of the joystick in the Upper Control Box.

# Transportation

## Machine Weights

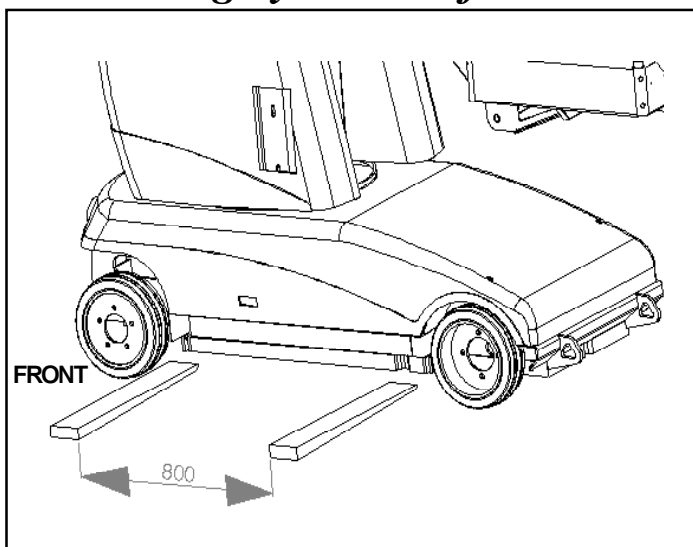
Before transporting or lifting the MB20N/26 machine be aware of its weight. It is very important to realise that the centre of gravity of the stowed machine is approximately 80 cm above ground and in the plane of the energy chain which is located on the back of the mast.

**MB20N CE Version = 2554 kg**  
**MB20N US Version = 3042 kg**  
**(6708 lbs)**

**MB26 CE Version = 2413 kg**  
**MB26 US Version = 2950 kg**  
**( 6505 lbs)**

In cases of particular difficulties with lifting or shipping it is possible to remove the single block ballast from the machine. Remove the 13 screws connecting the ballast cover to the mast. Undo the 4 bolts connecting the ballast to the mast and use a forklift to remove the ballast block. The ballast block weighs **850 kg** on the CE version and **1300 kg** on the US version. This work may not be carried out without the written permission of UpRight Ireland engineering department. (Tel. 353 1 2024100).

## 1 Hoisting by Fork-Lift



The MB20/26 may be lifted by forklift subject to the following strict procedure.

Ensure that the mast and jib are fully stowed and that the pothole bars are fully retracted (raised).

Adjust the forks so that the minimum clearance between them is 800mm as shown below.

Approach the machine from either side but place the fork as close as possible to the front wheel as shown.

**Never approach the MB20 from the front or rear while fork lifting.**

Use maximum forklift **tilt** as soon as possible when raising the MB20/26.

If travelling over sloped or uneven ground it is strongly recommended to temporarily tie the MB20 jib mount structure to the forklift mast as a safety precaution.

## 2 Hoisting By Crane

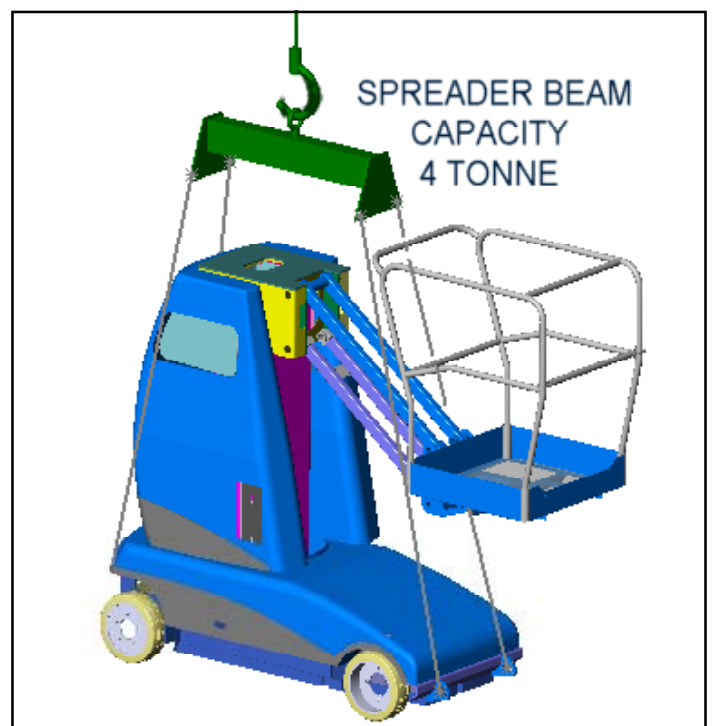
The MB20/26 may be lifted by an overhead hoist/ crane subject to the following strict procedure.

