snorkel

MHP15HD

WITH HYDRAULIC CONTROLS



Gasoline
Battery Electric
Bi-Energy Options

OPERATION MANUAL

Serial Number NZ110302 and after

Part Number: 15358-1
March 2020 (Rev A)

MidWestTech | Snorkel MHP15HD with Hydraulic Controls Towable Boom Lift Operator's Ma... Order the manual at mid-west-tech.com >

Table Of Contents

1. Introduction

Standard MHP15HD . . . 5
Options . . . 5
Operations Manual . . . 5
Photographs . . . 5
Safety Alerts . . . 5
Operation . . . 6
Maintenance . . . 6
Responsibility of Parties . . . 6
In Summary . . . 7
Product Warranty . . . 7
AS/NZS 1418.10 Commissioning . . . 7
Additional Information . . . 7

2. Specifications

Component Identification . . . 9
Working Envelope . . . 10
General Specifications . . . 11
Engine Specifications . . . 12

3. Safety

Electrocution Hazards . . . 13
Minimum Safe Approach Distance (M.S.A.D) . . . 13
Platform Capacity . . . 14
Manual Force . . . 14
Wind Speeds . . . 14
Prestart Inspection . . . 14
Workplace Inspection and Practices . . . 14
Operation . . . 15
Tip-Over and Falling Hazards . . . 15
Electrical System . . . 16
Hydraulic System . . . 16
Engine and Fuel Handling Precautions . . . 16
Placards and Decals . . . 17
General Safety Rules . . . 17

3. Safety - Low Voltage Insulation

Owner Responsibility . . . 19
Insulation Maintenance . . . 19
Electrical Safety Certificate . . . 19
Insulation Covering Test . . . 19
Basket Emergency Exit . . . 19
Earth Point . . . 20
Safety Decals and Placards . . . 20

4. Safety Devices

Emergency Stop Switch . . . 21
Other Safety Devices . . . 21
Lanyard Anchor Points . . . 21
Gravity Gates . . . 22
Guardrails . . . 22
10.9m Height Restriction Kit (Option) . . . 22
Enable Switch . . . 22
Enable Switch (Foot) . . . 23
Platform Overload Protection . . . 23
Bubble Level . . . 23
RCD/ELCB AC Outlet . . . 23
Stabiliser Boom Interlock Test . . . 24
Flashing Light Option . . . 24

5. Gauges and Displays

Hourmeter . . . 25
Level Bubble . . . 25
Hydraulic Oil Level . . . 25

6. Controls

Control Description . . . 27
Controls and Control Decal Locations . . . 27
Ground Control Box . . . 28
Lower Controls . . . 28
Platform Control Box . . . 29
Upper Controls . . . 29
Stabiliser Controls . . . 33
Self Leveling Stabiliser . . . 33

7. Prestart Inspection

Pre-Operation Inspection Table . . . 35
Stabiliser/Boom Interlock Test . . . 36
Engine Cover . . . 37
Engine Fuel Level . . . 37
Fuel Tank Cap . . . 37
Fuel Leaks . . . 37
Engine Oil Level . . . 37
Wiring Harnesses . . . 37
Battery Terminals . . . 38
Battery Fluid Level . . . 38
Hydraulic Oil Level . . . 38
Hydraulic Oil Leaks . . . 38
Bolts and Fasteners . . . 38
Wheels and Tyres . . . 39
Structural Damage and Welds . . . 39
Lanyard Anchor Points . . . 39
Platform Gravity Gates . . . 40
Platform Guardrails . . . 40
Flashing Light (Option) . . . 40
Ground Control Switches . . . 40
Platform Control Switches . . . 41
AC Outlet RCD/ELCB (Option) . . . 41
LV Insulated MHP15HD . . . 42
Placards and Decals . . . 42
Standard MHP15HD Placards and Decals . . . 44
Low Voltage Insulated MHP15HD Placards and Decals . . . 46

