

nifty 170 sd

shortform operating instructions



self propelled access

This book is designed as a guide to enable you to start work quickly and safely. It is not intended to replace the full manufacturer's operating instructions (a copy of which should be with your machine) which should be read and understood by anyone operating the machine.

SAFETY TIPS

ALWAYS

- Inspect your machine before use.
- Check all operations including ground controls.
- Check ground conditions.
- Check clearance from overhead obstructions (power cables, building projections etc).
- Plan your task/job.
- Use sole boards under your outriggers at all times regardless of ground conditions.
- Stabilise and level machine before use.
- Wear a safety harness connected to a suitable anchorage point inside the platform.
- Operate all controls smoothly.
- Warn other people that you are there by means of flashing lights, sign and cones.
- MAKE SAFETY YOUR No.1 PRIORITY.

NEVER

- Use an unsafe machine.
- Use an access platform to hoist loads like a crane.
- Overload cage/platform.
- Operate in strong winds (Check manufacturer's recommendation).
- Rest the cage on a structure or object to gain extra support.
- Attach your safety harness to a structure outside of the platform.
- Throw or drop anything from the platform.
- Use boxes, ladders or stand on handrails to gain additional height, if you can't reach, you need a bigger machine.
- Let an untrained person operate the access platform.
- Take unnecessary risks (hospitals and graveyards are full of dead heroes!)

**In the unlikely event that your machine develops a fault
please contact the Facelift Tech Team on 01444 881100**

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DAILY SAFETY CHECK LIST

Before use each day and at the beginning of each shift the aerial platform shall be given a visual inspection and functional test including, but not limited to, the following:

- 1) Read and fully understand Operating and Safety Manual.
 - 2) Check safety belts and hard hats.
 - 3) Check all decals and placards to see if in place and legible.
 - 4) Check platform is securely fastened to platform support.
 - 5) Check wheels and tyres.
 - 6) Check outriggers (if applicable) for condition, microswitch operation and security.
 - 7) Check batteries for condition, cleanliness, connections and electrolyte levels.
 - 8) Check engine oil, fuel and coolant levels (if applicable).
 - 9) Check installation of all guards, covers and boom clamps.
 - 10) Check for loose, missing or damaged parts.
 - 11) Check all hydraulic hoses and electrical cables and wiring.
 - 12) Check hydraulic, fuel and air systems for leaks.
 - 13) Do not exceed rated platform capacity 440 lbs (200kgs).
 - 14) Check foot pedal for proper operation (if applicable).
 - 15) Check all operating emergency controls – Select an area free from obstructions and hazards. Exercise extreme caution throughout the checking procedure especially when checking brakes
 - 16) Check operation of emergency system and jack recovery
 - 17) Check brakes and all lights.
 - 18) Check tilt sensor/alarm horn and beacons (if fitted).
 - 19) Check high engine and/or high drive limit switches.
 - 20) Check and refer to Operating and Safety Manual for further daily/periodic checks and inspections.
- 6) Release boom travelling clamp.
 - 7) Check all red emergency stops are not engaged i.e. fully out.
 - 8) Ensure selector handvalve adjacent to ground control station is turned fully down to outrigger/drive position.(for four wheel drive machine grasp and hold duty selector. Power will be available automatically).
 - 9) From the cage control station depress and hold the green power button or footswitch to give hydraulic power to the outriggers and select the appropriate control lever. Note: No power will be available if the booms are not in the boom rest.
 - 10) Using the four outrigger control levers, (toggle switches on 4WD), lower each outrigger onto a firm level surface and level machine base ensuring each outrigger foot is taking equal weight with the wheels clear of the ground.
 - 11) Check machine is level using spirit level on the base, visible from the cage.
 - 12) Change selector valve at drive/outrigger control station to platform, i.e. turn fully up. (On four wheel drive machines releasing the duty selector handle automatically returns the machine to 'platform' operation).
 - 13) The booms can now be operated from the ground or cage control station by depressing and holding the green power button. Note: If no power is available check each outrigger is lowered and each footpad is taking weight.
 - 14) Always lower booms before adjusting, raising, retracting or moving outriggers in any way.
 - 15) Never alter, modify or block any of the safety circuits on the Niftylift.

