# Owner's Manual

**2000 Hydraulic Swing Hoist** 





2170 Winston Park Drive, Oakville, Ontario, L6H 5W1

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# **Job Site Safety Checklist**

_	On Roc	of:		On Gro	ound:
	1.	Proper Fire Extinguisher.		1.	Ground fault box at electrical power source.
	2.	Safety Glasses.		2.	Emergency phone numbers posted.
	3.	Approved Gas Cans.		3.	Hard hats are being worn.
	4.	Extension Cords in Good Condition with			
		GCFI.		Steen	Roofing – 4 in 12:
		First Aid Kit.	_	-	
	6.	Proper Apparel.		1.	Scaffold, Guardrails, Fence, Catch Platform, or Safety Lines being used.
_				2	Ground area roped or guard railed off to
	Flat Lo	w-Slope Roofing:		۷.	pedestrian traffic.
_	1.	No mechanical equipment or material		3.	Ground level personnel wearing hard hats.
		within 6ft of an edge without a Guardrail			·
		System.		Hoist:	
	2.	Warning Lines, Monitor System or Guardrail			
		System.		1.	Inspected.
			ш		Counter Balance weights.
H	Tear O	ff:			Lines secured at night. Guardrails at hoist area.
_		Chute or dump pan used on roofs greater		4. 5.	
	1.	than 20 feet from the ground.		5.	That a made are being worm.
_	2.	Safety glasses and dust masks.			
	3.			Ladder	<b>:</b>
		level.		1.	Tied off.
					Safety feet.
	Special	Hazards:		3.	Three feet above roof edge.
	•			4.	Inspected.
		Electrical lines shut off or roped off.	_	5.	9
		Roof opening guard railed or roped off.		6.	Hard hats are being worn.
	Э.	Unsafe decking properly covered and roped off to prevent unauthorized access.			
	ıc (l - · ·	·		Scaffol	lding:
		mable vapors discharged on roof – See owner.		1.	Secured to building 30 feet wide, 20 feet
	Radiati	on hazard on roof – See owner.			high.
				2.	Leveling shoes.
	Kettle:				Planking and plywood.
ш	1.	Inspected.			Guardrails.
	2.	·		5.	Inspected.
		clothing.			
	3.	Fire extinguisher.		Hazard	d Communication:
	4.	Proper placement of all equipment.		1.	Hazard communication policy on site.
	5.	Propane secured 20 feet away from kettle.		2.	MSDS' for materials on site.
	6.	Guardrails at outlet area.		3.	Workers trained about hazards.
	7.	Area Roped Off.			

# **Pre-Hoisting Checklist**

Discuss work plan, personal protective equipment and each new crew member's responsibility before starting setup.
Ensure OSHA approved roof top barriers are in place.
Ensure a competent person (Qualified Engineer) has determined the structural deck can support the intended loads in
hoisting and material handling.
Ensure hoisting operation will clear all power lines and obstructions.
Ensure hoisting area is secured from all unauthorized personnel.
Ensure that all hoisting accessories such as forks, buckets, and slings are commercially manufactured and are in good
condition, and show their load capacity.
Capacity of slings decreases as the angle increases. Ensure slings have a capacity of at least 2000lbs and are in good
condition.
Inspect the wire rope of slings for wear, damage or pinching. Replace if required.
Ensure at least three wraps of wire rope remain on the winch drum at maximum travel.
Ensure bolt securing wire rope end loop to the drum flange is tight and in good condition.
Ensure the wire rope is unwinding from the bottom, not from the top of the cable drum.
Ensure there is sufficient weight on the wire rope to maintain 10lbs of tension at all times. 🗘
Ensure that the counterweight frame is bolted together and that all 5 bolts are in place and secure.
Ensure that the front frame is bolted together and all 4 bolts are in place and secure.
Ensure the bolt on the lower telescopic stabilizer is secure and in good condition.
Ensure the lower pin and hairpin between the front frame and stabilizer are connected and are in good condition.
Ensure the upper pin and hairpin between the front frame and upper counterweight frame are connected and are in
good condition.
Ensure the pin between the cylinder mount and counterweight boom are connected via the sliding tube and are in good
condition.
Ensure the wing bolt on the sliding tube is tightened and doesn't allow the cylinder mount to move.
Ensure the pin and hairpin between the front frame and cylinder frame are connected and are in good condition.
Ensure the pin and hairpin connecting the cylinder to the cylinder frame are connected and are in good condition.
Ensure the pin and hairpin connecting the cylinder to the swing frame are connected and are in good condition.
Ensure the pin and hairpin between the winch and counterweight frame are connected and are in good condition.
Check the 4" and 6" steel pulleys for lubrication. The bolts should be greased daily.
Ensure the Swing Boom is completely seated in the front frame tubes.
Ensure that the structural members of the hoist are free of defects and damage which may affect the integrity of the
hoist.
Ensure the front vertical frame is vertically plumb.
Ensure that the ASE approved counterweights totally 1x the load weight are secured in the counterweight container
with rope or chain (Check local regulators for differing safety factors).
Ensure the pivot sheave can rotate freely and is in the rear position, facing towards the hoist winch.
Ensure the pin through the cable keeper is in good condition and is securely in place.
Ensure the cable keeper is in the locked position.
Ensure the swivel hook has a rated capacity of at least 2000lbs and is in good condition.
Ensure the safety latch on the swivel hook does not support any load.
Ensure all shackles have a rated capacity of at least 2000lbs and are in good condition.
Ensure the Power Unit has been properly maintained.
Ensure the hydraulic hoses are properly connected and are in good operating condition.
Operate the hoist with a minimum load to test hoisting operations, controls and power unit. A minimum load is 50lbs or
less, enough to maintain cable tension.

### **Pre-Usage Instructions**

#### **Replacement Safety Decals**

Worn, damaged or illegible labels should be replaced. New labels may be obtained from All Seasons Equipment, (1-888-308-4763) or through your local dealer.

#### **Obligations and Usage**

This product is intended to be used under the guidelines of this manual and relevant literature published by All Seasons Equipment, div ESKO Equipment MFG. It is the owner and/or the operator's obligation to ensure this product is operated only for its intended uses. Operation contrary to the guidelines set forth may cause damage to the equipment and create serious safety problems.

#### Maximum Rated Loads

2000 Single Line Hydraulic Swing Hoist:
 2000 Double Line Hydraulic Swing Hoist:
 2000 lbs Single Line
 2000 lbs Double Line
 1500 Double Line Hydraulic Swing Hoist:
 1500 lbs Double Line

All ratings are with 200ft of cable on Hoist Winch.

All Seasons Equipment recommends counterweights equaling 1 times the lifting weight of the load.

\*Ontario Regulations for Construction Projects (210.d, O.Reg 213/91, s.210) allow for counterweights 1.25 times the lifting weight of the load. Check your local regulations for possible changes in ballast requirements.