8. Operation

Operating procedures . . . 49
Control Stations . . . 49
Emergency Stopping . . . 49
Operation Considerations . . . 50
Manual Stabiliser Operation (Option) . . . 50
Self Leveling Stabilisers . . . 50
Unlocking The Booms . . . 51
Starting From Ground Controls . . . 51
Starting From Platform Controls . . . 52
Moving The Platform . . . 53
Over-Center Valve . . . 54
Securing For The Day . . . 54

9. Stowing and Transporting

Stowing . . . 55
Transporting . . . 55
Towing . . . 56

MidWestTech | Snorkel MHP15HD with Hydraulic Controls Towable Boom Lift Operator'... Order the manual at mid-west-tech.com >

10. Emergency Operation

Emergency Operation Procedures 57
Ground Control Station Settings 57
Platform Control Station Settings 57

11. Options

Bi-Energy 59
Airline to Platform 61
Dual Fuel 61
Work Lights 61
Flashing Light 61
Battery Isolate Switch 61
RCD/ELCB AC Outlet 61
10.9 Meter Height Restriction Kit 61
Low Voltage Insulation 62
Spare Wheel 62
Fiberglass Basket 62

12. Troubleshooting

Troubleshooting Chart 63

Appendix A - Glossary

MidWestTech | Snorkel MHP15HD with Hydraulic Controls Towable Boom Lift Operator'... Order the manual at mid-west-tech.com >

■ General Specifications

The Snorkel MHP15HD is a boom supported elevating work platform built to conform to all applicable OSHA, ANSI or CSA standards as previously outlined.

OSHA Paragraph 1910.67 Title 29, C.F.R., Vehicle-Mounted Elevating and Rotating Work Platforms - Labour.

OSHA Paragraph 1926.556 Title 29, C.F.R., Aerial Lifts - Construction.

Australian Standard AS1418-10 Elevating Work Platforms.

Note
For further details regarding lubricants, maintenance schedules and service please refer to the Maintenance and Repair Parts Manual for this machine.

SPECIFICATIONS	MHP15HD V4	
Nominal working height	14.8m	48' 6"
Maximum height to basket floor	12.8m	42'
Maximum outreach	6.6m	21' 6"
Maximum width of base		
Stabilisers retracted	1.8m	5' 11"
Stabilisers extended	3.5m	11' 6"
Safe working load (unrestricted)	200kg	440lbs
Platform size	1.7 x 0.70 x 1.14m	3' 10" x 2' 4" x 3' 7"
Construction	Steel	Steel
Travelling height	1.9m	6' 2"
Overall length	7.3m	24'
Maximum towing speed	80km/h	50m/h
Turntable rotation	540° Non continuous or 360° continuous	
Trailer tongue weight (approximately)	100kg	220lb
Maximum rated axle capacity	2000kg	4408lb
Insulation rating	Nil (on standard models)	
Weight (depending on options)	1840kg	4056lb
Stabiliser maximum load	1095kg	2414lb
Maximum allowable force	400N	
Maximum chassis inclination	1°/1°	

☐ Recommended hydraulic oil

Shell Tellus 32 or Castrol AWS 32 or similar.

MidWestTech | Snorkel MHP15HD with Hydraulic Controls Towable Boom Lift Operator'... Order the manual at mid-west-tech.com >

