

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

## OPERATOR'S MANUAL

### Emergency Stop Braking System

**MODELS:** ES-300 / ES-500



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# INTRODUCTION

## WHY THIS SAFETY UPGRADE IS NECESSARY:

This safety upgrade is to hold the carriage in place in the event of a cable or brake failure. This mechanism if engaged will activate stopping wedges to hold the carriage in place and avoid what is commonly called “carriage-plunge”, which is a failure that could damage your hoist or injure the operator.



*Carriage-plunge without Emergency Stop*



*Carriage-plunge with Emergency Stop*

## WHY THIS SAFETY UPGRADE WORKS:

Your new emergency stop braking system has been designed to prevent the uncontrolled descent of the carriage due to a cable or brake failure. It is **EXTREMELY IMPORTANT** to follow all of the instructions and warnings in this manual before operation. Failure to follow all of these instructions and warnings could result in equipment damage or personal bodily injury.

# DO'S AND DON'TS

It is EXTREMELY IMPORTANT to fully understand what to do and what not to do with your new emergency stop braking system. Please read all of these items before operating your Safety Hoist with your new emergency stop.

<b>DO</b>	<b>DON'T</b>
Bring the carriage down slowly	Bring the carriage down rapidly
Remove the brake lockout pin before operation	Leave the brake lockout pin in during operation
Test the system before each use	Operate the system without testing it
Take material up	Lower material
Make sure the cable is correctly wound on the winch drum with no crossovers, flat spots, or fraying	Allow any cable crossing
Operate as stated in this manual	Modify any part in any way, this will result in a void of warranty and could result in injury or OSHA fine
Inspect all parts of the emergency stop before each use to ensure proper maintenance and upkeep	Use prior to inspection each time of use
Remove the brake lockout pin before storage	Store the unit with the brake lockout pin installed

## **DID THE BRAKE ENGAGE?**

If the brake engaged on your new braking system, it occurred either as an accident or an emergency. We have broken down what to do in both of these situations. Failure to read these instructions could result in injury or OSHA fine.

### **ACCIDENTAL ENGAGEMENT:**

*In the event that the emergency stop is inadvertently applied:*

- 1.) Inspect the track for any rough edges that need to be filed or sanded down from the wedges being engaged
- 2.) Apply upward tension to the cable by engaging the drive, causing the carriage to ascend and resume operation
- 3.) If the wedge is applied more than once, it should be inspected and replaced if necessary

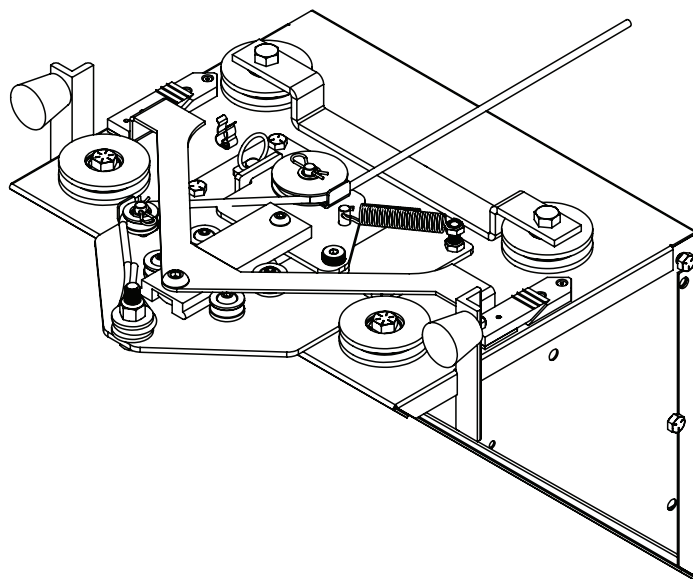
### **EMERGENCY ENGAGEMENT:**

*In the event that the emergency stop is applied as an emergency:*

- 1.) If the emergency stop braking system is applied due to a cable or brake failure while loaded, we recommend removing the load safely and lowering the entire hoist (BOTH the track and the carriage) to the ground and repairing the damage that occurred

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

## **ES-300 ASSEMBLY INSTRUCTIONS & PARTS LIST/ASSEMBLY DRAWINGS**



# ASSEMBLY INSTRUCTIONS

Your new emergency stop braking system has been designed to prevent the uncontrolled descent of the carriage due to a cable or brake failure. It is **EXTREMELY IMPORTANT** to follow all of the instructions and warnings in this manual. Failure to do so could result in equipment damage or personal bodily injury.