Raise the jib to clear the lifting straps as shown.

Use 4 No. separate lifting straps connected to a spreader beam. **DO NOT** use a lesser number of threaded straps as these could slip and lead to instability. The recommended minimum capacity of EACH of the 4 straps is 2 tonne and the minimum length of each strap is 2 metres. Damage to the covers and/or cage rails can occur if a spreader beam is not deployed during a crane lift.

Apply the straps via 1 tonne shackles to each of the 4 lifting lugs on the chassis. See the figure below.

**DO NOT** apply lifting straps to any other part of the machine.



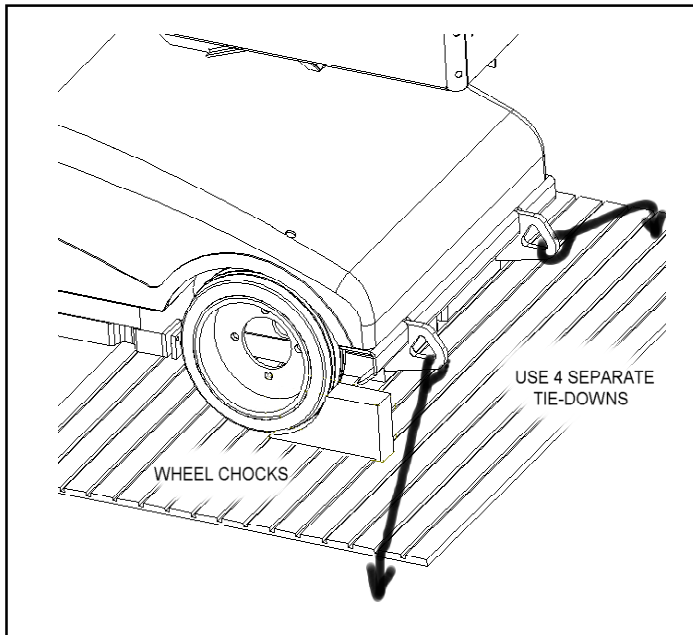
# Transportation

## 3 Transport By Truck

The MB20/26 can be carried on a suitably rated transportation vehicle or trailer. Because of its high gradeability, the machine can be driven under its own power on to a standard loading ramp (Up to 14 degrees). It is recommended to reverse the machine up on to the truck thus forward travelling down the ramp at the delivery point. Winch-assisted loading is allowable for larger slopes, however, operate the trucks assist winch at minimum speed to avoid over-pressurising the hydraulic system in the machine.

When the MB20/26 is on the truck or trailer it should then be made secure by:-

1. Chocking the wheels.
2. Securing with adequate chains or straps to the lifting lugs on the chassis.



### CAUTION



**DO NOT** loop straps through the cage, ladder or jib as this could cause permanent structural damage during transportation.

## Towing/Winching Valves

The failsafe brakes are automatically applied when the machine comes to a stop or in the event of total power loss due to low battery or malfunction of the hydraulic drive system.

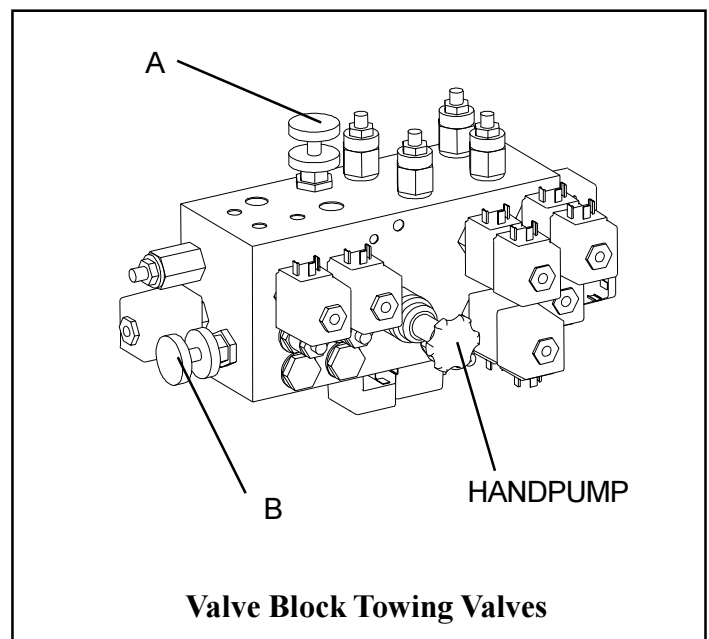
To tow the vehicle or to winch it on to a truck it is necessary to hydraulically bypass the control valves and release these brakes.