SETTING UP PROCEDURES



**FAILURE TO DEPLOY THE OUTRIGGERS CORRECTLY
COULD RESULT IN DEATH OR SERIOUS INJURY.**

ALL MODELS

- 1) Read and fully comply with all safety precautions and operating instructions in the Operating and Safety manual and the warning decals on the machine.
- 2) Position Niftylift on firm, level ground. **NEVER** work with base across or adjacent to any slope.
- 3) Position Niftylift, bearing in mind range of boom movement so that any overhead obstruction or possible hazards such as, but not limited to, power cables, telephone lines, drains, man-hole covers, etc.
- 4) If the load bearing capacity of the ground is in any doubt the machine must not be used.
- 5) Check wheels and cordon off area using appropriate cones, barriers and flags.

GROUND CONTROL OPERATION



**ALWAYS ALLOW THE ENGINE TO
WARM UP BEFORE OPERATING.**

ALL MODELS

- 1) Ensure all red emergency stops are out.
- 2) Turn key switch at ground control station to ground (i.e. fully down).
- 3) Ensure selector hand valve (if applicable) is turned to platform position i.e. fully up.
- 4) Battery electric models go to step 10).

DIESEL ENGINE OR BI ENERGY MODELS

- 5) Turn duty selector in platform to BATT (Battery) or ENG (Engine).
- 6) If BATT (Battery) is selected go to step 10).
- 7) If ENG (Engine) is selected go to step 8). for a COLD ENGINE or step 9). for a WARM ENGINE.
- 8) COLD ENGINE. turn the main engine ignition switch (located in RHS engine canopy) through ON to GL. This engages the glow plug pre-heat system. Hold for 3-5 seconds then turn key fully to ST (start) position and the engine will fire.

- 9) WARM ENGINE turn the main engine ignition switch (located in RHS engine canopy) through ON to ST (start) position and the engine will fire.

PETROL (GASOLINE) ENGINE OR PETROL (GASOLINE)/ELECTRIC MODELS

- 5) Turn duty selector in platform to BATT (Battery) or ENG (Engine).
- 6) If BATT (Battery) is selected go to Step 10).
- 7) If ENG (Engine) is selected go to Step 8). for a COLD ENGINE or Step 9). for a WARM ENGINE.
- 8) COLD ENGINE. turn the engine fuel tap on and engage the choke lever. Turn the main engine ignition through ON to ST (Start) and the engine will fire. Return the choke lever to its normal running position after the engine is started.
- 9) WARM ENGINE. turn the engine fuel tap on and turn the main engine ignition through ON to ST (start) position and the engine will fire.

ALL MODELS

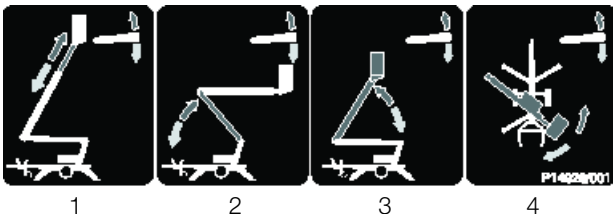
- 10) Push and hold green power button.
- 11) Select function and operate hand levers in full accordance with manufacturers operating and safety manual.
- 12) To return control to platform turn key fully clockwise to up position.
- 13) When not in use return machine to stowed position, fully raise and stow all outriggers, turn key to centre off position, remove key and chock wheels.

EMERGENCY PROCEDURES

- 14) Push in red emergency stop to shut down all functions.
- 15) Use emergency hand pump to manoeuvre machine into a safe position. Base or cage controls can be used whilst the handpump is being operated. Only when the machine is fully stowed should the flow be directed to the jack controls in order to recover the jacks. Failure to follow this procedure could result in serious injury or risk of death.
- 16) To swing booms fit a 1/2 inch drive socket to end of swing worm gear and crank round manually.

BOOM FUNCTIONS

- A) Push and hold green "Power Control" button.



- B) Select lever 1, 2, 3, or 4 for desired boom function.
- 1 Operates Telescope UP for out DOWN for in. (If applicable, Ground control of telescope function is an option)
 - 2 Operates Lower boom UP for up DOWN for down.
 - 3 Operates Upper boom UP for up DOWN for down.
 - 4 Operates SLEW (Swing) UP for right DOWN for left.



ALWAYS ENSURE THE AERIAL PLATFORM IS ON A FIRM LEVEL SURFACE AND THE AREA IS FREE OF ANY OVERHEAD OBSTRUCTIONS.

ENGAGING THE RED EMERGENCY STOP BUTTON WILL SHUT DOWN THE ENGINE, AND THE ELECTRIC CIRCUIT PREVENTING OPERATION OF ANY FUNCTION.

PLATFORM CONTROL OPERATION



NEVER START THE NIFTYLIFT IF YOU SMELL PETROL (GASOLINE), LIQUID PROPANE OR DIESEL. THESE FUELS ARE FLAMMABLE.