#### **Operator & Jobsite Preparation**

- 1. Operators must be thoroughly trained before operating this hoist. A trained person is one who is thoroughly familiar with the safety features, design capabilities, use and operation of the machine and this manual.
- 2. Prior to setting up this hoist, there must be a plan of action outlining the work to be accomplished, individual responsibilities, personal protective equipment and method of communication.
- 3. A good line of communication must be maintained between the hoist operator and the ground crew. Walkie-Talkies, cell phones or other methods of voice communication should be used whenever possible, at the very least hand signals.
- 4. Follow the pre-hoisting check list before operating.
- 5. Use only ASE approved solid steel ballast blocks or factory approved equivalent as counterweights. Never use roof materials or pourable materials as counterweight.
- 6. Maintain 1lb of counterweight for every pound being lifted by the hoist. This is a general specification; different regions have different regulations which may require higher ballast requirements on the All Seasons Hoist.
- 7. Wear heavy gloves when handling wire rope.
- 8. Wear safety footwear and head protection while operating the hoist or working in its vicinity.
- 9. All personnel are required to be protected by a safety harness and life line or guardrails as required by OSHA or Canadian regulations, when handling loads at the roof edge.
- 10. Never use the hoist structure to anchor life lines, workers' harnesses or other attachments.
- 11. The hoist operator must stand behind the operator fence while the hoist is operating.
- 12. Ensure that the hoisting area is clear of power lines. Consult the power company before hoisting near power lines.
- 13. The hoisting area is to be kept clear of unauthorized personnel at all times. Place barricades or secure the area in such a manner that if there was equipment failure, no personnel would be injured.

- 14. Keep out from under a raised load.
- 15. Never hoist over a doorway.
- 16. Avoid sudden stops and shock loads.
- 17. All hoisting accessories such as forks, buckets and slings must be commercially manufactured and show their load capacity.
- 18. All hooks, slings, shackles and other hoisting accessories must be properly maintained and installed.
- 19. Secure the load before lifting.
- 20. Tag lines must be used to control all loads.
- 21. No person shall be allowed to ride on the hoist.
- 22. Do not climb the hoist frame, use only a step ladder. Do not use an extension ladder.
- 23. Check the hoist periodically during operation.
- 24. Do not disconnect the hydraulic hoses or fittings while the hydraulic Power Pack is running.
- 25. Do not attempt to make adjustments while the hoist is being operated.
- 26. Keep all body parts clear of moving parts.
- 27. At the end of operation, the hoist should be secured to prevent unauthorized use. Never assume you will find the hoist in the same condition in which you left it.
- 28. Do not weld or otherwise modify the hoist. Such alternations may weaken the structural integrity of the hoist.
- 29. Only trained personnel are authorized to do repairs.
- 30. Do not operate the hoist under the influence of drugs, alcohol or medication.
- 31. Do not exceed the rated capacity of the hoist.
- 32. Inspect the cable before each use. Never operate the hoist with damaged cable. Use only galvanized aircraft cable as replacement cable. See attached cable specifications.
- 33. Do not start the engine until after the hydraulic hoses are connected. Make certain all connecting pins and hardware on the frame components are tightened securely before operating the hoist.
- 34. Use guardrails on each side of access point at the roof edge. Avoid reaching over the roof edge.
- 35. It is the responsibility of the owner or his representative, to ensure that all safety decals are in place and are legible as well as making this manual available to the machine operator. If any decals become illegible, contact All Seasons Equipment for immediate replacement.
- 36. Handle only stable or safely arranged loads.
- 37. Do not wrap hoist cable around load. The load must be attached by lift rings, pallet forks, slings or other approved means.
- 38. "The load shall be well secured and properly balanced in the sling or lifting device before it is lifted more than a few inches" OSHA Standards.
- 39. Use caution when handling fuel. Gasoline is very flammable.
- 40. Use the cable weight to maintain cable tension when operating without a load.
- 41. Grease pulleys daily to prevent freeze up and wear. Replace worn or damaged pulleys.
- 42. Cable end fittings and cable clips are potential problem areas. Inspect them regularly. Repairs should be made by a qualified service person.



#### **WARNING:**

Use the cable weight to maintain cable tension when operating without a load.

It is recommended that the employer keep records of all safety and health training. Records can provide evidence of the employer's good faith and compliance with OSHA standards. Documentation can also supply an answer to one of the first questions an accident investigator will ask. "Was the injured employee trained to do the job?"

Training in the proper performance of a job is time and money well spent, and the employer should regard it as an investment rather than an expense. An effective program of safety and health training for workers can result in fewer accidents and illnesses, better morale, and lower insurance premiums, among other benefits.

#### **Hoist Specifications**

#### **1500 Double Line Hydraulic Swing Hoist**

	USA	Canada
Hoist Capacity	1500lbs Double Line	680kg
Hoist Capacity	1000lbs Single Line	454kg
Hoist Spood	80ft/min Double Line	24mpm
Hoist Speed	160ft/min Single Line	48mpm
Hoist Cable Supplied	200ft ¼" Cable	60m
Hoist Cable – Maximum Capacity	1000ft ¼" Cable	305m
Boom Overhangs Roof	5ft	1.524m
Maximum Height Under Hook to Roof Deck		
Frame Weight:		
Counterweight Boom	170lbs	78kg
Swing Boom	110lbs	50kg
Front Vertical Frame	155lbs	71kg
Lower Telescopic Support	15lbs	7kg
Safety Fence	15lbs	7kg
Cylinder Support Frame	25lbs	12kg
Hydraulic Cylinder	25lbs	12kg
Hydraulic Winch	170lbs	78kg
Hydraulic Power Pack	380lbs	173kg
Required Ballast (1 Times Load*)	Max 1500lbs	Max 680kg

#### **2000 Double Line Hydraulic Swing Hoist**

	USA	Canada
Hoist Canacity	2000lbs Double Line	908kg
Hoist Capacity	1500lbs Single Line	680kg
Hoist Speed	80ft/min Double Line	24mpm
noist speed	160ft/min Single Line	48mpm
Hoist Cable Supplied	200ft ¼" Cable	60m
Hoist Cable – Maximum Capacity	1000ft ¼" Cable	305m
Boom Overhangs Roof	5ft	1.524m
Maximum Height Under Hook to Roof Deck		
Frame Weight:		
Counterweight Boom	170lbs	78kg
Swing Boom	110lbs	50kg
Front Vertical Frame	155lbs	71kg
Lower Telescopic Support	15lbs	7kg
Safety Fence	15lbs	7kg
Cylinder Support Frame	25lbs	12kg
Hydraulic Cylinder	25lbs	12kg
Hydraulic Winch	170lbs	78kg
Hydraulic Power Pack	370lbs	173kg
Required Ballast (1 Times Load*)	Max 2000lbs	Max 907kg