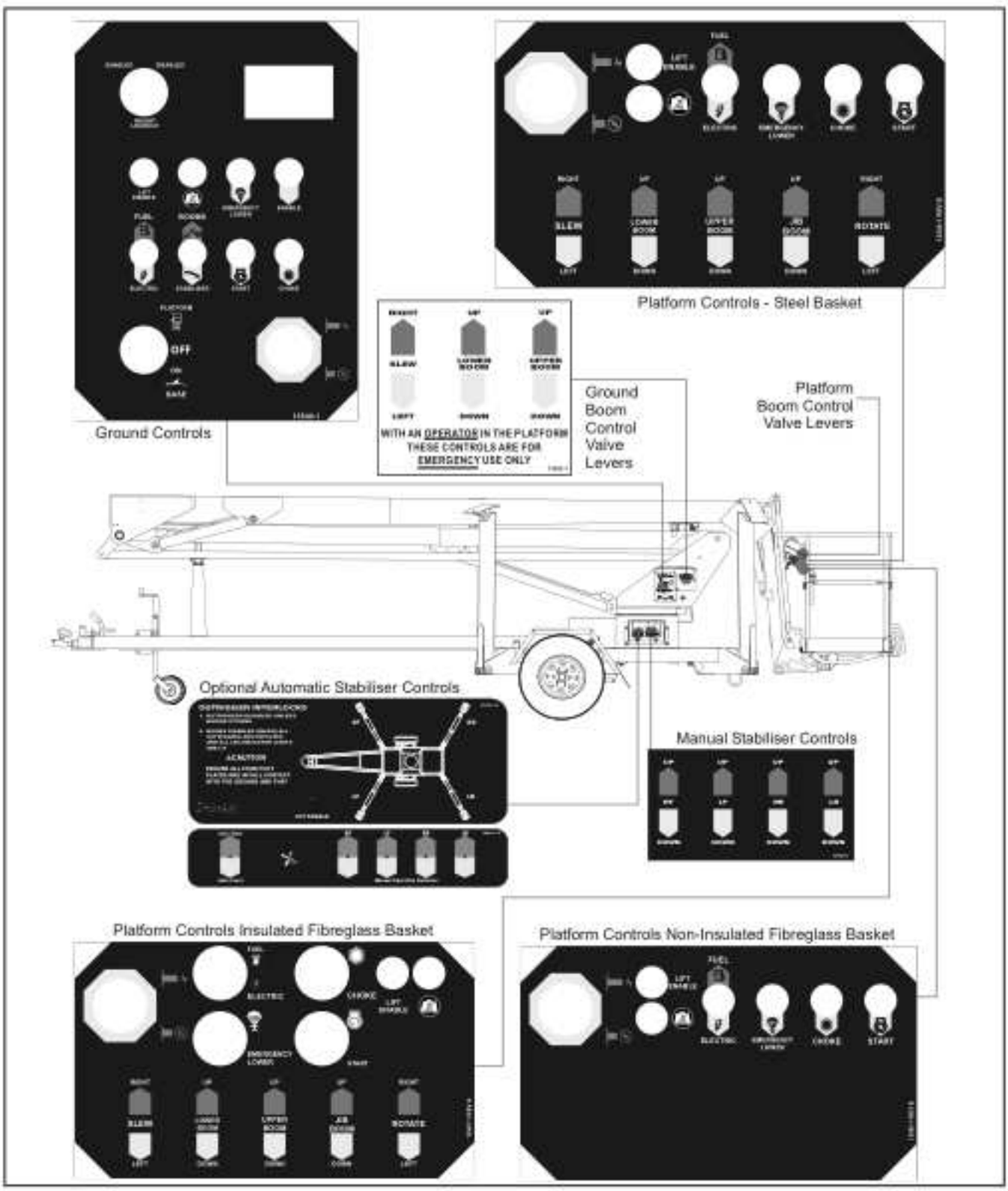
■ Controls Description

This chapter explains what each control does.

This chapter DOES NOT explain how to use the controls to produce useful work, refer to the "Operation" chapter for that after you have read this chapter.

For optional equipment controls, see the "Options" chapter.

Controls and control decals locations



MidWestTech | Snorkel MHP15HD with Hydraulic Controls Towable Boom Lift Operator'... Order the manual at mid-west-tech.com >

Snorkel Product Warranty Policy

7. At the direction of the Snorkel Warranty department, any component part(s) of Snorkel products to be replaced or repaired under this warranty program must be returned freight prepaid for inspection. An RMA (Returns material authorization) must be requested from Snorkel Warranty department, a copy to be placed with the returning component part(s).

8. All warranty replacement parts will be shipped freight prepaid (standard charges, ground shipping only) from the Snorkel Parts department, Service Department or from the Vendor to Dealer/SSC or Customer. Any other shipping method is the customer responsibility.

