

# SAFETY HOIST<sup>CO.</sup>

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## **OPERATING & INSTRUCTION MANUAL AH-300**

**IMPORTANT  
RETAIN THIS MANUAL**

For instruction on assembly and operation of Hoist

READ THIS MANUAL CAREFULLY BEFORE ATTEMPTING TO  
ASSEMBLE OR OPERATE. FAILURE TO COMPLY WITH  
INSTRUCTIONS MAY CAUSE THE HOIST TO MALFUNCTION  
AND, MAY RESULT IN PERSONAL INJURY.

# **Safety Hoist Company Hoist Manual**

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# I. EVERY TIME SET UP INSTRUCTIONS

## **\*\*\*IMPORTANT\*\*\***

EVERY TIME A SAFETY HOIST IS SET UP FOR OPERATION:

1. CHECK OIL IN ENGINE AND GEAR BOX BEFORE STARTING ENGINE. REMEMBER TO CHANGE THE OIL IN THE ENGINE AT LEAST EVERY 50 TO 100 HOURS MAXIMUM.
2. INSPECT WINCH DRUM AND BRAKE ASSEMBLY FOR OBVIOUS DAMAGE OR MISALGMENT. INSPECT WINCH DRUM TO MAKE SURE THAT CABLE IS WOUND SMOOTHLY WITH NO CROSSOVERS. IF THERE ARE ANY, RELEASE THE BRAKE AND PULL OFF ENOUGH CABLE TO ELIMINATE THE CROSSOVERS. THEN WITH A LEATHER GLOVE, CAREFULLY WIND THE CABLE BACK ONTO THE DRUM TO PREVENT CABLE KINKING.
3. INSPECT THE BRAKE BAND OR MULTISEGMENT BRAKE TO MAKE SURE IT'S IN GOOD CONDITIONS WITH NO CUTS OR TEARS. MAKE SURE NO OIL OR MUD HAS GOTTEN ONTO THE BRAKE ASSEMBLY WHICH WILL CAUSE THE BRAKE TO SLIP.
4. TEST THE BRAKE. PUT ONE BUNDLE OF SHINGLES (OR ABOUT 70 TO 100 POUNDS) ON THE PLATFORM. ONLY LIFT IT TWO OR THREE FEET TO MAKE SURE THE BRAKE IS CLEAN AND WORKING PROPERLY, AND THEN LOWER THE LOAD SLOWLY. DO THIS AT LEAST SIX TIMES BEFORE TRYING TO LIFT A LOAD HEAVIER THAN THE TEST LOAD. ONCE YOU ARE CERTAIN THE BRAKE WILL HOLD THEN RAISE THE LOAD YOU ARE TRYING TO LIFT A FEW FEET. STOP RAISING THE LOAD. WAIT A MINUTE TO MAKE SURE THE LOAD DOESN'T SLIP. THIS WILL VERIFY THAT THE BRAKE IS WORKING PROPERLY FOR THE FULL LOAD WEIGHT.