Proceed as follows:-

Refer to the valve block drawing below.

1. Fully lower the jib boom and the mast sections. Rotate the mast into the stowed position.
2. Turn the Upper Control Box to the **OFF** position and remove the key.
3. Remove the rear GRP cover from the chassis and locate the hydraulic control valve block.
4. The hand valve marked 'A' should be turned fully clockwise to close. The hand valve marked 'B' should be turned fully anti-clockwise to open.
5. Operate the red handpump a number of times to develop sufficient pressure to 'separate' the internal brake disks. These brakes are integral with the hydraulic drive motors.

The machine can now be safely towed or winched.



### WARNING



**RISK OF SERIOUS INJURY.** Releasing the brakes will cause the machine to move uncontrollably on a slope. Damaging momentum can be developed due to the large mass of a slow moving machine.

# Transportation

6. On completion of towing or winching, reverse the position of the rotary hand valves 'A' and 'B'.

The handpump becomes inoperative when these valves are returned to their normal position.

## ***AFTER USE EACH DAY***

1. Ensure that the platform (masts and jib) are fully lowered.
2. Park the machine on firm and level ground, never on a grass surface.
3. Turn the key switch to the OFF position and remove.
4. Put the batteries on charge.

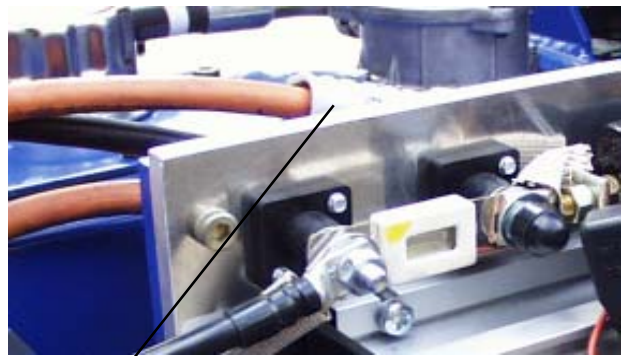
## ***Long-Term Storage***

### ***PRESERVATION***

1. Clean and touch up damaged paint surfaces.
2. Fill the hydraulic tank to operating level **with the platform fully lowered**. Fluid should be visible on the tank dip stick.
3. Coat exposed portions of cylinder rods with a preservative such as multipurpose grease and wrap with barrier material.
4. Coat all exposed unpainted metal surfaces with a light oil or other preservative.
5. Cover the machine with tarpaulin if possible. If this is not available it is advisable to cover the mast and jib mount area as a minimum. This will prevent moisture from entering the mast, battery and chassis areas.

### ***BATTERIES***

1. Disconnect the batteries at the quick connect plug and socket. This is located in the chassis between the controller and the hydraulic tank.
2. Disconnect the battery leads and tape up the lead terminals to ensure insulation.
3. Better battery life and efficiency is achieved if the batteries are used consistently. It is therefore recommended that the batteries are used elsewhere if the machine is to be unused for an extended period ( 2 weeks or more).



Battery Disconnect Located Behind Controller



## **WARNING**



### **RISK of SERIOUS INJURY.**

**Take particular care when handling batteries. Acid spills can cause severe burns or blindness. DO NOT store batteries close to naked flames or close to steel fabrication areas.**



# Safety Inspection

## *Safety Inspection*

This Safety Inspection shall be carried out by the owner immediately prior to transporting this machine.

This Safety Inspection shall also be carried out by the user prior to use each day.

The procedure is to carry out the following 14 checks in order as follows.

1. Remove the rear chassis covers by means of the two top twist-locks and the two lift-and-turn catches at the sides. The cover is removed by sliding it backwards and upwards. Use the central handle provided.
2. Ensure that the mast and jib are fully lowered. Remove the hydraulic oil filler cap and check that the hydraulic oil level is correct. Oil should be visible on the dip stick. Top up as necessary using hydraulic oil Viscosity Grade ISO 46.
3. Inspect the chassis area for oil leaks, loose parts, frayed cables and hoses and structural damage etc. Check that all cable connections to the solenoid valves are intact.
4. Open the Inspection hatches on both sides of the upper mast cover. Check that the AC mains cable is disconnected from the battery charger. Check the electrolyte level in each battery cell. Top up as necessary with **distilled water** only.
5. Batteries should be examined for cracks, acid leakage and terminal corrosion. Take corrective action immediately if either check fails.

### NOTE

Vehicles fitted with the automated battery top-up system with shut-off valve, top up the battery cells with distilled water using the electrolyte fill button, ensuring that the shut-off valve is open during the fill and closed after use.