9. All warranty claims are subject to approval by Snorkel Service department. Snorkel reserves the right to limit or adjust claims with regard to defective parts, labor or travel time based on usual and customary guidelines.

10. Reimbursement policy, labor will be paid at 75% of posted hourly shop rate. Travel time will be paid at $50 per hour up to a maximum of 3 hours. Snorkel will pay 1 hour of troubleshooting time per warranty claim, unless expressly agreed otherwise in writing and in advance by Snorkel's Warranty Department. An annual rate declaration must to be supplied to the Snorkel Warranty administrator by January 31st and will be used as the reimbursable rate for that calendar year.

REPLACEMENT PARTS WARRANTY

- Any part replaced under this limited warranty is not subject to further warranty cover beyond the normal warranty period of the machine upon which the part was installed.
- Any replacement parts sold (not delivered under a warranty claim) will be subject to a warranty period of (6) six months from the date of invoice.
- Parts held by an authorized Distributor/SSC are covered under warranty for a period of (12) twelve months from the date of invoice, provided that those parts have been subject to appropriate storage to prevent damage and deterioration (conditional on Snorkel review).

CLAIM PROCEDURE

The Snorkel Warranty department must be notified within forty-eight hours (48) of any possible warranty situation during the applicable warranty period. Personnel performing major warranty repair or parts replacement must obtain specific approval by the Snorkel Warranty department prior to performing the warranty repair or replacement.

When a Distributor/SSC/Customer perceive a warranty issue to exist the following steps must be adhered to:

- Customer/SSC/Distributor to place a purchase order for genuine Snorkel replacement parts.
- Snorkel to dispatch parts via the requested method (in line with the required response time).
- Confirmation that a qualified technician is available to replace the part and that this person has been accepted by Snorkel to carry out such work under the warranty of the machine. Failure to do this may nullify the warranty.
- Customer/SSC/Distributor to allocate a warranty claim number to the repair.
- All correspondence in respect of the claim to be on an official Snorkel warranty claim form as supplied by Snorkel's warranty department.
- All warranty claims must be submitted within 30 days of the date of the machine repair.

FREIGHT DAMAGE

- If a machine is received in a damaged condition, then the damage must be noted on the bill of lading and/or delivery documents and photographs must be taken at the point of delivery, prior to signing acceptance of the consignment.
- The freight company and Snorkel must be contacted by the Distributor and a damage claim registered by either party immediately.
- The above requirements apply only to freight damage associated with equipment supplied by Snorkel transport. Customer freight issues are excluded from this warranty policy.

Snorkel Warranty Statement Effective 1/1/2017

MidWestTech | Snorkel MHP15HD with Hydraulic Controls Towable Boom Lift Operator'... Order the manual at mid-west-tech.com >

Minimum Safe Approach Distance – AS/NZS

Minimum safe approach distances to energized power lines and their associated parts must be observed while operating the aerial platform.

⚠Danger

The aerial platform is not electrically insulated. Death or serious injury will result from contact with, or inadequate clearance from, an energized conductor. Do not go closer than the minimum safe approach distance as defined by national safety regulations.

AS/NZS 2550.10:2006 define minimum distances that must be observed when working near overhead power lines on poles and overhead power lines on towers. Refer to the clearance requirements decals on the machine to determine safe approach distances (refer to Figure 3.2).

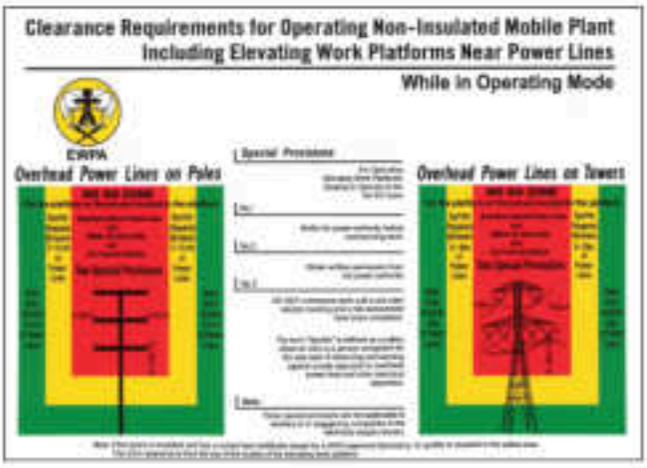


Figure 3.2 – Minimum Safe Approach Distance

Platform Capacity

Two people and their work materials may occupy the platform.