## II. GENERAL SAFETY INSRUCTIONS

- A. **These safety instructions and warnings are not substitutes for routine prevention measures which must also be observed to avoid potential risks and hazards. Failure to obey these safety warnings may result in injury to you or others, or damage to the hoist.**
1. **WARNING... DO NOT USE OR PLACE THIS METAL HOIST IN ANY AREA WHERE IT COULD COME IN CONTACT WITH ELECTICAL WIRING OR OTHER HAZARDS CAUSING INJURY OR DEATH!!!**
  2. Avoid damage to Hoist operating parts by securing hoist to truck bed with cord rope or bungee cord. Damaged parts MAY make hoist not SAFE to operate. Note: Transporting hoist in rain may cause road oils to be deposited on brake band and or brake pulley. Cover brake area with plastic sheet and inspect prior to use. See Section III, How to Assemble your Hoist.
  3. When unpacking a new Hoist, inspect parts carefully for any damage that may have occurred during transport. **DO NOT ASSEMBLE OR USE THE HOIST IF ANY PARTS ARE DAMAGED!!** Return the damaged part to the place of purchase for replacement.
  4. Observed all labels and instructions attached to various parts of the Hoist.
  5. For Safe Operation use only parts, attachments and accessories supplied by the Manufacturer for use with this Hoist. Using substitute parts will void the Warranty.
  6. Check assembled parts (splice plates, bolts, engine mounting, belts, pulleys, hoist cable, etc.) for proper tightness and fit before using the Hoist, and during frequent periods of use, be certain the equipment is in safe working condition. Recheck for bolt tightness after every 4 hours of operation.
  7. Never place the Hoist on a slippery, uneven or unstable surface. Make sure the Hoist is properly braced against a building or solid abutment at the correct angle as described herein. Base of hoist should be one (1) foot away from the building for every (4) four feet of building height. Top of hoist must be tied off for safety operation. Tie to rungs not side rails.
  8. Keep the area around the base of the Hoist clear of debris to avoid slipping, tripping or falling against the Hoist.
  9. Handle fuel with care. It is extremely flammable and highly explosive under certain conditions.
    - a. Never smoke or allow open flames or sparks to be present in the vicinity of the when the fuel tank is being filled.

- b. Use an approved fuel container
- c. Never add fuel to a hot or running engine.
- d. Replace fuel caps of the supply container and the engine fuel tank and wipe up any spilled fuel before starting the engine.

**B. SAFE OPERATION PROCEDURE**

1. DO NOT ALLOW ANYONE TO OPERATE THE HOIST WHO HAS NOT BEEN PROPERLY AND THOROUGHLY TRAINED IN ITS OPERATION AND USE IN ACCORDANCE WITH THIS HOIST’S INSTRUCTION MANUAL.
2. NEVER OPERATE THE ENGINE INDOORS. EXHAUST FUMES CAN BE HAZARDOUS IN ENCLOSED AREAS.
3. ONLY USE THE HOIST TO LIFT MATERIALS!!!! THE HOIST SHOULD NEVER BE USED TO TRANSPORT A PERSON FROM ONE ELEVATION TO ANOTHER!!!! DO NOT USE HOIST FOR LOWERING ANYTHING.
4. Always Observe Maximum Capacity of Hoist. Following Chart is your guide.

Hoist Series	Number of Passes of Cable	Capacity
MH123 Series	2	200 lbs.
VH-300 Series	2	300 lbs.
HD-400 Series	2	200 lbs.
HD-400 Series	4	400 lbs.

5. KEEP HANDS, FEET, OTHER BODY PARTS AND CLOTHING AWAY FROM THE TRACK AND MOVING OR ROTATING PARTS OF THE HOIST WHEN STARTING THE ENGINE OR OPERATING THE HOIST.
6. Do not allow any one to work or walk around or under the Hoist when in operation.
7. Do not use the Hoist to lift buckets of hot asphalt or any other hot or liquid substance, unless contents are in a closed and sealed container.
8. Always turn off the engine when you leave the vicinity of the Hoist.

### III. HOW TO ASSEMBLE YOUR HOIST

1. Unpack all parts of the hoist and lay them out on the ground.

#### MAJOR PARTS LIST

3-8ft. track sections with splice plate's attached and 1-4ft. track section with splice plates attached

1-VH Peak assembly

1-VH Carriage Flap (Flap Assembled on Carriage)

1-Carriage with 1/2" bolt, washers and lock nut (Bolt Assembled on Carriage) 1-

Steel base section with winch drum, brake, cable and drive belt

1-Brake release handle with hitch pin

1-Power Pack (engine bolted on motor base)

Note that the engine is shipped without gas or oil. Oil needs to be added in the crank case and the gear reduction unit, please refer to the instruction manual for the engine for oil type and quantity.