BEFORE OPERATING THE NIFTYLIFT ENSURE THAT EACH OPERATOR HAS READ AND FULLY UNDERSTOOD THE OPERATING MANUAL. FAILURE TO DO SO MAY RESULT IN DEATH OR SERIOUS INJURY.

ALL MODELS

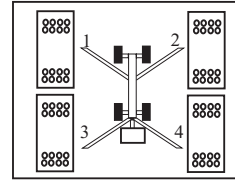
- 1) Ensure all red emergency stops are out.
- 2) Turn key switch at ground control station fully up to platform position.
- 3) Ensure selector hand valve (if applicable) is turned to platform position i.e. fully up.
- 4) Battery electric models go to step 10.

DIESEL ENGINE OR BI ENERGY MODELS ONLY

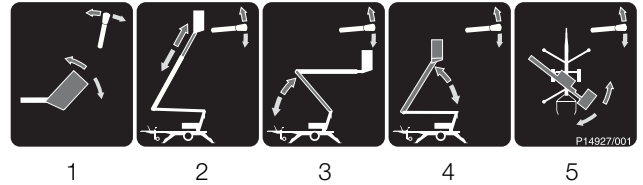
- 5) Turn duty selector in platform to BATT (Battery) or ENG (Engine).
- 6) If BATT (Battery) is selected go to Step 10).
- 7) If ENG (Engine) is selected go to Step 8) for cold engine or Step 9) for a warm engine.
- 8) COLD ENGINE Turn the main engine ignition switch (located in RHS engine canopy) to ON. Turn the ignition switch in the cage to the left 'Glo' position and hold for 3-5 seconds then turn key fully to right (start) position and the engine will fire.
- 9) WARM ENGINE Turn the main engine ignition switch to ON. Then turn ignition switch in the cage fully to the right (start) position and the engine will fire.

PETROL (GASOLINE) ENGINE OR PETROL (GASOLINE)/ELECTRIC MODELS ONLY

- 5) Turn duty selector in platform to BATT (Battery) or ENG (Engine).
- 6) If BATT (Battery) is selected go to Step 10).
- 7) If ENG (Engine) is selected, ensure the fuel tap is turned to the ON position and then go to Step 8) for cold engine or Step 9) for a warm engine.
- 8) COLD ENGINE (From the ground only) turn the engine fuel tap on and engage the choke lever. Turn the main engine ignition through ON to ST (Start) and the engine will fire. Return the choke lever to its normal running position after the engine is started.
- 9) WARM ENGINE Turn the main engine ignition switch to ON. Then turn ignition switch in the cage fully to the right (start) position and the engine will fire.



BOOM CONTROLS



Select lever 1, 2, 3, 4, or 5 for desired function.

Toggle switches 1,2,3 and 4 operate individual outrigger legs as indicated on the adjacent label

ALL MODELS

- 10) Ensure key switch selector is turned to ON or BATT (Battery) if applicable.
- 11) Depress foot switch or push and hold green power button.
- 12) Select function and operate hand levers in full accordance with manufacturers operating and safety manual.
- 13) When not in use return booms to stowed position. Fully raise and stow all outriggers. Turn key switch at ground control to centre off position, remove key and chock wheels.

PLATFORM PUSHBUTTON CONTROLS STATION

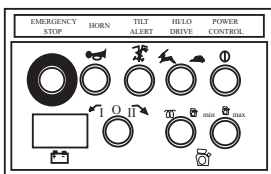


Fig. 1

(BI-ENERGY MODEL SHOWN)

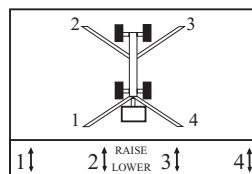


Fig. 2

DRIVE AND BOOM FUNCTIONS

Situated at the top of Boom 1 (superstructure) is the 5 lever drive/outrigger hand valve. These control the following functions:

Left hand lever: Two axis joystick for drive: Upwards for Forward, Downwards for Back and Steer: Left for Left, Right for Right.

The remaining levers control jack deployment as indicated in fig.2 (Mounted adjacent to the jack control position) Two wheel drive machine only.

FOUR WHEEL DRIVE: JACK CONTROL

Situated adjacent to the single drive/steer joystick is the box comprising the toggle switches controlling each stabiliser leg. These operate individually to either lower or raise each leg and provide the levelling function for the machine base.

