

## Hydraulic Winch

Instruction and safety information

Read before operating the hydraulic winch

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## **Warning**

- Do not erect the swing hoist near overhead cables, electrical power lines or wires.
- Erect swing hoist on firm and level roof.
- Tighten all bolts and nuts securely and clip all locking pins or swing hoist failure will occur under load and may cause damage or injury.
- Always keep the instruction manual with the machine for reference.
- Do not exceed the rated capacity of the swing hoist.
- Minimum ballast weight must be kept at 1 1/4 to 1 ratio (1.25 pounds of ballast for 1 pound of load).
- Inspect all joints, cable, brake and connections before each use. Replace if damaged.
- Do not run cable completely out from the drum. Leave at least 4 turns of cable on the drum.
- Do not remove safety covers when engine is running.
- Read the engine manual and follow the instructions and warnings.

Warning labels have been included on the equipment. If the warning labels wear off, please request new ones.

Misuse of the swing hoist may result in injury or damage. SPAR-Marathon provides instructions for its safe use and relies on the purchaser to ensure that these instructions are given to the personnel who will actually be using the equipment.

It is the responsibility of the purchaser to ensure that the personnel operating the swing hoist are trained in the proper operating procedures and all safety regulations.

The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to work environment to control or eliminate any hazards or other exposure to illness or injury.

Regulations governing the use, selection and maintenance of personal protective and lifesaving apparatus regulations must be followed.

The SPAR-Marathon swing hoist is designed and manufactured for hoisting material only. Any other use of this equipment will void any warranty or responsibility, expressed or implied, on the part of the manufacturer.

The swing hoist should be operated by experienced personnel only. It is a good idea to barricade the hoisting area and to keep unauthorized persons away from it.

## **Introduction**

The SPAR-Marathon hydraulic winch is designed to provide reliable, easy operation, excellent lifting performance and easy maintenance. Set up of the winch takes only minutes with no special tools needed. Different size connectors are used to avoid set up confusion.

Mark down the model number and serial number from the winch and always use it for ordering parts. These numbers can be found on the serial number plate located on the frame.


Model #       :  
Serial #       :

## **Specifications**

	<u>HW1000</u>	<u>HW2000</u>
Maximum capacity (2 parts of line)	1000 lbs	2000 lbs
Lifting speed (maximum)	150 ft/min	150 ft/min
Cable length supplied	200 ft	200 ft
Maximum cable length	300 ft	300 ft
Winch weight	100 lbs	100 lbs

Specifications are subject to change without notice.

## **Winch set up**

 **Warning** Do not set up hoist over doorway.

Secure enough ballast to the hoist frame according to the hoist requirement.

Place winch with protective bar facing forward on winch platform at the ballast leg. Slide winch up to align mounting holes at the rear of frame. Attach with two 5/8 x 3 1/2 pins and two 5/8 x 1 3/4 bolts & nuts. (Figure 1)

Move the power unit close to operator fence.