1.) Remove all parts from the box and inspect for any damage - <b>See Figure 1</b>
2.) If there is any damage, please contact Safety Hoist Company at 877-99-HOIST
3.) If there is no damage, assemble existing carriage flap to the new carriage using the hardware provided, which is attached to the new carriage
4.) Install the brake lockout pin by pulling the cam plate down so the holes on the cam plate match the holes on the backing plate. <b>If you do not install the brake lockout pin, it will be very difficult to install carriage onto track - See Figure 2</b>
5.) Install the carriage on top of the track and ensure that the carriage runs smoothly on the track, run the carriage along the track until it reaches the carriage stops at the bottom of the track
6.) String the cable. Draw out enough cable to run up the backside of the track, through the peak, and back down to the carriage on the front side (the carriage side)

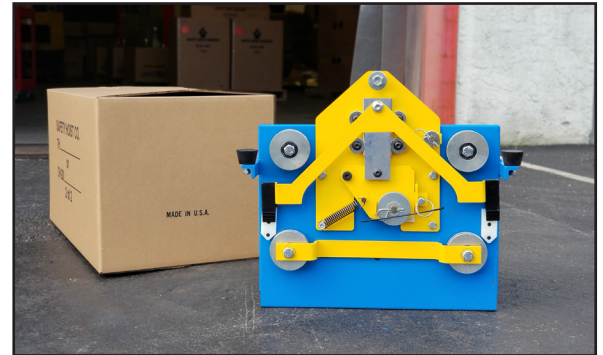


FIGURE 1

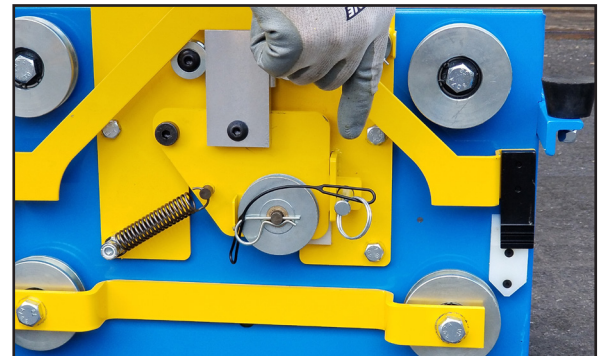


FIGURE 2



# ASSEMBLY INSTRUCTIONS

Your new emergency stop braking system has been designed to prevent the uncontrolled descent of the carriage due to a cable or brake failure. It is **EXTREMELY IMPORTANT** to follow all of the instructions and warnings in this manual. Failure to do so could result in equipment damage or personal bodily injury.

- 7.) Remove the hairpin from the pulley wheel (item 7), releasing item 7, and string the cable around the pulley so that the cable when reinstalled will be between the pulley and "cable keeper A". At this point reinstall the pulley and the hairpin back into place - **See Figure 3**

*Please refer to page 12 for assembly drawing*

- 8.) Remove the ES wheel (item 4) from the carriage by pulling the hairpin (item 23), and string the cable between item 4 and "cable keeper B". Reinstall item 4 and its hairpin, and attach the end of the cable to the carriage anchor bolt - **See Figure 4**

- 9.) **WARNING! VERY IMPORTANT!**  
Remove the brake lockout pin that was installed in STEP 3

- 10.) At this point you are ready to raise the ladder to its desired position for operation