## WARNING



Bystanders should stand clear of the machine while the following checks are performed.

Survey the local area for uneven surfaces, potholes, kerbs and debris.

Check overhead for obstructions, particularly overhead cables.

6. Prior to operating the functions, check that the upper and lower emergency stop buttons on each control station must be retracted (turn clockwise if necessary). Carry out the following function from the Lower Control Station. **Do Not** enter the platform at this stage. Turn the keyswitch towards '**Chassis**' while selecting either one of the 3 function switches. The key returns by default to the '**Platform**' position. This is a safety feature to prevent inadvertent platform motion. **DO Not** separate the spare key from the ring.

Hold key towards '**Chassis**' before operating any function

Remove key from '**Platform**' position & insert in Upper Console for normal control.



### 7. CHECK JIB

Operate the jib to its fully elevated position. Check for correct routing of the hoses and cables. Check the Emergency Lowering feature of the jib. Ensure that when the Emergency Lowering lever/button is disengaged, the jib no longer descends. Return the jib to its rest position using the normal Lower Control Station.

### 8. CHECK MAST Chains

Elevate the masts approximately 30cm above the rest position. Check for correct routing of the energy chain. Raise the masts to full height and check for correct adjustment of each lifting chain as follows. Each chain in the pair should bear load. Use a hand held spring balance or tensionometer apply a nominal load

# Safety Inspection

(approximately 10 kgf.) to either chain in the pair. Apply the load about half way up the chain. Record the approximate deflection i.e. the offset distance from the mast. Repeat the measurement on the adjacent chain at the same location. Chains bearing equal load will deflect equal amounts. Carefully adjust the slack chain until the deflections are approximately equal. Torque up the locknuts to 70 Nm.

Apply a thin layer of grease to the lifting chains with a small paintbrush.

**NOTE:- Over-tensioning of either lifting chain will result in unnecessary lifting of the mast and a subsequent increase in machine stowed height.**



- Apply a nominal load (10kgf) to each chain separately.

- Adjust the bottom tensioners such that dimensions 'A' & 'B' are approximately equal.

## Straps

The function of the mast straps is to ensure that masts descend in the correct order and more importantly, that masts cannot continue to descend if the jib or platform meets an external obstacle.

Raise the masts about 30 cm. Check the external mast clamp screws for tightness. Pull on the short length of each strap and check that they are secure. Refer to the maintenance manual for instructions on more stringent periodic checks on these straps.

## Emergency Lowering

Check the Emergency Lowering feature of the mast. The lever is located in the upper mast cover. Open the left hand battery inspection hatch and locate the 'Emergency Lowering' decal label. Check the wear pads for damage or heavy scoring. Replace as necessary.

9. Elevate the jib fully. Using the Lower Control Station, turn the mast assembly through about 90 degrees. Check the correct routing of the hoses and cables and the correct smooth operation of the energy chain in its chassis base slide. Continue slewing through 180 degrees in both directions.

Confirm that the physical slew stops are intact.

## 10. STANDARD PLATFORM CONTROLS

Repeat the mast, jib and slewing functions from the Upper Control Station in the platform. Check that pressing the emergency stop button prevents subsequent operation of the joystick.



UPPER CONTROL STATION

## 11. EMERGENCY OVER-RIDE

While in the platform, ask a colleague to deflect the tilt alarm sensor body. This orange-coloured sensor is located on the chassis base. The alarm will sound and all normal function will become interrupted.



ON - OFF - EMERGENCY KEYSWITCH



# Safety Inspection



**TILT SENSOR**

Locate the key switch on the left side of the Upper Control Station. See the photo below. By simultaneously turning the key to the position marked '**Emergency OverRide**' it should now be possible to lower the mast, lower the jib and slew the mast only.

## 12. MACHINE TRAVEL - UNELEVATED

Travel functions are possible only from the platform Upper Control Station. As with all such controls, the deadman handgrip switch must be depressed before any function can operate.



**Joystick  
Deadman Grip**

Select 'Drive Functions' on the top left toggle switch. Pushing back and forward on the joystick moves the machine backwards and forwards respectively.

The pothole protection will begin to retract immediately. However, full demand speed will not be realised until the bars are fully raised. This takes about 3 seconds. Check that the motion alarm **DOES** sound during travel.

Check that the machine travels at maximum speed while the speed selector is switched to '**STANDARD DRIVE**' and that the machine travels at a markedly less speed with the switch to '**EXTRA TRACTION**' speed.