#### 2000 Single Line Hydraulic Swing Hoist

	USA	Canada
Hoist Capacity	2000lbs Single Line	908kg
Hoist Speed	200ft/min Single Line	60m/min
Hoist Cable Supplied	200ft 5/16" Cable	60m
Hoist Cable – Maximum Capacity	500ft+	152m+
Boom Overhangs Roof	5ft	1.524
Maximum Height Under Hook to Roof Deck		
Frame Weight:		
Counterweight Boom	170lbs	78kg
Swing Boom	110lbs	50kg
Front Vertical Frame	155lbs	71kg
Lower Telescopic Support	15lbs	7kg
Safety Fence	15lbs	7kg
Cylinder Support Frame	25lbs	12kg
Hydraulic Cylinder	25lbs	12kg
Hydraulic Winch	170lbs	78kg
Hydraulic Power Pack	380lbs	173kg
Required Ballast (1 Times Load*)	Max 2000lbs	Max 907kg

#### **Prior to Setup**

- 1. If the unit is new from factory, cut the banding and separate the parts. Remove the shipping protection and check all members for damage during transport. Do not use the hoist if any frame members are bent or have broken welds.
- 2. Hoist installation and setup cannot proceed until all necessary parts and equipment have been raised to the roof deck where the hoist operations will be done. Use a hoist beam, swing beam, freight elevator or crane for this purpose.



#### WARNING:

ENSURE ALL STRUCTURAL MEMBERS FOR THE HOIST ARE FREE OF DEFECTS AND DAMAGE THAT MAY AFFECT THE INTERGITY OF THE UNIT.



#### **WARNING:**

ENSURE THE HOISTING AREA IS SECURED FROM ALL UNAUTHORIZED PERSONNEL. ENSURE THAT OSHA APPROVED ROOF TOP BARRIER ARE IN PLACE.



#### WARNING:

A COMPETENT PERSON MUST DETERMINE THAT THE STRUCTURAL DECK CAN SUPPORT THE INTENDED LOADS IN HOISTING AND MATERIAL HANDLING IN ADDITION TO THE WEIGHT OF THE COUNTERWEIGHT ON THE ROOF DECK. FAILURE TO DO THIS CAN RESULT IN SERIOUS PERSONAL INJURY, EQUIPMENT FAILURE OR DEATH.



#### **WARNING:**

PRIOR TO SETTING UP THE HOIST, THERE MUST BE A PLAN OF ACTION OUTLINING THE WORK TO BE ACCOMPLISHED, INDIVIDUAL RESPONSIBILITIES, PERSONAL PROTECTIVE EQUIPMENT, AND THE METHOD OF COMMUNICATION. FAILURE TO DO THIS CAN RESULT IN SERIOUS PERSONAL INJURY, EQUIPMENT FAILURE OR DEATH.

## **Setup Instructions**

#### **Low-Rise Jobs**

Lifting the frame onto to roof:

- 1. Position the frame and Power Unit close to the location where they are going to be raised to the roof top.
- 2. You need at least three men, on the ground to tie and guide parts and two on the roof top to pull parts up.
- 3. The frame parts must be placed at least 10ft from the roof edge for assembly.

#### Raising the Power Unit (Using Hand Winch)

- 1. Install the Hand Winch in place of the Hydraulic Winch on the hoist frame. Always ensure that sufficient ballast is installed on the hoist frame before lifting the Power Unit.
- 2. Unwind enough cable to go under the Guide Pulley on the Vertical Boom and over the Swing Pulley.
- 3. Slide the frame to the edge of the roof.
- 4. Lower the cable to ground level and attach the Power Pack or Winch to the end of the hoist cable.

**NOTE:** Make sure that there are at least 400lbs of counterweights installed on the hoist counterweight base before listing the Power Unit.

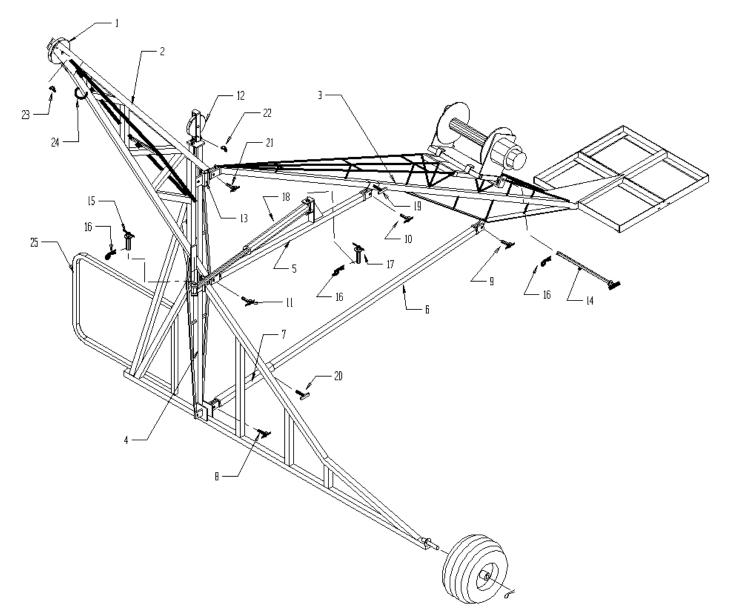
- 5. Hoist up Power Pack or Winch using the Hand Winch.
- 6. To swing the load in, remove Pin #15 from the swing cylinder and swing the boom in manually.

#### **High-Rise Jobs**

The frame of the ASE Swing Hoist can be disassembled to fit into elevators for quick and safe transportation to the roof deck.

#### Frame Assembly

- 1. Attach the two parts of the Rear Frame (#3) together using the bolts and welded nuts provided.
- 2. Attach the two parts of the Vertical Frame (#4) together using the bolts and welded nuts provided.
- 3. Lay the Vertical Frame (#4) down to the deck. Insert the two axles of the Swing Boom (#2) into the tubes (#13) on the Vertical Frame.
- 4. Lift the Vertical Frame and Swing Boom into an upright position. While two men hold this frame upright, another will attach the Rear Frame (#3) to bracket on the top tube (#13) and insert pin (#21) and lock pin (#16).
- 5. Install the bottom telescopic tubes (#6 + #7) into the brackets at the bottom of the vertical boom (#2) and insert pins (#8 + #9). Also insert locking pins into (#16).
- 6. Place the Hydraulic Swing Cylinder Arm (#5) on the bottom Swing Tube Bracket and insert pins (#10 + #11) and lock pin (#16). Slide Tube may be adjusted by sliding up or on rear leg (#3).
- 7. Place the Swing Cylinder (#18) on arm (#5) and insert pin (#17 + #16). The hydraulic cylinder shaft rod end is inserted into the Swing Boom (#2). Bracket and pins are inserted to keep it in place.
- 8. Install the Safety Fence (#25) on the Vertical Frame.



#### **Installing/Connecting the Power Unit and Power Pack**

- 1. Position the Hydraulic Winch into the retainer brackets on Rear Frame Leg #3.
- 2. Insert pin (#14) through the Rear Frame Brackets and tubes at the back of the Winch. Then insert hitch pin (#16).
- 3. Our Gas Power Pack comes equipped with four 9ft hoses which have quick connect couplers on one end. The three larger quick connects are to be attached to the Hydraulic Winch Unit.