⚠Danger

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tip-over accident. Do not exceed the capacity values indicated on the machine decals, placards, and in the machine specifications in this manual.

The maximum unrestricted rated load capacity and the maximum number of occupants for the aerial platform are stated on machine decals, placards, and in the machine specifications in this manual.

Manual Force

Manual force is the force applied by the occupants to objects such as walls or other structures outside the work platform.

⚠Danger

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tip-over accident. Do not exceed the maximum allowable manual force indicated on the machine decals, placards, and in the machine specifications in this manual.

The maximum allowable manual force is limited to 45 lbs (200 N) of force per occupant, with a maximum of 90 lbs (400 N) for two occupants.

Wind Speeds

Do not add anything to the aerial platform that will increase the wind loading such as billboards, banners, flags, etc.

⚠Danger

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tip-over accident. Do not operate the machine in wind speeds of 28 mph (12.5 m/s) or greater.

Do not operate the aerial platform in windy conditions with wind gusts or steady wind speeds of 28 mph (12.5 m/s) or greater. Refer to Figure 3.3.

Prestart Inspection

Perform a prestart inspection before each shift as described in Chapter 7. Do not use the aerial platform on the job unless you are trained and authorized to do so.

Work Place Inspection and Practices

Do not use the aerial platform as a ground connection when welding.

- The welding ground clamp must be attached to the same structure that is being welded.

BEAUFORT RATING	WIND SPEED				GROUND CONDITIONS
	m/s	km/h	ft/s	mph	
3	3,4~5,4	12,25~19,4	11.5~17.75	7.5~12.0	Papers and thin branches move, flags wave.
4	5,4~8,0	19,4~28,8	17.75~26.25	12.0~18	Dust is raised, paper whirls up, and small branches sway.
5	8,0~10,8	28,8~38,9	26.25~35.5	18~24.25	Shrubs with leaves start swaying. Wave crests are apparent in ponds or swamps.
6	10,8~13,9	38,9~50,0	35.5~45.5	24.5~31	Tree branches move. Power lines whistle. It is difficult to open an umbrella.
7	13,9~17,2	50,0~61,9	45.5~56.5	31.~38.5	Whole trees sway. It is difficult to walk against the wind.

Figure 3.3 – Beaufort Scale

MidWestTech | Snorkel MHP15HD with Hydraulic Controls Towable Boom Lift Operator'... Order the manual at mid-west-tech.com >

■ Emergency Stop Switch

At ground control box

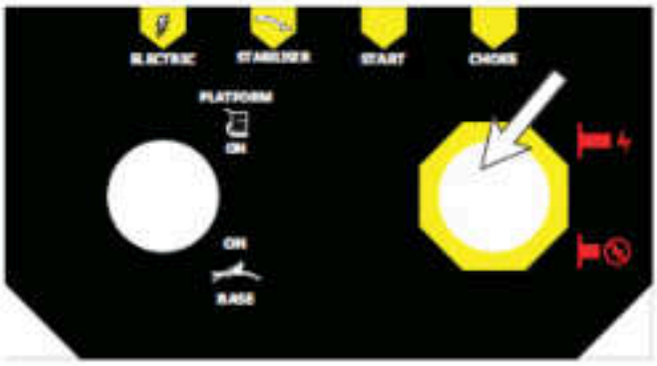


Figure 4.1 - Emergency Stop Switch at Ground Control Box

Press the red EMERGENCY STOP button in, at any time, under any conditions, and the entire machine stops, and nothing moves. This switch must be out (on) for the MHP to work. Pull the switch and it will pop out (on).