(The 'Extra Traction' position is used for situations where higher torque is demanded of the drive system and where lower speed is acceptable - such as ramp loading etc.)

Check that the thumb operated switches on the top of the joystick operates the front wheel steering.

## 13. CHECK MACHINE TRAVEL - ELEVATED

While the masts are raised, it is possible to drive and steer the machine at a much reduced CREEP SPEED. Also note that while the masts are raised, the pothole protection bars should be fully extended and should remain extended during creep speed motion of the machine.



## WARNING



**The issue of reduced speed while elevated and deployment of the pothole protection bars is crucial to the safe operation of this machine.**

**The machine may not be released or operated unless these functions operate properly.**

## 14. FINAL PREPARATION

Configure the masts and jib to the stowed position. Replace all machine covers and secure. The machine is now ready for **Operation** or **Transportation**.

See the appropriate sections in this manual.

# Operation

## *Controls and Indicators*

The pre-operation safety checks should be carried out prior to operation. These checks are detailed in the previous section. Operators who follow these guidelines will become familiar with the controls and indicators on the machine.

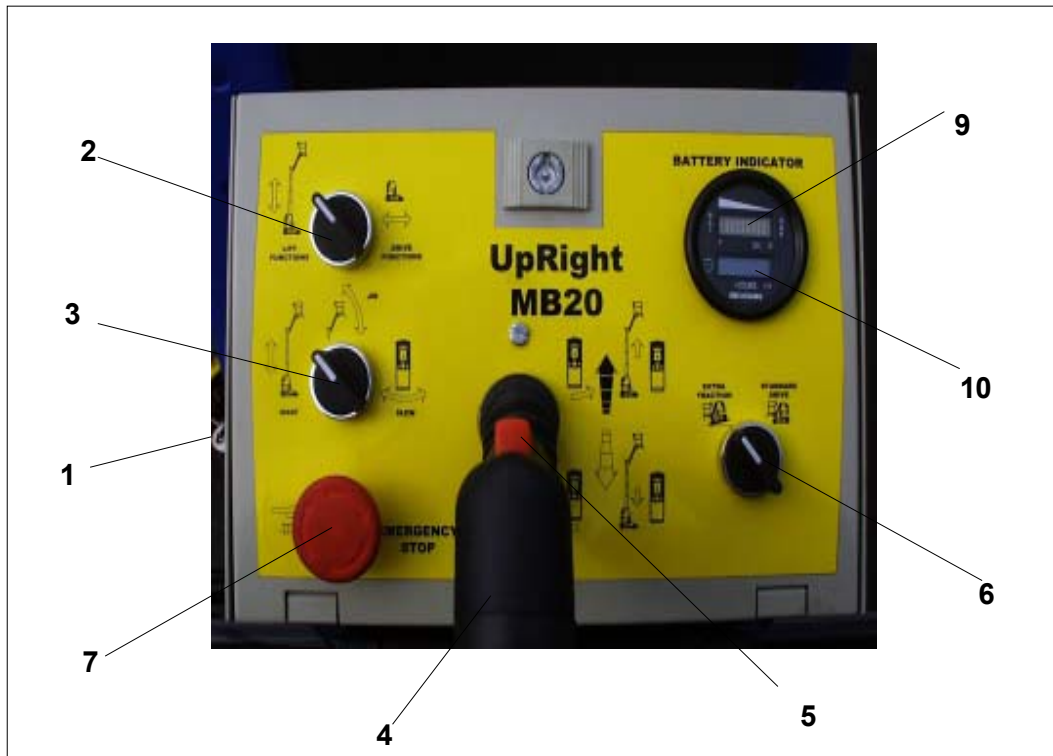
This section summarises the controls and indicators in tabular form and provides more detailed information.



**WARNING**



**DO NOT** operate the machine from the upper controls until the platform entrance drop-bar is in the fully lowered position and your safety harness has been fitted and attached.