STARTING THE ENGINE FROM THE PLATFORM



NEVER START THE NIFTYLIFT IF YOU CAN SMELL PETROL (GASOLINE), LIQUID PROPANE OR DIESEL. THESE FUELS ARE HIGHLY FLAMMABLE.



******FOR COLD START PROCEDURES SEE PLATFORM CONTROL OPERATION: STEP 8**

- A) Ensure main engine ignition located in RHS engine canopy is turned to ON position.
- B) Ensure that all EMERGENCY STOPS are not engaged (i.e. must be fully out).
- C) Ensure the key switch selector located at the ground control station is turned to platform (i.e. fully up).
- D) Ensure the duty selector in the platform is in the ENG (Engine) position.
- E) Turn ignition switch to the right (start) position and the engine will now fire up.
- F) The engine will automatically rev up if the booms are in the stowed position and the green power control pushbutton, or the footswitch, if applicable, is depressed, thus allowing fast travel speed – when selected on the Hi/Lo selector.
- G) To shut down the engine from the platform simply turn the duty selector to OFF or BATT (Battery) or in an emergency depress the RED Emergency stop button.

POWER SYSTEM CHANGEOVER

ENGINE TO BATTERY

- 1) Engage any RED Emergency Stop button to shut down the engine.
- 2) Re-set RED Emergency Stop button.
- 3) Turn the duty selector in the platform to BATT (Battery).

BATTERY TO ENGINE

- 1) Ensure all RED Emergency Stops are out.
- 2) Ensure main engine ignition switch located at the ground is turned to ON.
- 3) Turn the duty selector in the platform to ENG (Engine).
- 4) Turn ignition switch to the right (start) position and the engine will now fire up.

PETROL (GASOLINE) TO GAS

- 1) Locate petrol shut-off valve on carburettor, and turn petrol to OFF position.
- 2) Run engine until all of the Petrol is exhausted, i.e. engine stops.
- 3) Open valve on gas bottle, introducing supply to the vapouriser.
- 4) Turn engine over until it fires, allow vapouriser to achieve running temperature before using machine. If engine runs erratically, check that all petrol has been used from bowl.

GAS TO PETROL (GASOLINE)

- 1) Turn gas off by shutting valve on the bottle – ensure that it is fully closed.
- 2) Open fuel shut-off valve on engine carburettor, and allow it to fill with petrol.
- 3) Turn engine over until it fires.

DRIVING CONTROLS



DO NOT OPERATE THE NIFTYLIFT WHILST ELEVATED UNLESS ON A FIRM, LEVEL SURFACE FREE FROM ANY POSSIBLE OBSTRUCTIONS OR HAZARDS BOTH AT GROUND LEVEL AND OVERHEAD.

- 1) Check proposed route for possible hazards, obstructions and personnel.
- 2) Depress footswitch located in platform floor (if applicable). For four wheel drive machine grasp and hold the duty selector handle.
- 3) Use Hi/Lo selector on platform pushbutton control station to determine speed.
HIGH DRIVE – GIVES HIGH SPEED AND LOW GRADEABILITY
LOW DRIVE – GIVES LOW SPEED AND HIGH GRADEABILITY
- 4) Select drive joystick from hand lever controls (left hand lever of five, situated at the drive/outrigger control position).

- A Up for forwards
- B Down for reverse
- C Left for steer left
- D Right for steer right

The driving horn is activated by the button on the cage controls.

- 5) All control levers give a fully proportional response, therefore the more the lever is moved away from the centre (off) position the faster the function will become.
- 6) Maximum drive speed is only attainable when all booms are fully stowed and the Hi/Lo selector is in the Hi position and fast speed selected on the switch.
- 7) When driving with the booms fully stowed, the tilt alarm is bypassed to allow the Niftylift to be driven in areas where the slope exceeds the five degree working limit. In normal operation the drive is therefore unaffected when driven onto a slope in excess of five degrees, until the outriggers are lowered and the booms are raised, whereupon the drive would be disabled and the tilt alarm sounds continuously.
- 8) Under no circumstances should any Niftylift SP series machine be driven on slopes exceeding 25%, with the booms fully stowed (30% for 4WD machine).

BOOM CONTROLS

- 1) Never exceed the maximum platform capacity of 440lb (200kg).
- 2) Check below, above and around platform for any obstruction or hazards before operating any function
- 3) Depress the green power button or the foot switch located in the platform floor (if applicable).
- 4) Select handlever controls marked 3, 4, 5.