2. Prepare hoist assembly by standing base section on its side with Brake Drum UP and Brake spring away from assembler.
3. Slide an 8-ft. track section onto the base section with rung short side facing towards assembler and secure each leg with two 3/8" carriage bolts and lock nuts. Figure 1



Continue adding additional sections to reach the desired length of the hoist (See Chart Page 7). The track sections are attached using the splice plates as noted below with 3/8"x 3/4" carriage bolts and lock nuts. The splice plates must be installed on the outside of the track section. See Figure 2

Figure 2



4. Lay the hoist down on the ground with the brake spring towards the ground.
5. Slide the carriage onto the track section from the "Top" of hoist, with the flat surface of the carriage facing away from the base section. See Figure 3

Figure 3



6. Slide the carriage along the track to base section so that the bumpers rest on the base section. Make sure carriage slides smoothly on track.

7. Slide the peak assembly (CH-B) onto the end of the track and secure it with two (2) 3/8"x 3/4" carriage bolts and lock nuts. See Figure 4

Figure 4



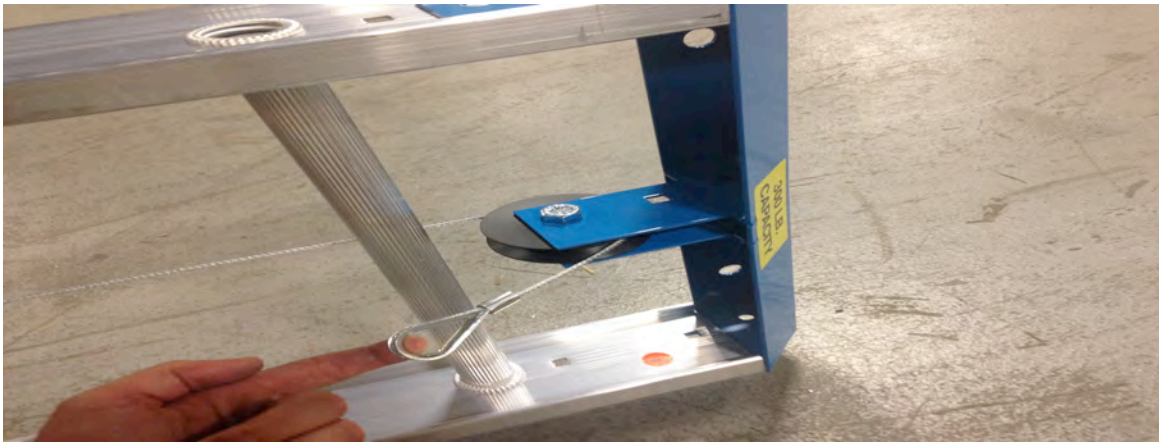
10. Slide the brake release handle over the brake bar and secure it with the hitch pin. See Figure 5

Figure 5





11. Turn the hoist up on its side with brake drum up.
  12. Push forward on the brake handle to release the brake. (Note you will only need to have it rotate 10-15 degrees, 1 – 2", to release the brake).
  13. While the brake is released, pull out cable from the winch drum. Draw out enough cable to run up the back side of the track, thru the peak pulley and back down to the carriage on the front side (The carriage side). See Figure 6
- Figure 6



14. Attach the thimble on the cable to the back of carriage using the 1/2" bolt, nut and washers. Put 2 1/2" washers between thimble and carriage and 1 1/2" washer on other side of thimble. Pass the bolt thru the washers, thimble and then thru the bumper side angle then center hole on carriage. Tighten the 1/2" bolt so it passes thru the nut, but not so tight as to stop the thimble from rotating on the bolt. See Figure 7
- Figure 7



15. You are now ready to lift the hoist into place.

**Warning:** When setting up your hoist please take note of all overhead obstructions and/or electrical wires. Select a location that is free of traffic and pedestrians.

16. Lay the assembled hoist along side the wall where the hoist is to be used.

17. Drop and end of rope from the roof to the ground. Tie the end of the top rung of the last section and use the rope to lift the top of the hoist to the roof. While the hoist is being lifted, one or two people on the ground should brace the feet of the hoist and walk the hoist up until it is vertical.

18. Once the hoist is vertical, lean it up against the building.

19. Place Hoist against building at the proper safe angle. Use the chart below, as a guide to determine the angle of incline of the Hoist for the length of the Hoist to be assembled. Secure track to roof with a rope to prevent hoist from sliding along roof. Tie rope to a rung or the peak NOT to side rails of track. Tying to side rails will stop carriage from going up and down.