- 11.) Once in position, go behind/underneath the ladder and while wearing protective gloves, pull the cable down, causing the carriage to rise. Then quickly release the cable to stimulate failure. If the carriage stops in place you are ready to attach your power unit. If it does not, please review step 3 - 9. If it still does not work, call us at 877-99-HOIST - **See Figure 5**

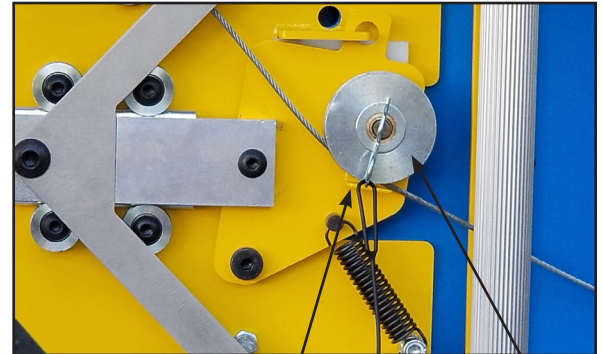


FIGURE 3 Cable Keeper A Item #7

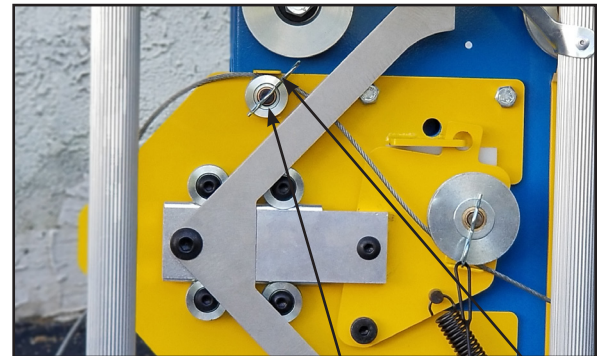


FIGURE 4 Item #4 Cable Keeper B



FIGURE 5



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## ASSEMBLY INSTRUCTIONS

Your new emergency stop braking system has been designed to prevent the uncontrolled descent of the carriage due to a cable or brake failure. It is **EXTREMELY IMPORTANT** to follow all of the instructions and warnings in this manual. Failure to do so could result in equipment damage or personal bodily injury.

12.) Attach the power unit at this time by hooking it over cross shaft located above the brake release shaft. Once in position, check power unit for free backward movement so that the drive belt can fully engage the engine output pulley

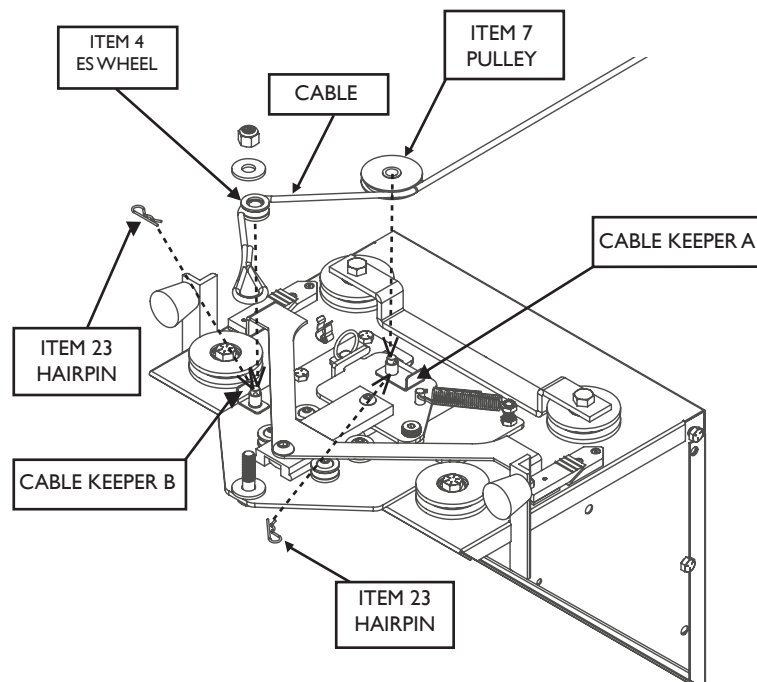
13.) Attach the V-belt to the power pack by pushing it over the belt guide bar, between the belt guard opening and then looping it over the engine drive pulley