**Upper Control Box & Console**



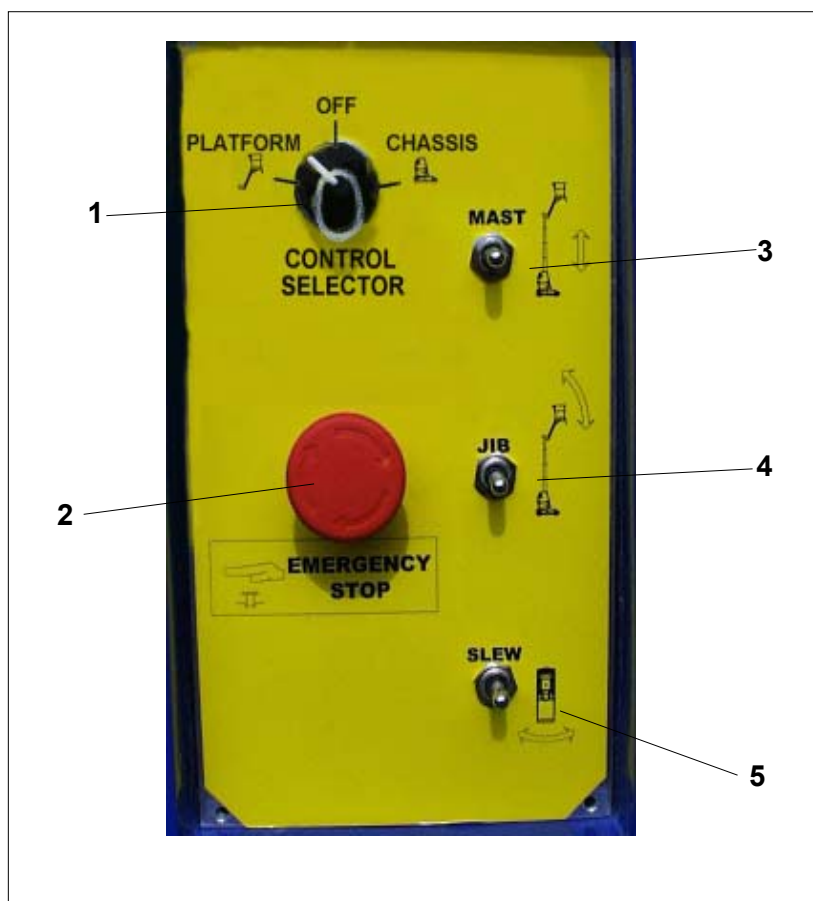
# Operation

**Table 1: Controls and Indicators**

## *Upper Control Console*

ITEM	NAME	FUNCTION
1	MAIN KEY SWITCH	Withdraw key from 'Platform' position on the Lower Console. Insert key into Upper Console. Turn anticlockwise to the ' <b>ON</b> ' position for normal power. Turn to the centre position for power ' <b>Off</b> ', and to remove the key. Hold in clockwise position to activate ' <b>Emergency Override</b> ' for safety descent.
2	LIFT/DRIVE SELECTOR	Select either the <b>Lift</b> function or the <b>Drive</b> function.
3	LIFT FUNCTION SELECTOR	Select whichever lift function is required before using the joystick. The decal shows logical functions and direction i.e. <b>Mast, Jib or Slew</b>
4	JOYSTICK	Grip the red 'Deadman' button (item 5) on the joystick continuously. Refer to the decal logic diagrams for correct direction of motion. e.g. If <b>Drive</b> is preselected - pushing forward moves machine forward. If <b>Lift</b> is preselected - pushing forward lifts the mast, lifts the jib or slews the platform to the right.
5	DEADMAN SWITCH	The red 'Deadman' grip button on the joystick must be grasped for any function to operate.
6	TRACTION SWITCH	Having preselected the <b>Drive</b> function with item 2, selecting <b>Standard Drive</b> allows maximum travel speed on level ground. Selecting <b>Extra Traction</b> allows extra wheel drive traction for climbing slopes. A consequence of extra traction is reduced speed range.
7	EMMERGENCY STOP	Push this red button at any time to isolate power. Turn clockwise to reset.
8	HORN BUTTON	Use to warn by-standers or to attract attention.
9	BATTERY CONDITION L.E.D.	Indicates the battery charge condition. Green band for fully charged. Orange band for partially discharged. Red band means the batteries are 80% discharged and must be put on charge immediately.
10	HOUR METER	Records the accumulated hours worked.

# Operation



**Table 2 : Controls and Indicators**

## *Lower Control Console*

ITEM	NAME	FUNCTION
1	MAIN SELECTOR SWITCH	<p>Turn key to '<b>Off</b>' position and remove - dissables the machine.</p> <p>Turn key to '<b>Platform</b>' position and remove - enables Upper Controls and disables Lower Controls.</p> <p>Turn and hold key to the '<b>Chassis</b>' position - enables electrical power to Lower Control switches only.</p>
2	EMMERGENCY STOP	<p>Push this red button at any time to isolate power.</p> <p>Turn clockwise to reset.</p>
3	MAST TOGGLE	<p><b>Raise</b> the masts by holding switch in <b>up</b> position. <b>Lower</b> the mast by holding in <b>down</b> position.</p>
4	JIB TOGGLE	<p><b>Raise</b> the jib by holding switch in <b>up</b> position. <b>Lower</b> the jib by holding in <b>down</b> position.</p>
5	SLEW TOGGLE	<p>Slew the platform to the <b>right</b> by holding switch in <b>up</b> position. Slew to the <b>left</b> by holding in <b>down</b> position.</p>

# Operation

## ELEVATING & LOWERING THE WORK PLATFORM

Before operating the MB20 Work Platform it is imperative that the pre-operation Safety Inspection has been completed and any deficiencies have been corrected. The operator must also be fully trained in the use of this machine.