Chart A

Height to Bearing Point "A"	Maximum Horizontal Distance "B"	Approx. Hoist Length "C"
13 ft.	3.ft. 4 inches	15ft Base + 8' + 4'*
21 ft.	5ft. 4 inches	23ft. Base + (2)-8' + 4'
25 ft.	6ft. 3 inches	27ft. Base + (3) - 8'

29 ft.**	7ft. 3 inches	31ft. Base + (3)-8' + 4' *
32 ft. **	8ft.	35 ft. Base + (4)-8'
36 ft. **	9ft	39 ft. Base + (4)-8' + 4' *
40 ft.**	10ft	43 ft. Base + (5)-8'

\* Only 1- 4-foot section allowed per hoist assembly must be top section.

\*\* Any hoist with height greater than 27 feet must use a support brace.

Distance "B" the maximum horizontal distance, must not be more than 1/4 of the Hoist's working length "A".

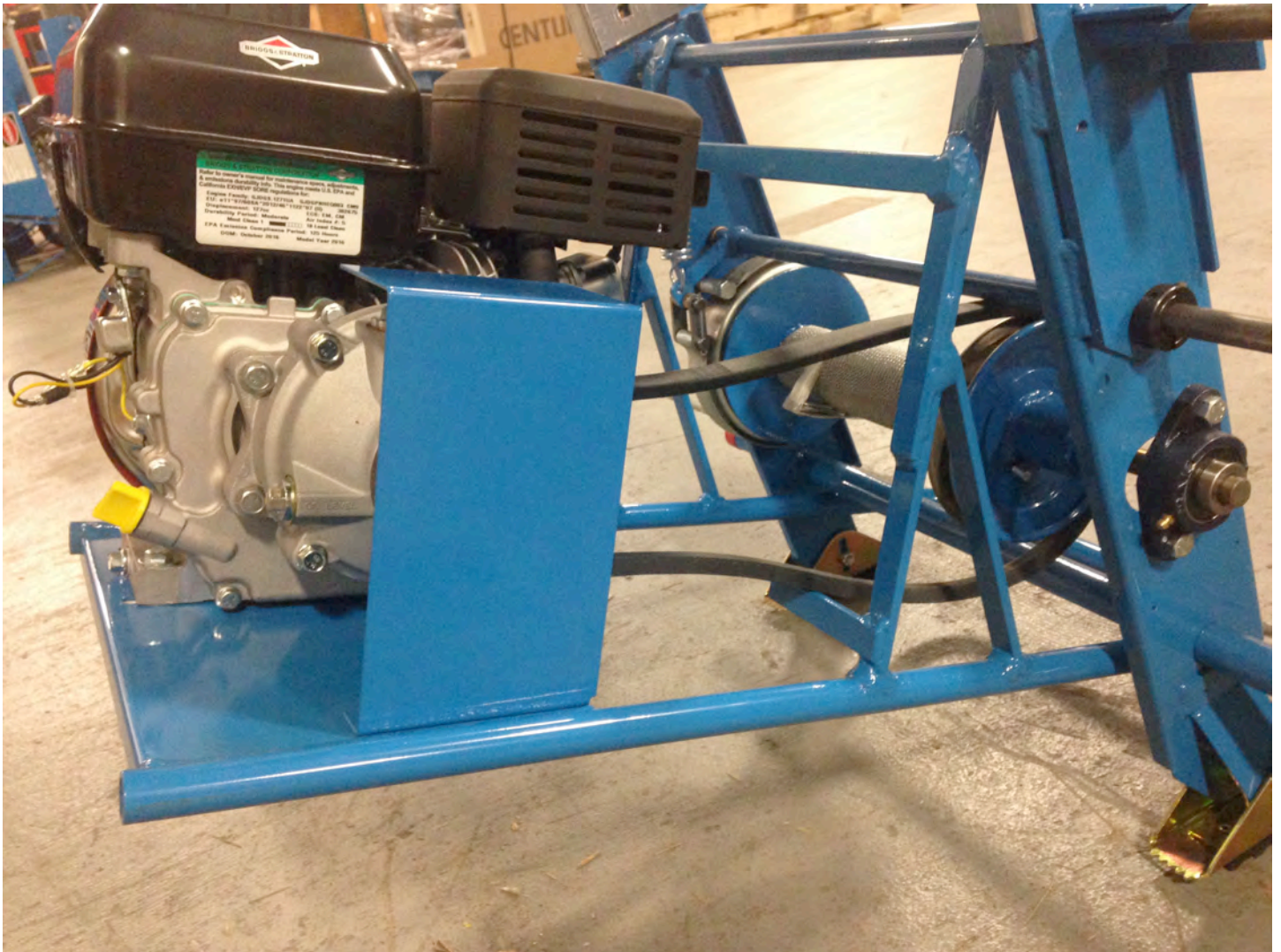
20. Attach power pack to hoist by hooking unit over cross shaft located above brake release shaft. Once in position check power pack unit for free backward movement so that drive belt can fully engage the winch drum assembly. See Figure 8.