14.) Before operating, make sure that the cable slack is evenly distributed across the winch drum by applying tension to the cable with a gloved hand. At this point you are now ready to operate your hoist

## DISASSEMBLY AND STORAGE

### PLEASE REFER TO ES-300 ASSEMBLY DRAWING ON PAGE 12

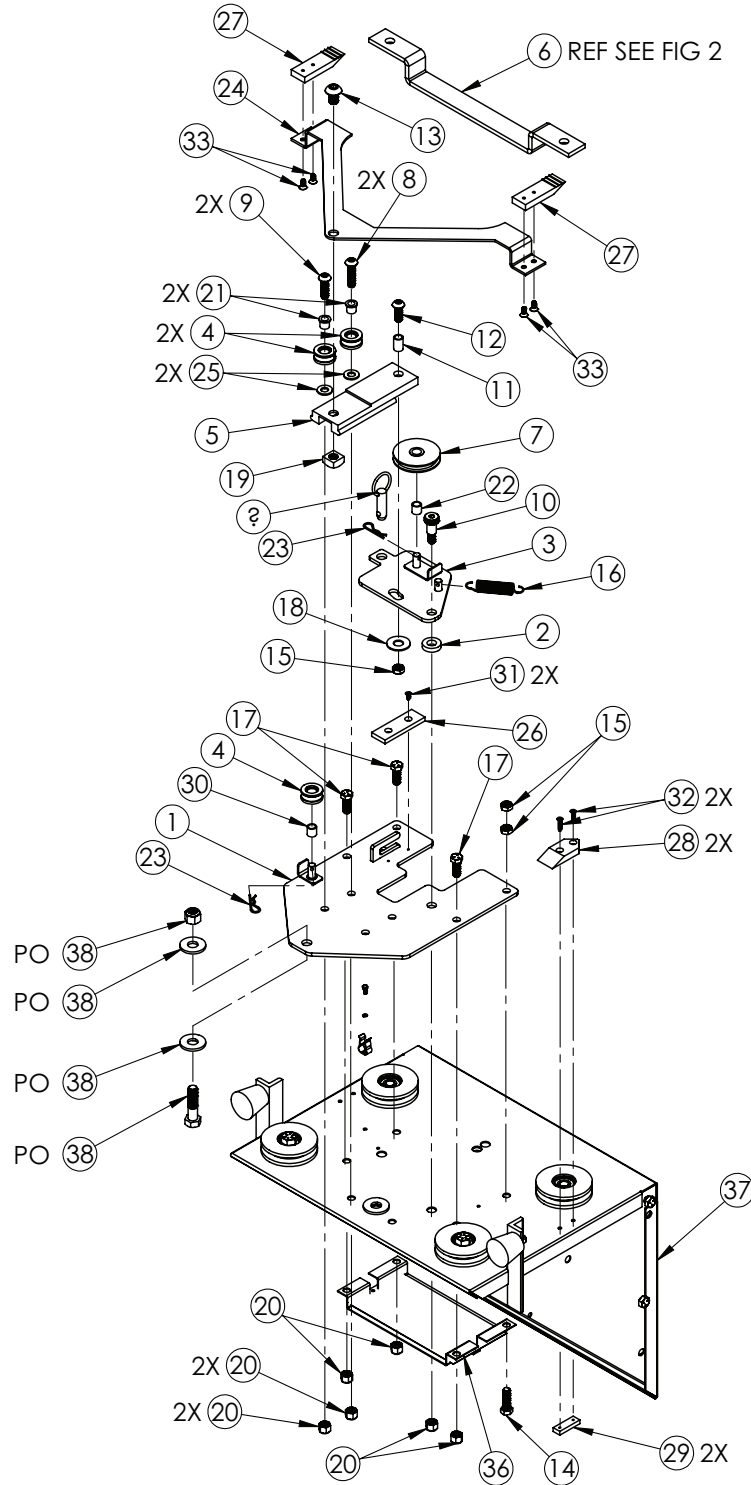
- 1.) Lower the carriage to the ground and remove the cable from the carriage anchor bolt
- 2.) Remove hairpin (**item 23**) from ES wheel (**item 4**)
- 3.) Pull cable free of ES wheel (**item 4**) and cable keeper B
- 4.) Reinstall ES wheel (**item 4**) and hairpin (**item 23**)
- 5.) Remove hairpin (**item 23**) from pulley (**item 7**)
- 6.) Pull cable free of pulley (**item 7**) and cable keeper A
- 7.) Reinstall pulley (**item 7**) and hairpin (**item 23**)
- 8.) Pull cable peak and rewind cable on cable drum
- 9.) Reinstall the brake lockout pin to allow the carriage to be removed from the track
- 10.) Remove carriage
- 11.) Remove brake lockout pin by leaving lock out pin installed (*it puts strain on the spring*)