**NOTE:** The Quick Connect Couplers are all different sizes. It is impossible to connect them in the wrong position.

4. There are two remaining hoses to connect. These are the hoses with the two smallest quick connect couplings. These connect to the Hydraulic Cylinder (#18).

**NOTE:** When the Hydraulic Hoist is not in use or being transported, the Hydraulic Cylinder Shaft should always be retracted to prevent damage to the shaft.

- 5. After all hoses are connected, start the gas engine. (Following the starting procedures enclosed in the engine manual).
- 6. Accelerate the engine slightly above idle.
- 7. Unwind some cable from the Winch, approximately 30 feet so that it can be placed it in the pulleys. To unwind the cable, push the lever on the right hand side of the Power Unit backwards slowly. This will unwind the cable (Have a person help with the unwinding to prevent the cable from tangling).
- 8. Remove the safety pin (#22) from the guide pulley (#12) and run the cable under the pulley and replace safety pin (#22).
- 9. Now remove safety pin (#29) from swing frame pulley (#13) and run the cable over the pulley. Insert safety pin (#29).
- 10. Use the Cable Counterweight on the end of the cable just above the hook.

#### Running the Hoist with Double Line Cable



#### WARNING:

These instructions are to be used ONLY for the 1500 Double Line and 2000 Double Line Hydraulic Swing Hoists. If these instructions are used on the 2000 Single Line Swing Hoist then the lifting capacity will exceed the designed safety factors of the hoist frame and could result in frame failure.

- 1. Remove the pulley, cable counterweight and shackles from the end of the cable block.
- 2. Reeve the cable through the horizontal cable block, and reattach hook.
- 3. Fasten the hook to the loop (#24) on the Swing Hoist boom.
- 4. Use the hook located on the bottom of the horizontal cable block for all lifting. The hoist will now lift an increased amount of weight at approximately half of the lifting speed.



#### **WARNING:**

Always inspect the cables, hoist pulleys and cable blocks for damage before lifting any kind of weight. The cable should be free of any broken strands or unraveling. Cable blocks and pulleys should roll freely without cable slipping over.

# **Safety Considerations**

#### General

- 1. After the hoist is assembled, make sure that all pins on the Frame and Power Unit are properly placed and the locking pins are in place.
- 2. **IMPORTANT:** Verify that all nuts and bolts on the frame are properly fastened. If loose, for your safety and that of others, make sure they are all tightened before operating the hoist.



#### **WARNING:**

Always be sure to have enough counterweights on the rear weight base. Use at least 1 times the weight you are lifting. EX: if you are lifting 1500 lbs, use 1500 lbs of counterweight on the base. Also make sure the counterweight blocks are properly placed and fastened on the base so that they are not accidentally removed or fall off. Always use proper counterweights and not building materials when operating any hoist.



#### WARNING:

Always keep in mind the maximum rated load on the hoist you are using.

- 3. The fence on the Vertical Frame must be swung outward to protect the operator from accidentally walking off the roof edge while operating the hoist.
- 4. Check the hoist cable for broken strands. If any are found, the cable should immediately be replaced before operating the Hoist.
- 5. Check the hoist braking system for proper operation. Always test the hoist with a small amount of weight before lifting heavy objects.
- 6. Grease all moving parts on the hoist frame regularly. Failing to grease bearings and pulleys is the leading cause of machine failure.
- 7. The hydraulic oil level must be checked every day before operation. If the oil level is too low, top it up with 10W40 Motor Oil.
- 8. If the hydraulic oil is repeatedly low, check for leaks in the system and repair immediately.
- 9. Engine oil should be checked daily before starting. For all other engine maintenance, refer to engine manual.

	2000 Single	2000 Double	1500 Double
Double Line Capacity with 200ft Cable.		2000 lbs	1500 lbs
Single Line Capacity with 200ft Cable.	2000 lbs	1600 lbs	1000 lbs

### **Operating Instructions**

#### **Hydraulic Power Pack Operation**

1. Lever #1: Lifting and Lowering Load Control

- Push lever forward to position B to lift material (Or wind cable)

- Pull lever backwards into position A to lower material (Or unwind cable)

Lever #2: Swing Cylinder Control

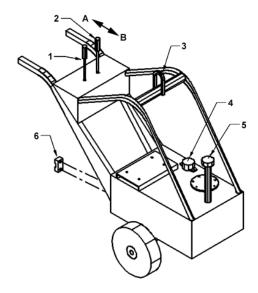
- Push lever forward to position B to swing lift boom in towards the roof top

- Pull lever backwards into position A to swing lift boom out over the roof top.



**WARNING:** Operate all controls slowly for safety and to increase the life of the machine.

- 3. Lifting Hook Attach cable here when lifting Power Pack.
- 4. Return Hydraulic Filter
- 5. Hydraulic Tank Filler Tube
- 6. Fluid Level Gauge



### **Maintenance**

#### **Maintenance Chart**

	Each Use	8 Hours	25 Hours	50 Hours	100 Hours	200 Hours	400 Hours
Check Hydraulic Fluid Level	Initial		✓				
Change Hydraulic Fluid							✓
Change Hydraulic Oil Filter			✓				
Check Hydraulic Lines					✓		
Check Engine Oil Level (Gasoline)	✓						
Change Engine Oil (Gasoline)			✓				
Change Engine Oil Filter (Gasoline)			✓				
Grease Frame	✓						
Service Air Cleaner (Gasoline)				✓			
Replace Air Filter (Gasoline)						✓	
Check Spark Plugs (Gasoline)					✓		
Replace Spark Plugs (Gasoline)						✓	
Check Battery Electrolyte (Gasoline)			✓				
Charge Battery (Gasoline)	Initial						
Replace Fuel Filters (Gasoline)						✓	
Inspect Hoist Pulleys	✓						
Inspect Hoist Cable	✓						
Check Engine Rotation	✓						

#### **Check the Hydraulic Fuel Level**

The hydraulic tank is located at the end of the Power Pack. Fluid levels are monitored with an level gauge. This Level Gauge is located on the side of the hydraulic tank.

Before the engine is first started, and after 25 hours of operation, check the hydraulic fluid level.

This machine is designed to use high quality 10W40 oil. In high temperature situation 20W50 oil can be used to increase machine performance.

Hydraulic Tank Capacity is: 20 Gallons (75.7 Litres)

Before checking the fluid level, ensure that the unit is parked on a level surface with the lift arms lowered, the engine off and the key removed.

#### Changing the Hydraulic Oil

Change the Hydraulic Oil after 400 operating hours.

1. The Unit should be parked on a level surface, unloaded, with the engine off and the key removed.

- 2. Place a drain pan under the drain plug that will hold at least 20 gallons (75.7 L)
- 3. Reinstall the drain plug.
- 4. Fill the hydraulic tank with approximately 18 gallons of 10W40 oil. It is very important to use high quality oil with few impurities.

NOTE: Dispose of used oil at a certified recycling centre.