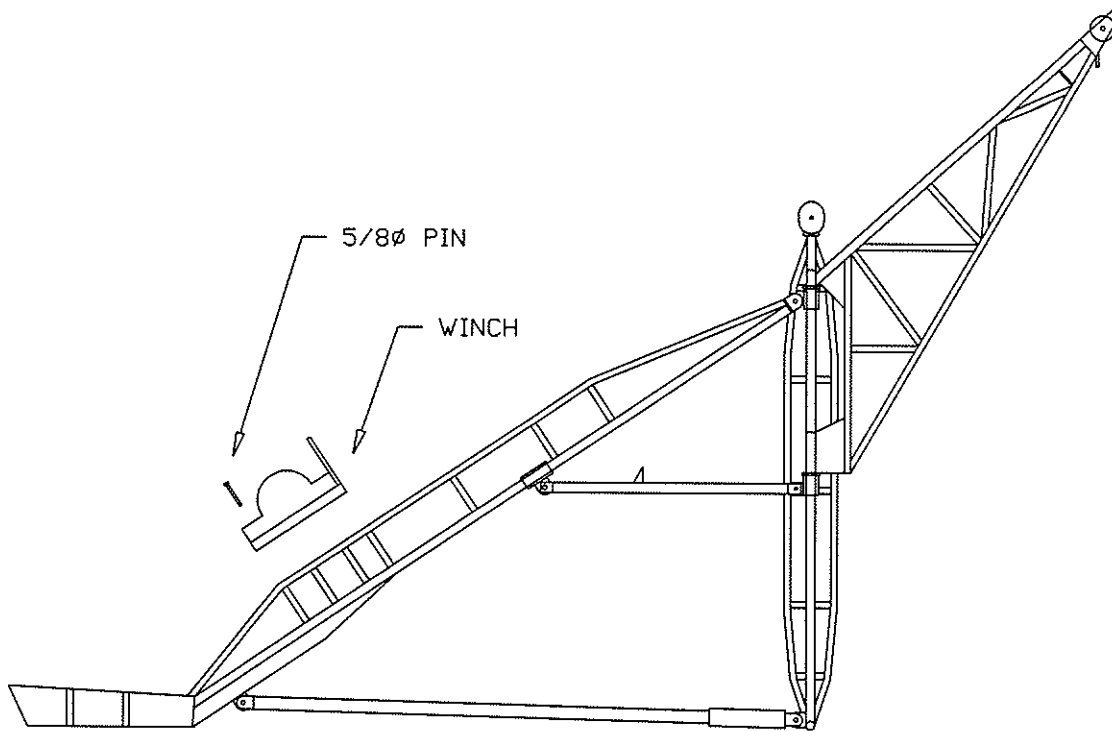


FIGURE 1

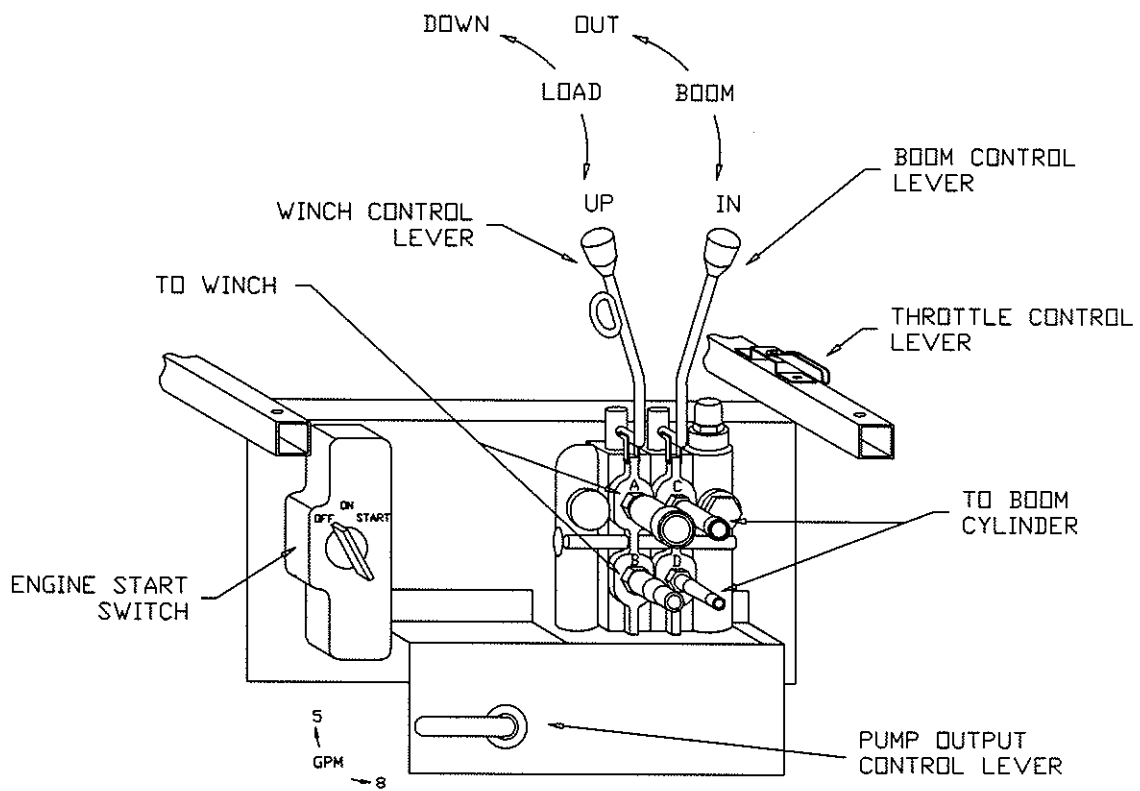


FIGURE 2: CONTROL PANEL

HS2000 SHOWN  
HS1000 SIMILAR

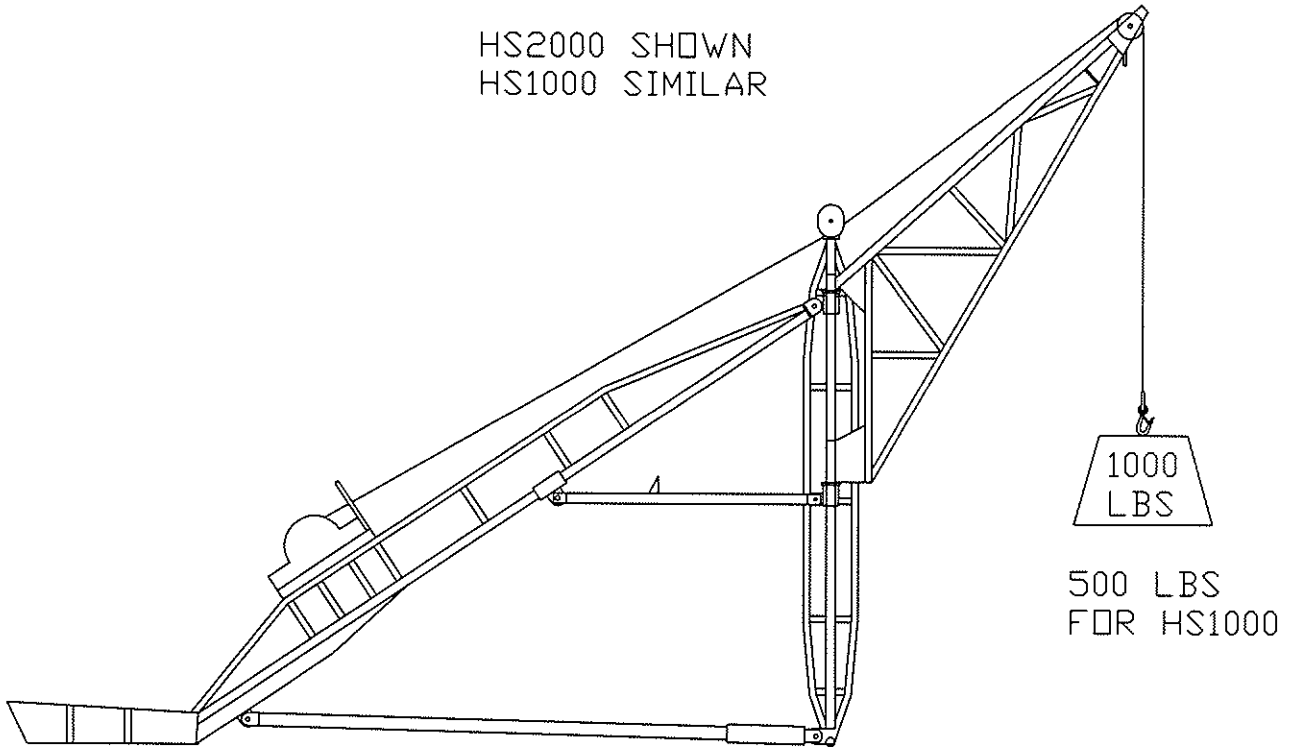


FIGURE 3: SINGLE LINE

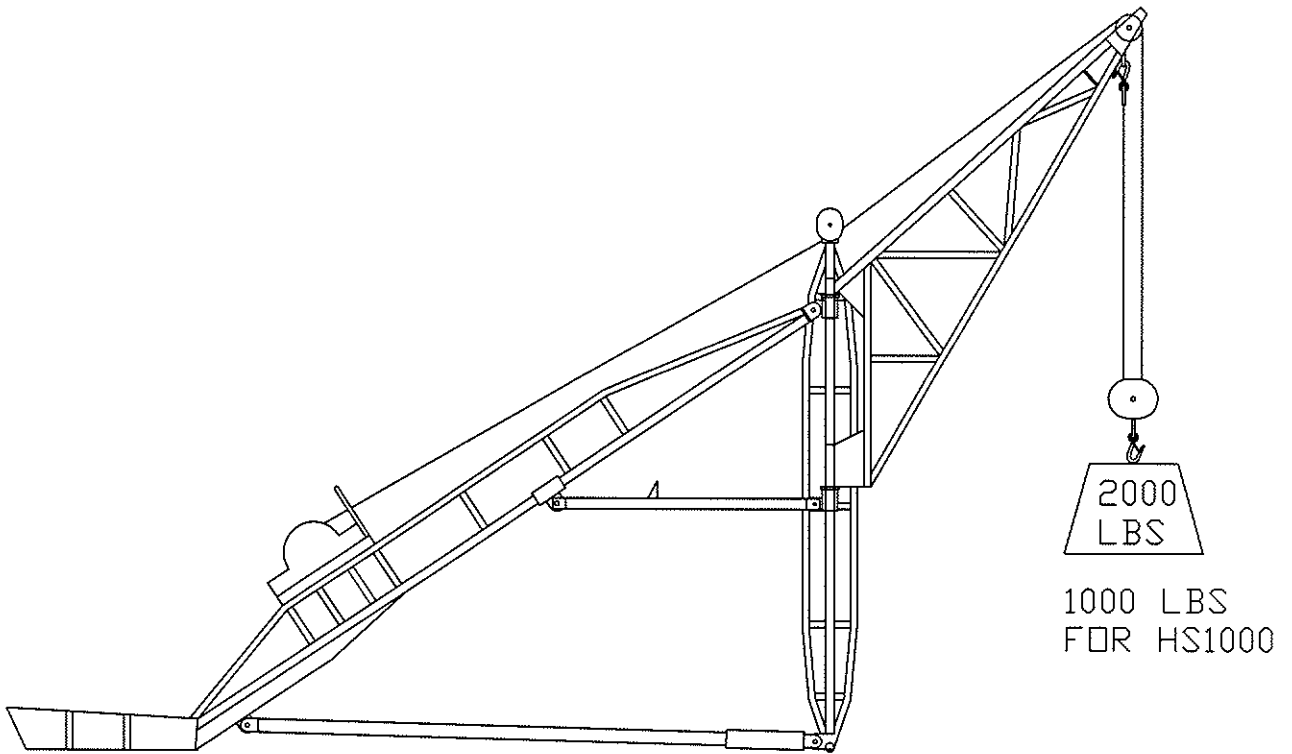


FIGURE 4: DOUBLE LINE

For new power unit, read and follow the separate manual on the power unit and engine to prepare for power unit operation.

Connect hoses from power unit to winch and cylinder. (Figure 2)

Winch control valve

3/8" female quick connect is on top (port A)

3/8" male quick connect is on bottom (port B)

Connect 1/2" hoses from winch control ports to motor ports on winch.

Boom cylinder control valve

1/4" female quick connect is on top (port C)

1/4" male quick connect is on bottom (port D)

Connect 1/4" hoses from boom cylinder control valve to boom cylinder.

Start power unit and operate boom control lever to bring boom in. Operate winch control lever to unwind enough cable to reeve the swing hoist.

Reeve cable through cable guide on winch, through bottom side of pulley block on mast, then through sheave on top of boom. Rotate cable keeper at top of boom back into boom.