- Control 1 Operates Cage Swivel (optional)
- Control 2 Operates Cage Levelling
FORWARD for (if applicable) forward
BACK for back
- Control 3 Operates Telescope
UP for telescope out
DOWN for telescope in
- Control 4 Operates Lower Boom
UP for up
DOWN for down
- Control 5 Operates Upper Boom
UP for up
DOWN for down
- Control 6 Operates Swing
UP for right
DOWN for left



IF ALARM SOUNDS -DESCEND IMMEDIATELY. THIS MACHINE IS NOT ELECTRICALLY INSULATED. DO NOT WORK WITHIN 3M (10FT) OF OVERHEAD CABLES EXCEEDING 415 VOLTS.

GENERAL



CHECKING THE OPERATION OF THE EMERGENCY CONTROLS EVERY DAY AND/OR BEFORE EACH SHIFT IS AN ESSENTIAL PART OF THE OPERATORS DUTIES.

The operator and all ground personnel must be thoroughly familiar with the location and operation of the **EMERGENCY CONTROLS**.

IN THE EVENT OF AN INCAPACITATED OPERATOR.

Turn key switch selector at ground control station to ground (i.e. fully down). Lower on ground controls as detailed under Section: Ground Control Operation.

IN THE EVENT OF MACHINE FAILURE.

The first recourse with all bi-energy machines is to switch to the alternate power source, recover the machine and fix the original problem. In the unlikely event of a fault which prevents either system from providing hydraulic flow, the machine can still be brought down to the rest position with the use of the emergency hand pump. The emergency hand pump is capable of manoeuvring the machine fully in any direction in order to stow the booms back in the transit position. Moving the duty selector to the alternate position will allow the ground operator to recover the jacks. Only when the machine is fully stowed should the controls be used to raise the outriggers. Failure to follow this procedure could result in serious injury or risk of death. Once completed, releasing the emergency hand pump will allow the system to reset ready for normal operation.

In the specific case of the four wheel drive machine, the emergency hand pump feed will default to the platform operation at all times. Once the booms have been recovered, it is possible to redirect the flow to the drive and outrigger circuit by using the duty selector valve at the top of Boom 1. Drive and steer control is available for the emergency hand pump, but if the outriggers are to be recovered the dead head dump manual override valve needs to be closed to prevent the hydraulic flow from returning directly to tank. This is situated beneath the canopy adjacent to the dump solenoid and is tie wrapped to prevent unauthorised operation. (See Drawing no D80230, item 37). If electrical power has been lost, it will be necessary to manually hold the solenoid for each stabiliser leg to direct the hydraulic flow to the cylinders. Once completed the dead head dump manual bypass valve **MUST** be reset in the open position in order to re-establish the machine safety interlocks. Failure to do so will render the machine in a potentially dangerous position

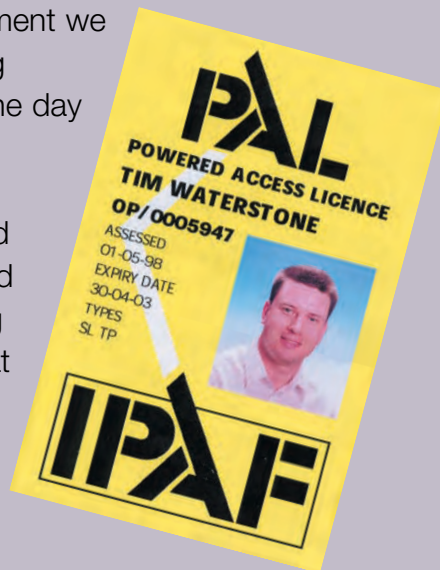
TO ROTATE PLATFORM IN AN EMERGENCY.

Fit 1/2 inch drive socket on to end of slew worm gear and crank round manually.

operator training centre

When hiring access equipment we strongly recommend taking advantage of one of our one day operator training courses

As Facelift is an accredited IPAF (Independent Powered Access Federation) training centre you can be sure that your staff will be trained to a high standard and receive an internationally recognised qualification.



Courses can take place on your own premises or at one of our training centres, situated in Hickstead, Iver, Southampton and Liverpool.

We can train your personnel on any of the following equipment:

- (SL) Scissor Lift
- (SPB) Self Propelled Boom
- (VMP26) Truck/Van mounted to 26m
- (VMP200) Truck mounted over 26m
- (VPP) Vertical Personnel Platform
- (TP) Trailer/Push around

The one day course* covers site safety, practical demonstration, sole usage and site risks and includes a theory test.

*(two day course for VMP200)

Successful candidates are issued with the IPAF PAL card, widely accepted by both the CITB and Health And Safety Executive.

For further information or to arrange a training course call us today on: 0800 0 72 55 72