Before beginning any operation, the following checks should be carried out.



### WARNING



**ENSURE** that no other persons are within 1 metre of the machine. Be aware of the pothole protection bar hazard on both sides of the machine.

**LOOK** up and around for obstructions before performing the lift or drive functions.

**DO NOT** overload the platform.

**DO NOT** operate within 3 metres of any electrical power cables.

**THIS WORK PLATFORM IS NOT INSULATED.**

**NOTE:** Chassis controls are for service use only. Do not leave a second (spare) key in the Lower Console. Use of a single key ensures full machine control by the person in the platform.

1. Enter the Platform through the entrance at the rear of the MB20/26 and ensure that the drop bar is in position. Raise and lock the entry step by means of the pedal in the platform.
2. Before using the machine all local Safety Regulations involving helmets and restraining devices should be observed. Safety harness lanyards, not exceeding 1 metre in length, should be attached to anchor points in cage floor.
3. Ensure that the 'ON/OFF/OVERRIDE' switch on the Upper Control Box is turned to the 'ON' position and both emergency stop buttons are off (twist clockwise if necessary).
4. Check the green battery indicator band L.E.D. is illuminated. If not, the battery may need recharging.
5. Check if the audible alarm sounds due to unlevel ground. None of the functions can work if the machine is not level.

## TRAVEL WITH WORK PLATFORM LOWERED

Refer to Tables 1 & 2 for controls and indicators

1. Verify that both Lower and Upper Control Console Emergency Stop Button is in the 'ON' position (turn clockwise to reset).
2. Climb into the Platform and check that the Keyswitch is turned to the 'ON' position and that the Drive/Lift Selector switch is positioned at **DRIVE FUNCTION**. Ensure that the drop bar is in position.
3. Check that the route is clear of persons, obstructions, pot holes or ledges and is capable of supporting the wheel loads. Also, check that the clearances above, below, and to the side of the Work Platform are sufficient.
4. To steer the MB20/26, activate the Deadman Switch while pushing the 'Rocker' Thumb-Switch, on top of the Joystick, **LEFT** or **RIGHT** to turn the wheels. Observe the tires while manoeuvring to ensure proper direction.  
**NOTE:** Steering is not self-centering. The wheels must be returned to the straight ahead position by operating the Steering Switch.

## TRAVEL WITH WORK PLATFORM ELEVATED

Refer to Tables 1 & 2 for controls and indicators



### CAUTION



**If the machine stops driving and the Tilt Alarm sounds, lower the Platform immediately.**

**Using the Emergency Override functions, move the machine to a level location before re-elevating the Platform.**

Travel with platform elevated **ONLY** on firm and level surfaces.

### NOTE:

*The Work Platform will travel at reduced speed when in the elevated position.*



# Operation

1. Check that the route is clear of persons, obstructions, pot holes or ledges and is capable of supporting the wheel loads. Also, check that the clearances above, below and to the side of the Work Platform are sufficient .
2. Ensure that the pothole guards remain in the extended (down) position during elevated travel.

## EMERGENCY SITUATIONS

in any emergency situation, the immediate action is to push the red **"Emergency Stop"** button . This will instantly cut of all electrical power to the controls. The button must be twisted in a clockwise direction in order to recommence control. However, the switch should be reset only when it is safe to do so. If the Audible warning alarm sounds, normal control functions will cease to operate. This will be due to the following problem ;

### ● *The Tilt Sensor has been activated*

In this situation the procedure is to turn the Platform **"ON/OFF/OVERRIDE"** Keyswitch to the **'EMERGENCY OVERRIDE'** position. Hold in this position while using the Mast and/or Jib boom down controls as normal. Do not begin to slew (rotate) until close to the ground.

*Note that during emergency operation, controls will operate only at a fixed, slow speed and will not allow the raising of the Booms. The Booms can only be lowered.*

### **Emergency Lowering (by hand)**

Should the machine become inoperable when elevated request a person on the ground to lower the platform using the emergency lowering valves. Lower the mast structure before lowering the jib/ platform structure.