LARGER DRAWING  
SHOWN ON PAGE 12

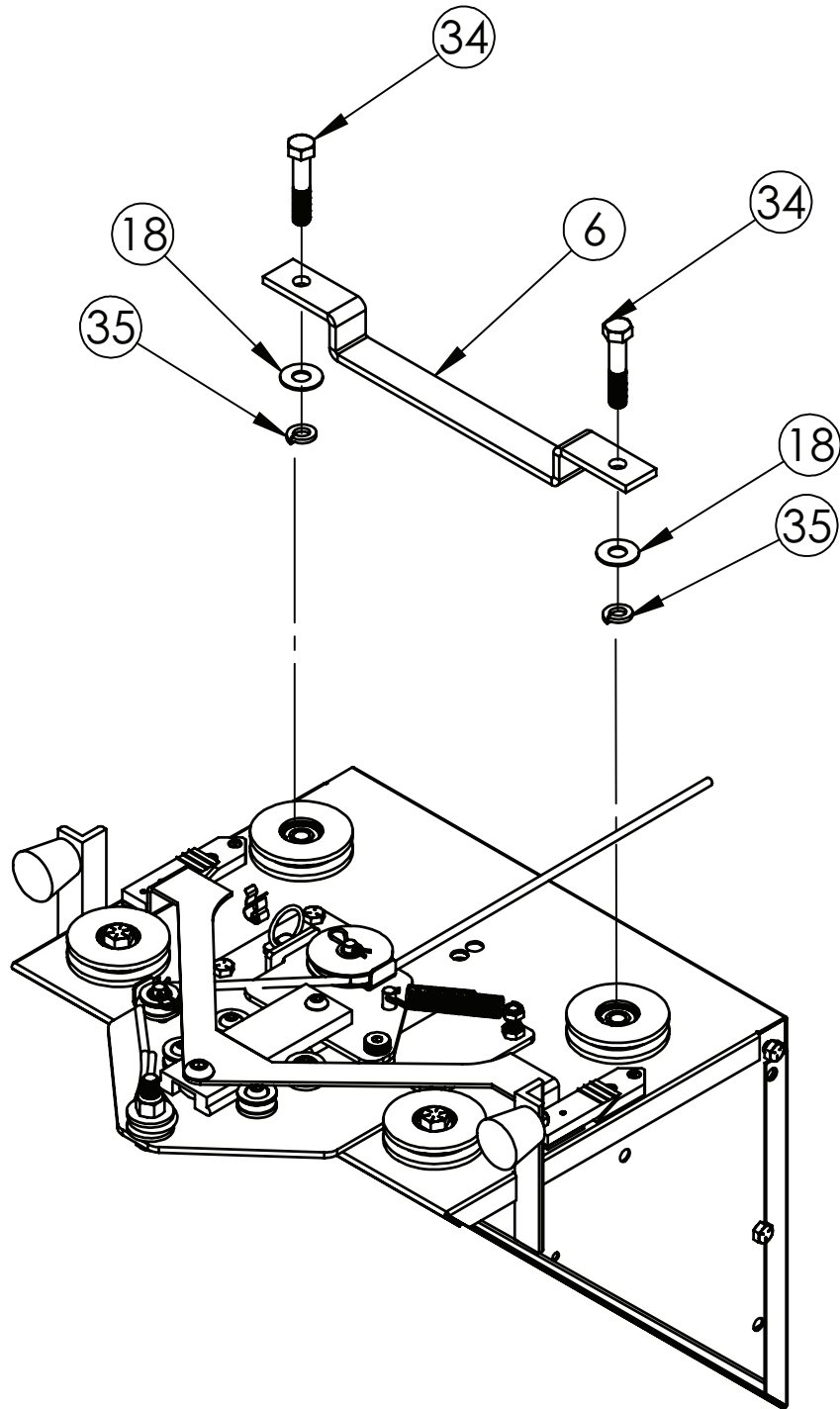
# ES-300 PARTS LIST AND ASSEMBLY DRAWINGS