At platform control box (steel platform)

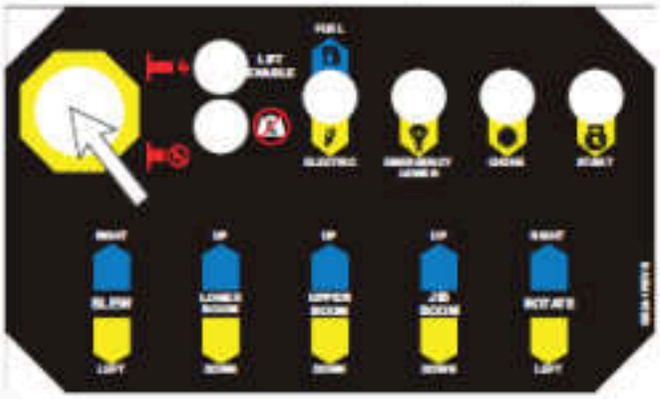


Figure 4.2 - Emergency Stop Switch at Platform Control Box - Steel Platform

At platform control box (insulated fiberglass platform)

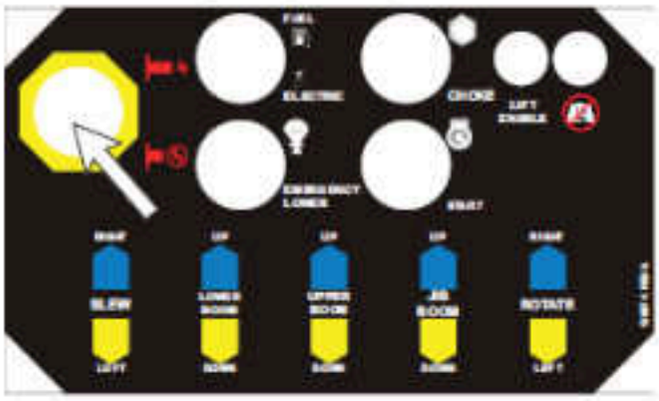


Figure 4.3- Emergency Stop Switch at Platform Control Box - Insulated Fiberglass Platform

At platform control box (non-insulated fiberglass platform)

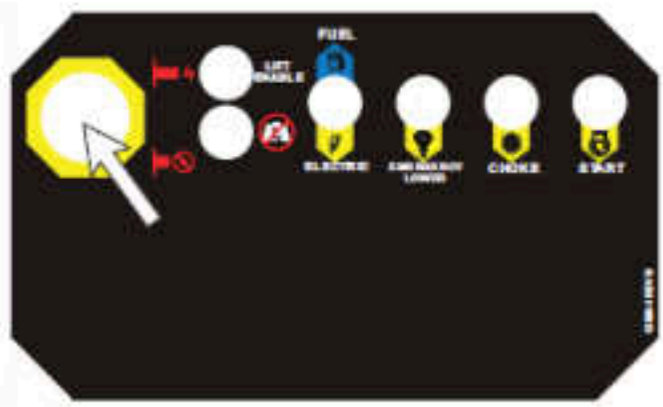


Figure 4.4 - Emergency Stop Switch at Platform Control Box - Non-Insulated Fiberglass Platform

Press the red EMERGENCY STOP button in, at any time, under any conditions, and the entire machine stops, and nothing moves. This switch must be out (on) for the MHP to work. Pull the switch and it will pop out (on).

Note
The ground control box is designed to override the platform control box. If the platform control box EMERGENCY STOP switch is in (off) the ground control box can still be used to start and operate the MHP.

■ Other Safety Devices

Lanyard anchor points



Figure 4.5 - Lanyard Anchor Points - Steel Platform

All personnel on the platform should attach their safety harness lanyards to one (1) of the lanyard anchor points.

MidWestTech | Snorkel MHP15HD with Hydraulic Controls Towable Boom Lift Operator'... Order the manual at mid-west-tech.com >