Locate the red lever behind the mast cover inspection door on the left hand side of the machine. By pulling on the lever, the mast will descend fully under gravity. Releasing the spring-loaded lever will cease this operation immediately if required.

Lower the masts fully before lowering the jib structure.

The Jib may be manually lowered by removing the

chassis rear cover and locating the screw type valve on the underside of the valve bloc. Turning the knob clockwise allows the jib to descend slowly.



## CAUTION



**During manual emergency lowering, extreme care must be taken to ensure that the person carrying out the task is not struck by the jib or platform structure.**



Turn wheels to right.  
Use 7/8" socket & extension as shown.

## MANUAL ROTATION

1. Lower the masts and jib fully before manually slewing the assembly. Press the Emergency Stop Button to prevent inadvertant powered motion.
2. Locate the opening behind the front right drive wheel. Apply a 7/8 inch socket wrench with extension bar to the shaft and turn to rotate the elevating assembly. (Turning the wheel fully to one side will facilitate this operation)

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NOTES:

ITEM	MB20 CE SPEC	MB20 ANSI SPEC	MB26 CE SPEC	MB26 ANSI SPEC
<b>Platform Size w/ Extension</b>	780mm X 745mm Inside Toeboards	31 in.x 29 in. Inside Toeboards	780mm X 745mm Inside Toeboards	31 in.x 29 in. Inside Toeboards
<b>Max. Platform Capacity</b>	215kg	474lbs	215kg	474lbs
<b>Max. No. of occupants</b> Standard	2 people	2 people	2 people	2 people
<b>Height</b> Working Height	8.0m	24ft	9.79m	32ft
Max. Platform Height	6.0m	18ft	7.79m	26ft
Max at max outreach	4.9m	14.4ft	6.9m	22.6ft
<b>Dimensions</b> Weight	2554kg	5632lbs	2415kg	5325lbs
Overall Width	815mm	32in	990mm	39in
Overall Height	1.98m	6.5ft	1.98m	6.5ft
Overall Length	2.22m	7.27ft	2.6m	8.5ft
<b>Surface Speed</b> Platform Lowered	3.03km/h	1.9mph	3.03km/h	1.9mph
Platform Raised	0.7km/h	0.43mph	0.7km/h	0.43mph
<b>Energy Source</b>	4 No. 6V x 375 Ahr Battery	4 No. 6V x 375 Ahr Battery	4 No. 6V x 375 Ahr Battery	4 No. 6V x 375 Ahr Battery
<b>System Voltage</b>	24 Volt DC	24 Volt DC	24 Volt DC	24 Volt DC
<b>Battery Charger</b>	24V x 30 Amp 220v 50Hz	24V x 30 Amp 220v 50Hz	24V x 30 Amp 220v 50Hz	24V x 30 Amp 220v 50Hz
<b>Battery Duty Cycle</b>	45% of 8 hour cycle	45% of 8 hour cycle	45% of 8 hour cycle	45% of 8 hour cycle
<b>Hydraulic Tank Capacity</b>	20L	5.2 US Gallons	20L	5.2 US Gallons
<b>Hydraulic System Pressure</b>	220bar	3190psi	220bar	3190psi
<b>Control System</b>	Smooth one hand joystick with two speed operation	Smooth one hand joystick with two speed operation	Smooth one hand joystick with two speed operation	Smooth one hand joystick with two speed operation
<b>Drive System</b>	Dual Front Wheel Hydraulic Motors with series or parallel operation	Dual Front Wheel Hydraulic Motors with series or parallel operation	Dual Front Wheel Hydraulic Motors with series or parallel operation	Dual Front Wheel Hydraulic Motors with series or parallel operation
<b>Tires</b>	13.5in x 4.0in solid polyurethane, non-mark	13.5in x 4.0in solid polyurethane, non-mark	13.5in x 4.0in solid polyurethane, non-mark	13.5in x 4.0in solid polyurethane, non-mark
<b>Turning Radius</b>	1.85m Outside	6.1ft Outside	2.1m Outside	6.9ft Outside
<b>Gradeability</b>	25%	25%	25%	25%
<b>Wheel Base</b>	1465mm	4.81ft	1465mm	4.81ft
<b>Hydraulic Oil</b>	ISO VG 46	ISO VG 46	ISO VG 46	ISO VG 46
<b>Sound Level</b>	68 dB (A)	68 dB (A)	68 dB (A)	68 dB (A)

\* Specifications subject to change without notice.

Hot weather or heavy use may reduce performance.

Meets or exceeds all applicable requirements of OSHA and ANSI A92.6-1999

Refer to Service Manual for complete parts and service information.

FOR MORE INFORMATION

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