For single line operation, attach shackle and safety hook to cable end. (Figure 3)

For double line operation, reeve cable through pulley block, attach shackle and safety hook, then attach to the hook at boom. (Figure 4)

**⚠ Warning** Reeving double line increases the lifting capacity of the winch only. The hoist frame capacity is the same. Load must not exceed the maximum capacity of the hoist frame.

## **Operation**

**⚠ Warning** Do not operate the power unit/engine before reading and understanding the power unit and engine instruction manual for proper operation.

Do not remove safety covers when engine is running.

Do not run cable completely out from the drum. Leave at least 4 turns of cable on the drum.

Check the swing hoist condition each time before using the equipment. Repair or replace components if they are damaged or in bad condition.

Operation of the swing hoist should be done on the operator fence side. Always stay clear of the path of swinging load.

All safety hooks come with a spring latch. Replace if the latch is broken or missing.

Do not make any adjustment while hoisting.

Always control the raising and lowering of load smoothly. Avoid sudden start and stop.

**Note:** Each engine in the power pack is filled with engine oil at the factory and the power pack is tested before delivery. Check engine oil level each time before use.

First time using the hoist:

- Hoses are shipped empty, fill up the hydraulic fluid reservoir with Hydrex AW 32 hydraulic fluid after running the hoist for a minute. Fluid level should be 1 1/2" from top of the reservoir. Fluid will be lower in the tank since fluid has been used up to fill the hoses.

Avoid cable build-up on the drum: the speed and the lifting capacity of the winch is depended on the diameter of the drum. When the cable build-up on the drum, the diameter of drum increase. As a result, lifting speed will increase but lifting capacity will decrease.

Feathering control feature : the speed of movement can be controlled by moving the control handle slowly and smooth movement can be achieved. Do not pull or push the control handle all the way too fast in one shot.

Start the engine as per the engine instruction and let it warm up a few minutes.

For HP2000 - select pump output (5 gpm or 8 gpm) by turning the ball valve lever. Select 5 gpm for hoisting load. Select 8 gpm for fast rewinding of cable only. It is not intended for hoisting full load. (Figure 2)

Adjust to desired operating engine speed by turning the throttle control lever.

Operate the swing hoist with no load a few times to check the operation.

For lifting the load, pull down on winch control lever.

For lowering the load, push up on winch control lever.

For swinging in the boom, pull down on boom control lever.

For swinging out the boom, push up on boom control lever.

To obtain best operation, place 10 to 20 pounds cable weight to the cable end.

If power failure occurs and load is stuck in the mid-air, release the brake manually by pulling down the cable on the brake assembly on the winch to release the brake. The load will lower slowly by gravity. Do not adjust or remove any component from the hydraulic system or the load will be free fall and may cause damage or injury.

## **Maintenance**

Change hydraulic fluid and filter after first 50 hours of use, then change hydraulic fluid and filter after every 250 hours of use. Use Hydrex AW 32 hydraulic fluid or compatible hydraulic fluid to suit the operating condition.

Grease the pivot points at the boom once a week or after each assembly of swing hoist.

Grease the bearings on the cylinder, winch, lead pulley and boom sheave every month.

For engine maintenance, refer to the engine instruction manual.



## Trouble shooting

<u>Symptom</u>	<u>Possible cause</u>	<u>Solution</u>
System not functioning	Fluid level low	Add hydraulic fluid
	Hose kinked	Straighten hose
	Hose quick connect not connected properly	Connect hose properly
	Engine to pump coupling break	Replace coupling
Hoist speed slow	Fluid level low	Add hydraulic fluid
	Hose Kinked	Straighten hose
	Engine speed slow	Increase engine speed
	Hose too long	Use only enough hose length for the job
	Filter clogged	Replace filter
	Pump damaged	Repair/replace pump
Oil foaming	Fluid level low	Add hydraulic fluid
	Water in fluid	Replace hydraulic fluid
	Improper oil type used	Use only appropriate hydraulic fluid
System overheated	Fluid level low	Add hydraulic fluid
	High ambient temperature	Turn off engine and let system cool down
	Extended duty cycle	Reduce duty cycle time