#### **Clean Hydraulic Filters**

The Hydraulic Swing Hoist oil return filter element should be replaced after 100 hours of operation. There is also a steel suction strainer that should be blown out with compressed air, or washed with light oil every 100 hours of operation.

#### **Check Hydraulic Lines**

Check the hydraulic lines after every 100 hours of operation. Inspect for wear, cracks, loose connections, leaks, etc. If hydraulic component requires service, remove all loads, stop the engine, and move all hydraulic controls in both directions to release any hydraulic pressure before any disassembly. Repair hoses as needed. Hydraulic hoses should be replaced as wear dictates.



WARNING: HYDRAULIC FLUID UNDER PRESSURE CAN PENETRATE SKIN AND CAUSE SEVERE BURNS THAT CAN RESULT IN DEATH OR SERIOUS ENJURY.

ALWAYS keep body and hands away from the pin holes or nozzles which eject hydraulic fluid under pressure. ALWAYS use paper or cardboard and not hands to search for leaks.

KNOW that all hydraulic fluid connections and all hydraulic hoses and lines are in good condition BEFORE applying pressure to the system.

Foreign fluid injected into skin must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result.

#### **Check Engine Oil Level** (Gasoline Model Only)

Check engine oil level before each use. See engine manual for detailed instructions.

#### **Change Engine Oil** (Gasoline Model Only)

Change oil after every 25 operating hours. Change more frequently when operating conditions are extremely dusty. See engine manual for detailed instructions.

**NOTE:** The engine has a drain hose permanently attached to the engine.

### **Change Engine Oil Filter** (Gasoline Model Only)

Replace the oil filter after the first 25 hours and every 50 hours thereafter. See the Engine Manual for detailed instructions.

#### **Service Air Cleaner** (Gasoline Model Only)

The foam element should be cleaned after every 50 operating hours.

The paper element should be replaced after every 200 operating hours.

Under extremely dusty or sandy conditions, the elements should be serviced several times a day, see the engine manual for detailed instructions.

#### **Check the Spark Plugs** (Gasoline Model Only)

Inspect the spark plugs after every 100 operating hours. Refer to the engine manual for spark plug service.

### **Replacing the Fuel Filter** (Gasoline Model Only)

Replace the fuel filter once every year or after 200 operating hours, whichever occurs first. Never re-install a dirty filter. See the Engine Manual for detailed instructions.

#### **Check Battery Electrolyte (Gasoline Model Only)**

External Contact, flush with water.

EYES: Flush with water for at least 15 minutes and get medical attention immediately.

INTERNAL CONTACT: Drink large quantities of water. Follow with beaten egg or vegetable oil.

#### **GET MEDICAL ATTENTION IMMEDIATELY.**

**WARNING:** In case of internal contact, do **NOT** induce vomiting.

#### **Checking the Electrolyte Level**

**WARNING:** ELECTRICAL SHOCK may result in injury and/or damage to the unit.

DO NOT allow tools or other objects to come into contact with both terminals at the same time.

ALWAYS remove the Negative (-) cable first to reduce the risk of sparks when removing the battery.

ALWAYS connect the Positive (+) cable first, then connect the Negative (-) cable.

warning: EXPLOSIVE GASES can result in serious injury or death. ALWAYS keep open flames, sparks, or smoking materials away from the battery.

POISONOUS BATTERY FLUID contains sulfuric acid and its contact with skin, eyes or clothing can cause severe chemical burns. ALWAYS wear safety glasses and protective gear near the battery.

DO NOT TIP any battery beyond 45 angle in any direction. ALWAYS KEEP BATTERIES OUT OF REACH OF CHILDREN.

 $\triangle$ 

warning: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of

California to cause cancer and reproductive harm. Wash hands after handling.



order.

**WARNING:** RESERVE CONNECTIONS may result in sparks which may cause injury. ALWAYS connect. Disconnect cables in the proper

#### **Replacing the Hoist Cable**

The hoist cable should be checked for broken or twisted strands before operating. The operator should also maintain a watch on the cable throughout the day, stopping the unit if broken strands are detected.

- 1. Spool the cable completely off the hoist drum.
- 2. Remove the bolt attaching the cable to the side of the drive drum.
- 3. Attach the new cable using the same mounting bolt.
- 4. Check to make sure that the bolt is screwed in properly. If the bolt head is sticking out too far it can interfere with the winch frame or bearing causing damage to the unit and presenting a safety hazard.
- 5. When spooling the cable onto the hoist, ensure that the cable is being spooled in the correction direction. The cable should come off the bottom of the drum and up the frame.



#### **WARNING:**

If the cable is installed in the incorrect direction, the unit braking system will not operate properly; posing a significant risk to the machine and people in the work area.

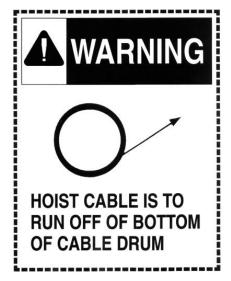
For 1500 Double Line and 2000 Double Line Hydraulic Swing Hoists:  $\frac{1}{2}$ " – 7x19 galvanized aircraft cable should be used. Please see attached mill certification for exact specification on the cable used by All Seasons Equipment.

For 2000 Single Line Hydraulic Swing Hoists: 5/16'' - 7x19 construction galvanized aircraft cable should be used. Please see the attached mill certification for the exact specifications on the cable used by All Seasons Equipment.