Figure 8



21. Attach the V-Belt by pushing it over belt guide bar, between the belt guard opening and then looping it over the engine drive pulley. See Figure 9.

Figure9



#### IV. HOW TO OPERATE YOUR HOIST

##### 1. Before starting engine:

- a. Refer to motor "operating instructions" for starting oil and gasoline specifications. Check engine & gear box oil level **BEFORE STARTING.**
- b. CAUTION-Make certain the drive belt is not so tight that it engages with the winch drum assembly and the engine pulley. It must be loose enough to

slip around both pulleys. If it's too tight, the carriage will move as soon as engine is started. If belt is too loose use other holes in Motor Base mounting hole pattern. There are four settings. This will tighten or loosen drive belt. Reinstall engine and tighten all four mounting bolts.

2. Start the engine and adjust throttle so that the engine runs at idle speed. The Operator should then make a trial test run with the Hoist. Use the Set Up Instructions in Section A. The test should be done while the carriage assembly is not loaded with material and should be run in accordance with these instructions to check for proper operation.

### 3. TRIAL RUN

## **IMPORTANT**

- a. Set up hoist onto building. Assemble per instructions in this booklet at noted on Page 4.
- b. Inspect brake to make sure there is no damage, cuts, tears or oily material on brake material. If any of the above is found, contact Safety Hoist Company for guidance.
- c. Inspect Winch Drum Assembly and Brake Assembly. Cable on winch drum must be smooth and in neat coils with no cable crossing over other cable. Cable should be tight on the Winch Drum. If cable has crossovers or is loose, release brake with Brake Release Handle and pull off enough cable to fix crossovers or tighten loose Cable. Rewind cable on Winch Drum neat and tight, coils laying side by side.
- d. With engine running at idle speed, press foot on treadle to tighten drive belt on winch drum and engine pulley. Carriage will begin to rise. Let carriage move two or three feet and take foot off of treadle. Don't touch Brake Release Handle. The carriage should stop where it is. If Carriage holds its position, GENTLY push up Brake Release Handle to bring the carriage back down to the starting position. Repeat this procedure 2 additional times.
- e. If the Trial Run is successful, go on to paragraph 3. In the operating instructions. If Brake does not hold carriage in place STOP during the TRIAL runs consult trouble shooting guide for help. For instructions call Safety Hoist Company (610-941-4333).

4. After completing the trial run, return the carriage assembly to the base position and load the hoisting carriage with material. Material should be placed flat and evenly at the center of the carriage platform.

**CAUTION: DO NOT EXCEED THE HOIST WEIGHT LIMIT. REFER TO CHART IN SAFE OPERATING PROCEDURE Section II, Paragraph B.4. TO DETERMINE MAXIMUM CAPACITY FOR YOUR HOIST.**

5. Manually increase engine speed to full throttle.
6. With engine at full throttle, apply foot pressure on treadle. This will engage winch and start carriage in its upward travel. Foot pressure on the motor base assembly treadle must be maintained throughout the upward travel of the carriage assembly. **THE FIRST TIME YOU USE THE HOIST EACH DAY, STOP THE LOADED CARRIAGE AFTER IT MOVES TWO FEET TO MAKE SURE THE BRAKE IS WORKING PROPERLY.**
7. Once carriage starts its upward travel do not stop its motion until it reaches the Peak. Upon load reaching peak, release foot pressure and the load will be able to be unloaded down the carriage flap. Always release foot pressure when Hoist reaches top and before unloading. NOTE: Should carriage stop in mid-climb, brake will hold load. Do Not Return loaded carriage to ground. Hoist is not designed to lower a loaded carriage. If necessary restart engine and/or reapply foot pressure on treadle and complete hoisting. Only if engine CAN NOT be restarted, use Brake Release Handle to lower carriage VERY SLOWLY.
8. Once load is unloaded on to roof:
  - a. Brake is always on. Therefore, by lifting up on Brake Release Handle, brake will release. Carriage will then lower.
  - b. CAUTION-Upon releasing brake, carriage will free fall. Allow the carriage to lower about 12 inches at a time as it descends by pushing on the Brake Release Handle slowly at steady intervals. LET GO OF THE HANDLE to stop the carriage.

**IMPORTANT: IF CARRIAGE DOES NOT MOVE DOWN AFTER LOAD IS REMOVED AND THE BRAKE RELEASE HANDLE IS LIFTED, IT MAY BE CAUSED BY A NEW BRAKE BAND OR THE FIRST FEW USES OF A NEW HOIST. TO WEAR IN NEW BRAKE BAND RAISE LOAD TO ROOF. REMOVE LOAD BUT LEAVE 40-50 POUNDS OF LOAD ON CARRIAGE AND USE BRAKE RELEASE HANDLE TO LOWER CARRIAGE. EXAMPLE: RAISE 2 OR 3 BUNDLES OF SHINGLES TO ROOF. DEPEND ON WEIGHT- DO NOT EXCEED WEIGHT LIMIT**

**OF HOIST. LEAVE 1 BUNDLE OF SHINGLES ON CARRIAGE AND LOWER CARRIAGE SLOWLY. DO THIS UNTIL FOR A DAY OR TWO UNTIL YOU CAN RAISE AND LOWER CARRIAGE WITH NO WEIGHT ON IT.**

V. DISASSEMBLY, STORAGE AND TRANSPORTING HOIST AFTER A JOB

1. Let engine cool down. Then disconnect all safety tie downs.
2. Move hoist away from building. **REMEMBER TO LOOK OUT FOR ANY OVER HEAD WIRES OF ANY KIND, ESPECIALLY POWER LINES.**
3. Place hoist on ground. Disassemble peak from top section of hoist. Remember, you don't have to disconnect cable from either the carriage or the winch drum. See "How to Assemble Hoist."
4. After you disassemble the peak from the hoist you can disassemble the number of sections you need to for safe transport on your truck.
5. Slide peak back onto the last section still remaining attached to the base and take up slack in cable by turning winch manually. You may need to use the Brake Release Handle to turn the Winch Drum.
6. Bring carriage close to the winch drum. Tie carriage to base with rope.
7. Use bungee cord or rope to tie hoist and track to your truck.
8. Cover brake area with a tarp to keep brake clean of dirt and road oils.

For Longer Storage

1. Disconnect spark plug wire from spark plug.
  2. Today's fuels tend to gum up more quickly than fuels used in the past. Use Fuel stabilizer if you won't be using your hoist for even 2 or 3 weeks.
9. The aluminum track section can be damaged by rough handling or during transportation on ladder racks. Take care when loading or unloading.



Damage to track can cause failure of hoist. When storing, hang the track Sections from a side wall to prevent damage.

## GENERAL CAUTIONS

DO NOT USE BRAKE RELEASE HANDLE WHILE RAISING MATERIAL. THE BRAKE WILL NOT BE ENGAGED AND WILL NOT HOLD THE LOAD WHEN YOUR FOOT IS REMOVED FROM THE TREADLE.