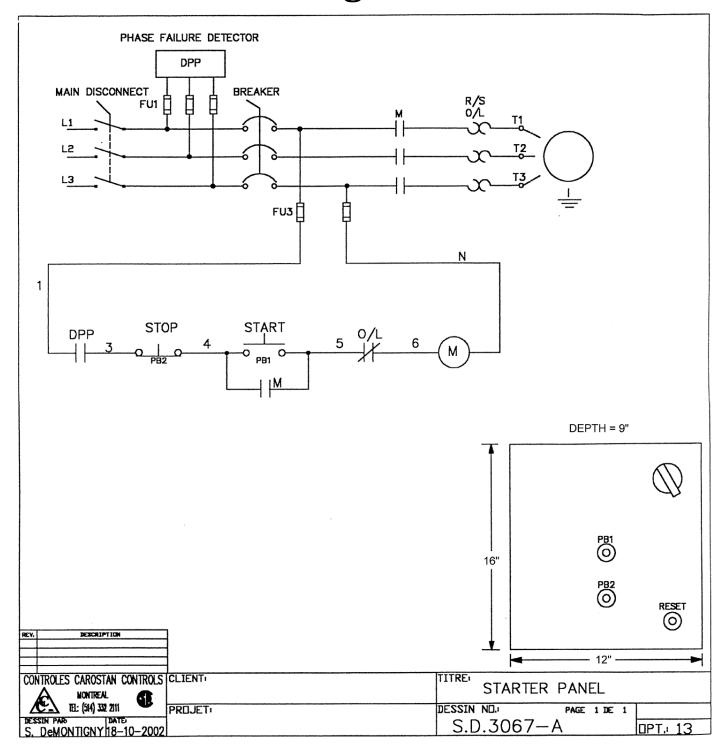
#### **Hoist Pulleys**

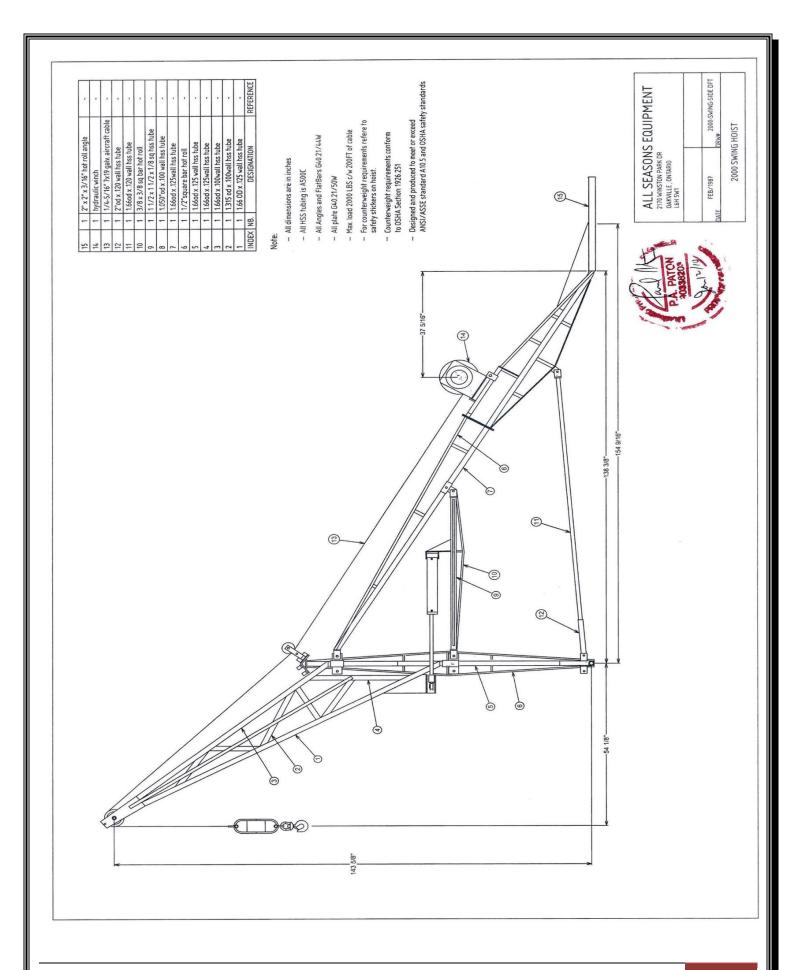
The grease fittings in the pulley bolts should be greased daily. When this greasing is being done, the operator should also inspect the pulleys for wear. A typical sign of dangerous wear is a flat spot being worn into one edge of the pulley, this indicates that the pulley had stopped rotating and the cable has run over the surface.

During a lift, the cable is under a large amount of stress and is extremely tight. By running over a pulley without it rotating it can easily cut the pulley in half. The operator should keep an eye on the pulleys while operating the hoist. If a pulley ceases to rotate, the unit should be stopped immediately and the pulley should then be inspected.



# **Parts Drawings & Certificate**





#### TEST CERTIFICATE

THIS IS TO CERTIFY THAT THE FOLLOWING PRODUCTS HAVE BEEN DULY INSPECTED BY US AND FOUND CONFORMING TO THE SPECIFICATION.

#### MIL-DTL-83420M

Purchaser: VANGUARD STEEL LTD Manufacturer:

L/C no.: T/T at sight

Commodity: Galvanized Cable

 Item no.: 27030020
 P.O.Number.: N01224

 Issuing no.: 14102458
 Contract no.: 14HTVST05

Reel no. :8Reels Construction: 7 x 19
Surface : Galvanized Diameter : 5/16"
Length : 5000FT/Reel Lay: RHRL

Total net weight: 6720LBS(3048KGS)

Physical Properties: Hot dipped Galv.

Standard: MIL-DTL-83420M, endurance testing not required

Wire diameter: 0.52+/-0.01mm, 0.59+/-0.01mm actual diameter: 8.00mm-8.16mm (0.3150"-0.3213")

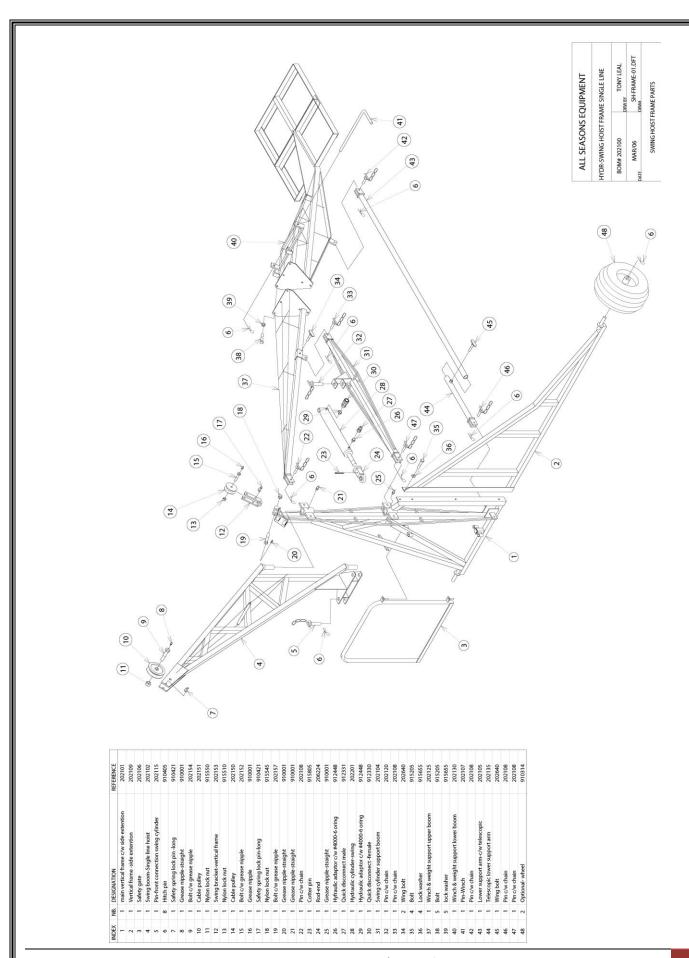
 Tensile Strength : ≥1960MPA
 actual Tensile Strength: 2160MPA