ONLY USE BRAKE RELEASE HANDLE WHEN LOWERING THE CARRIAGE. ALLOW CARRIAGE TO LOWER ABOUT 12 INCHES AT A TIME, AS IT DESCENDS.

YOU ONLY HAVE TO MOVE BRAKE RELEASE HANDLE FORWARD APPROXIMATELY 1 INCH TO RELEASE THE BRAKE. OPERATOR MUST PRACTICE THIS PROCEDURE PRIOR TO USING THE HOIST WITH A HEAVY LOAD.

MOVE BRAKE RELEASE HANDLE SLOWLY AND STEADILY. LET GO OF BRAKE RELEASE HANDLE IF CARRIAGE STARTS TO MOVE TOO FAST.

NOTE: Match part number on drawing with item number below.

DWG #	ITEM #	DESCRIPTION
1	A002	8' Track Section with splice plates
--	A003	4' Track Section with splice plates (Not Shown)
--	A007	Splice Plates (2) with nuts and bolts (Not Shown)
2	D6	Steel base section only
3	VH-D	Steel base section assembly
4	D2	Feet (2 Pack)
5	VH-C	Carriage assembly complete
6	V-10	Carriage flap with skate wheels
7	VH-B	Peak assembly complete
8	C-35	Carriage Bumpers (2 pack)
9	C-11	Carriage wheel nut/bolt set (2 pack)
10	D18-WELD	Winch Drum
11	D15	100 Ft. Wire Cable with thimble
12	D17	Winch Drum bearings with grease fitting in block
13	D20	Brake band for 6-inch drum
14	D114	Brake release bar
15	D23	Brake Release handle with hitch pin
16	D34PK	Brake Hardware Pack (Spring, Toggle Link, Eyebolt & Nut)
17	D27B	Briggs and Stratton engine
	or	
17	D27E	Electric Motor
	or	
17	D27H	Honda engine
18	D112	Drive Belt
--	D29	Drive pulley (On engine) (Not Shown)
19	D30	Brake Drum
20	D7PP-B	Power Pack (Motor base, engine, pulley) B & S engine
	or	
20	D7PP-H	Power Pack (Motor base, engine, pulley) Honda engine
	or	
20	D7PP-E	Power Pack (Motor base, engine, pulley) Electric Motor

## **OPTIONAL EQUIPMENT**

Unloading Ramp- Item No. MH123C  
(Guide pins into slots provided and rest on roof.)

Support Brace- Item No. MH 9SB  
(Position foot of brace against building. Extend  
Brace to middle of hoist or as far as can be  
reached. Bolt brace together. Attach support head  
of brace to track using clamps provided.)

Gravel Hopper- Item No. MH 8GH  
(Bolt the hopper with trap door facing ladder to  
top of carriage.)

## ENGINE RECOMMENDATIONS

ALL OPERATIONAL AND MAINTENANCE RECOMMENDATIONS, INCLUDING OIL WEIGHTS, LOCATION OF OIL FILLS FOR ENGINE AND GEAR BOX, SPARK PLUG NUMBER, AIR FILTER LOCATIONS AS WELL AS TROUBLE SHOOTING AND WIRING DIAGRAMS ARE FOUND IN THE ENGINE MANUFACTURE'S ENGINE MANUAL THIS IS PACKED WITH EVERY HOIST SOLD BY SAFETY HOIST COMPANY.

**NOTE: ENGINES ARE SHIPPED WITHOUT OIL IN THE ENGINE OR GEAR REDUCTION BOX. OIL MUST BE ADDED TO BOTH LOCATIONS OR SERIOUS DAMAGE WILL OCCUR.**

PLEASE NOTE, ENGINE WARRANTY IS SERVICED BY AUTHORIZE ENGINE DEALERS. ALL ENGINE QUESTIONS OR PROBLEMS MUST BE DIRECTED TO YOUR LOCAL DEALER. DEALER LOCATIONS CAN BE FOUND ON THE ENGINE MANUFACTURES WEBSITE.