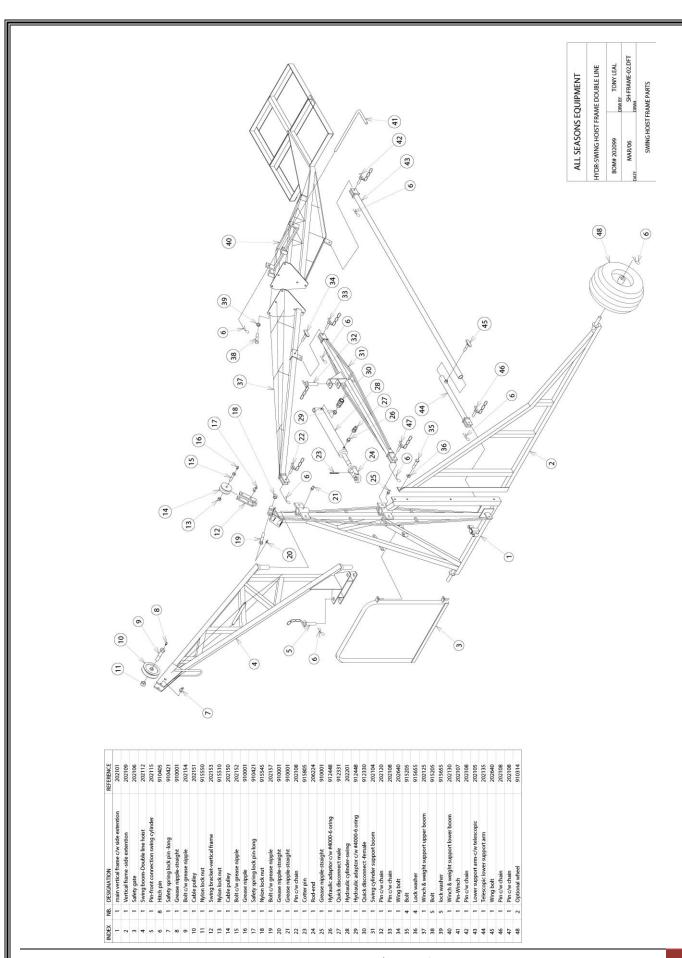
 Min. Breaking Load: ≥9800LBS
 actual Breaking Load:10200LBS

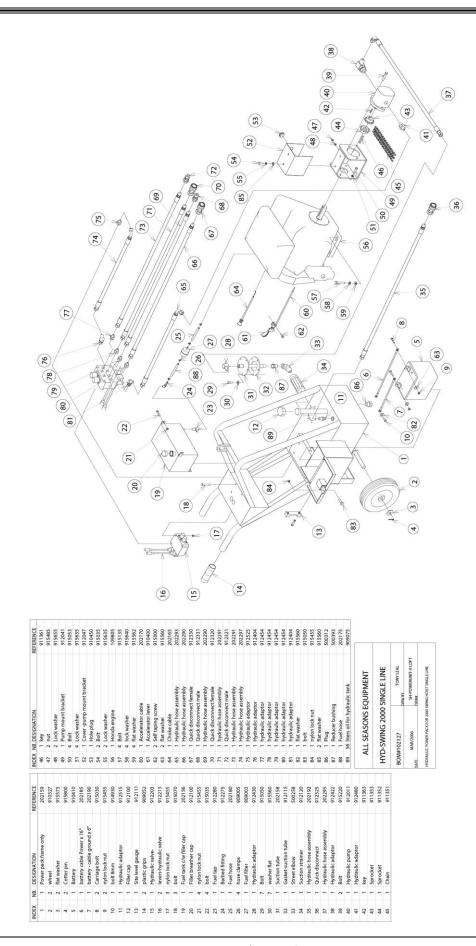
 Zinc Weight: ≥0.10OZ/FT2
 actual Zinc Weight: >0.12OZ/FT2

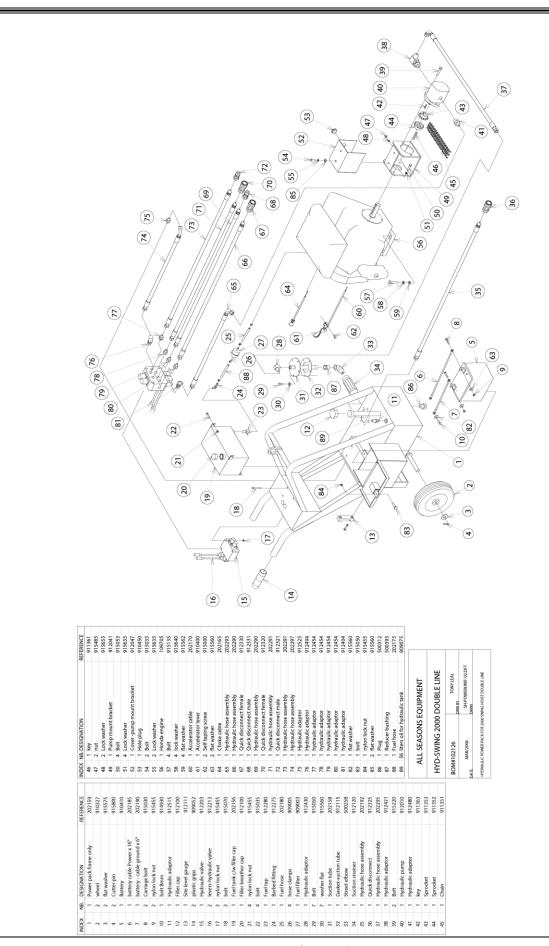
#### Composition:

Chemical	С%	Si%	Mn%	S%	Р%
SWRH62A	0.60-0.66	0.15-0.35	0.30-0.60	<0.03	<0.03



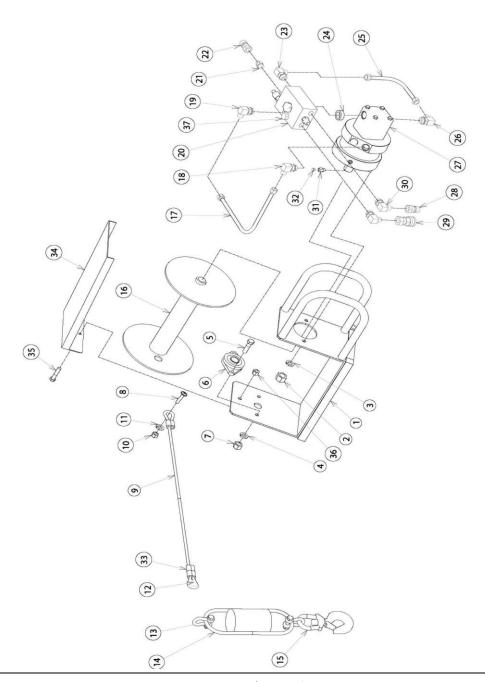






NB. DESIGNATION REFERENCE	ne 202256	25	er 12mm	er 915655	915215	911211	915485	olt 915210	202062	915485	r 915565	202086	202075	Cable counterweight 202155	k 202068	n-winch 202254	Hydr-tubing assembly 202240	Hydraulic adaptor x 90 deg 912415	Hydraulic adaptor x 90 deg 912413	Hydraulic manifold assembly 912270	Hydraulic adaptor-straight 912452	Quick disconnect male 912326	Hydraulic adaptor-90deg 912414	e 202235	Hydraulic tubing assembly 202245	Hydraulic adaptor x 90deg 912416	Hydraulic motor-brake 912017	Quick disconnect male 912321	Quick disconnect female 912320	hydraulic adaptor x 90deg 912595	adaptor 912441	Hydraulic breather plug	oval 202096	ch 202259		
Winch frame		Nut 12mm 1.25	lock washer 12mm	lock washer	bolt	Bearing	nut	Carriage bolt	Cable	nut	Flat washer	thimble	Sheckle	Cable cour	Swivel hook	Cable drum-winch	Hydr-tubin	Hydraulic a	Hydraulic a	<b>Hydraulic</b> r	Hydraulic a	Quick disc	Hydraulic a	Spacer tube	Hydraulict	Hydraulic a	<b>Hydraulic</b> r	Quick disc	Quick disc	hydraulic a	Hydraulic adaptor	<b>Hydraulic</b>	Aluminum oval	Cover-winch	Bolt	
NB.	-	7	7	7	7	-	7	-	200	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	m	-	-	-
INDEX	_	2	3	4	2	9	7	00	6	9	=	12	13	14	15	16	17	8	19	20	21	22	23	24	25	56	27	28	59	30	31	32	33	34		35





## **Safety & Regulations**

For rules governing the use of guard rail in the United States, please refer to:

U.S. Department of Labor Occupational Safety & Health Administration Part 1926 - Safety and Health Regulations for Construction www.osha.gov

For rules governing the use of roofing equipment in Canada, please refer to:

Canadian Centre for Occupational Health and Safety www.ccohs.ca/oshanswers/information/govt.html

#### **Contacts for Provincial Offices for Occupational Health and Safety:**

#### Alberta

Web Site: <a href="http://www.gov.ab.ca/hre/whs/">http://www.gov.ab.ca/hre/whs/</a>

#### **British Columbia**

Worker's Compensation Board of British Columbia: http://www.worksafebc.com/

Contact List/Regional Offices: <a href="http://www.worksafebc.com/contact\_us/regional\_locations/default.asp">http://www.worksafebc.com/contact\_us/regional\_locations/default.asp</a>

WCB Publications: <a href="http://www.worksafebc.com/Publications/default.asp">http://www.worksafebc.com/Publications/default.asp</a>

Manitoba

Manitoba Labour: <a href="http://www.gov.mb.ca/labour/safety/">http://www.gov.mb.ca/labour/safety/</a>

Contact List: <a href="http://www.gov.mb.ca/labour/safety/contactus.html">http://www.gov.mb.ca/labour/safety/contactus.html</a>

**New Brunswick** 

Regional Offices: <a href="http://www.whscc.nb.ca/index\_e.asp">http://www.whscc.nb.ca/index\_e.asp</a>

**Newfoundland and Labrador** 

Occupational Health and Safety: <a href="http://www.gs.gov.nl.ca/ohs/">http://www.gs.gov.nl.ca/ohs/</a>

Contact List/Regional Offices: http://www.gov.nl.ca/gs/ohs/locations.stm

**Northwest Territories and Nunavut** 

Web Site: <a href="http://www.wcb.nt.ca/default.asp">http://www.wcb.nt.ca/default.asp</a>

**Nova Scotia** 

**Occupational Health and Safety:** 

https://www.gov.ns.ca/enla/contact/default.asp?div=gen&pg=dept&bk=/enla/ohs/Default.asp

**Ontario** 

Ministry of Labour (OHS): <a href="http://www.labour.gov.on.ca/english/hs/">http://www.labour.gov.on.ca/english/hs/</a>

Contact List/Regional Offices: <a href="http://www.labour.gov.on.ca/english/about/reg">http://www.labour.gov.on.ca/english/about/reg</a> offices.html

**Prince Edward Island** 

Workers' Compensation Board: <a href="http://www.wcb.pe.ca">http://www.wcb.pe.ca</a>

Quebec

**CSST Internet address:** http://www.csst.qc.ca/portail/fr/

Saskatchewan

Saskatchewan Labour: http://www.labour.gov.sk.ca

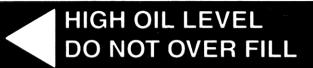
Yukon

WCHSB: http://wcb.yk.ca

## Stickers/Decals

# INSTRUCTION MANUAL ENCLOSED





### **HYDRAULIC** FLUID

**Use MOTOR OIL** as Hydraulic Fluid.

SUMMER - Above 32° F / O° C Use - 10W40 Low detergent

WINTER - Below 32° F / O° C Use - 10W30 Low detergent

### \* SAFETY FIRST \*

ALWAYS READ YOUR MANUAL BEFORE OPERATING THIS MACHINERY, INJURY OR **DEATH MAY RESULT IF THIS PRODUCT IS** MISUSED IN ANY WAY.

ALL SEASONS EQUIPMENT, Div. of ESKO Mfg. Ltd., relies upon the purchaser to see that the manual instructions are made clear to the persons who are operating this machine.







WHEN WORKING WITH HOISTS OR WINCHES OR HOOKING AND ARRANGING LOADS KEEP OUT FROM UNDER THE LOAD OR OUT OF THE LINE OF FORCE OF ANY LOAD. THIS PRODUCT IS NOT DESIGNED FOR LIFTING PEOPLE NOR LIFTING THINGS OVER PEOPLE. DO NOT WRAP HOIST ROPE AROUND THE LOAD. LOAD MUST ATTACH TO LINE BY LIFT RINGS, PALLET FORK SLINGS OR OTHER SUITABLE MEANS. ON LOADS OF 1200LBS OR MORE, USE FOLD OUT LOCK EXTEN-SION ON A-FRAME TOWER. BE CERTAIN PIN IS INSERTED TO LOCK.





HOIST CABLE IS TO **RUN OFF OF BOTTOM** OF CABLE DRUM

#### 2000 HYDRAULIC SWING HOIST

- a) Make Sure air pins on track and power unit are properly piaced and locked.
  b) IMPORTANT VERIFY THAT ALL NUTS, BOLTS AND PINS ON FRAME ARE PROPERLY FASTENED!!! IF NUTS & BOLTS ARE LOOSE, FOR YOUR OWN SAFETY MAKE SURE THEY ARE TIGHTENED!!
- d) Fences on Frame must be swung outwards, to protect operation from accidentally walking off roof edge while operating Hoist.
- Example: If you are lifting 800lb., place 1200pounds of counter wei



WARNING: KEEP IN MIND THAT THE MAXIMUM **RATED LOAD ON THE HOIST IS 2000 POUNDS!!!** 

- Check hoist cable for broken strands. If any are found cable should be replaced.
   Grease all moving parts on the hoist power unit (drum, bearings and pulleys) etc.
   N) Check hoist braking system for proper operation.
   Fingine oil level should be checked before starting. For any other engine maintenance, p.



**ALWAYS TEST HOIST LIFTING WITH SMALL AMOUNT OF** WEIGHT. BEFORE YOU LIFT VERY HEAVY OBJECTS.

WARNING 🕰 PLACE BALLAST HERE