FIGURE I: PLEASE REFER TO PARTS LIST ON PAGE 11



# ES-300 PARTS LIST AND ASSEMBLY DRAWINGS

FIGURE 2: PLEASE REFER TO PARTS LIST ON PAGE 11



# ES-300 PARTS LIST AND ASSEMBLY DRAWINGS

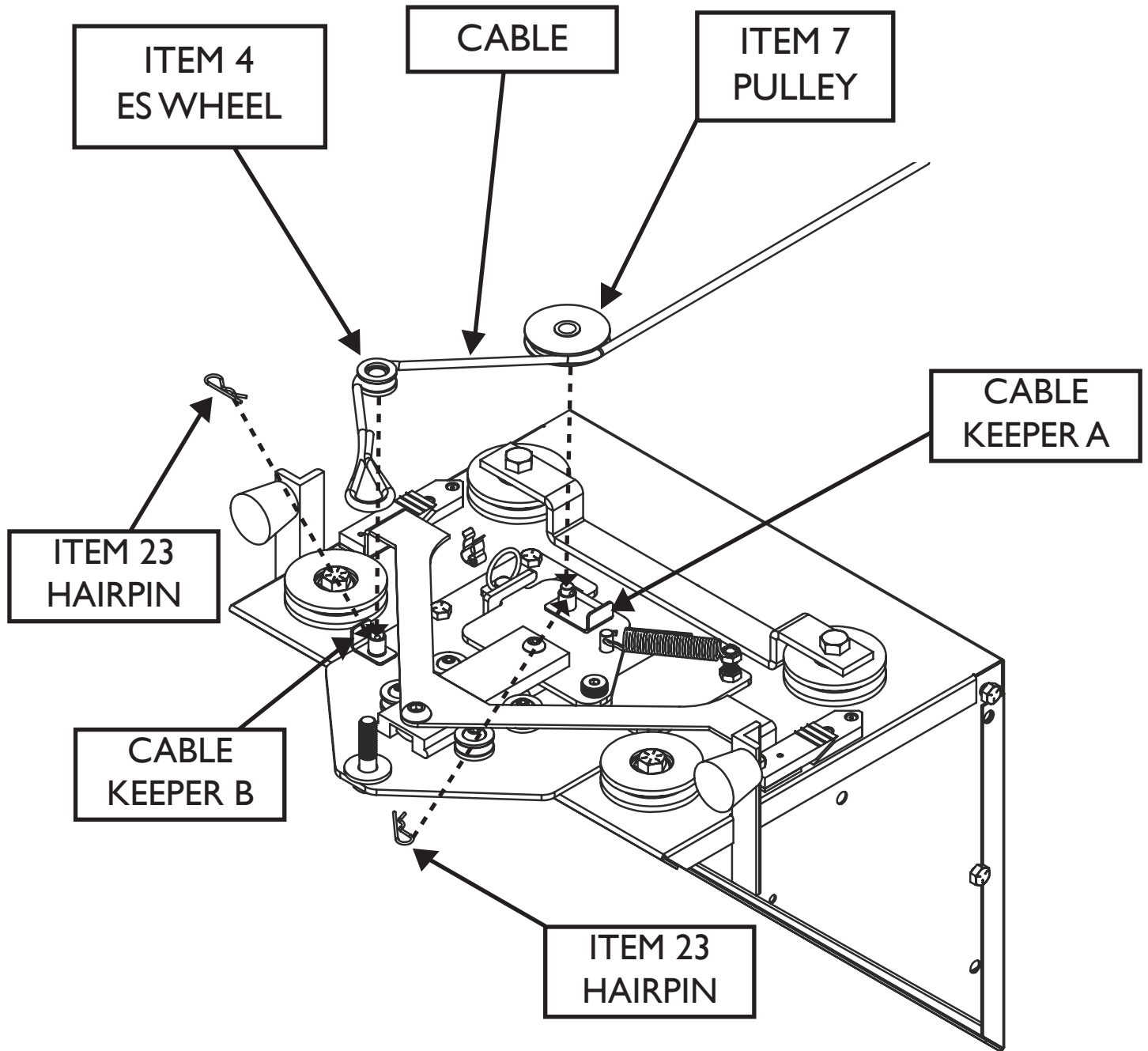
## FIGURE 1 AND 2 PARTS LIST:

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	EB-100	BAES PLATE WELDMENT	1
2	EB-307	1/2 ID X 1.0 OD X 1/4 THK BEARING	1
3	EB-108	CAM PLATE	1
4	MP-C040	ES WHEEL	5
5	EB-101	SLIDE	1
6	EB-104	BRACE, CARRIAGE WHEEL	1
7	EB-305	PULLEY FOR Ø .25 ROPE	1
8	.375-16 X 1.5 LG BHCS	3/8-16 X 1 1/2 LG BHCS	2
9	.375-16 X 1.25 LG BHCS	3/8-16 X 1 1/4 LG BHCS	2
10	.375-16 X .50 X .75 LG SHSS	3/8-16 X 1/2 X 3/4 LG SHSS	1
11	EB-130	3/8 ID X 1/2 OD X 3/4 LG SLEEVE BRG.	1
12	.375-16 X 1.0 LG BHCS	3/8-16 X 1.0 LG BHCS	1
13	0.5-13 X .75 LG BHCS	1/2-13 X 3/4 LG BHCS	1
14	.375-16 X 1.25 LG HHCS	3/8-16 X 1 1/4 LG HHCS	1
15	.375-16 THIN LN	3/8-16 THIN LN	3
16	EB-306	SPRING, 14 LB	1
17	.375-16 X 1.0 LG HHCS	3/8-16 X 1.0 LG HHCS	3
18	0.5 FW	1/2 FW	3
19	0.5-13 SN	NUT, SQUARE, 0.5-13	1
20	.375-16 LN	3/8-16 LOCKNUT	8
21	EB-131	FLANGED SLEEVE BEARING	4
22	HD-C050	BEARING 1/2 OD X 3/8 ID X 1/2 LG	1
23	.375 HAIRPIN	.375 HAIRPIN	2
24	EB-106	BRAKE WEDGE SUPPORT ARM	1
25	.375 FW	3/8 FLAT WASHER	4
26	EB-310	WEAR PAD	1
27	EB-312	BRAKE WEDGE	2
28	EB-313	WEAR PAD	2
29	EB-314	BACKING PLATE	2
30	HD-C050	BUSHING	1
31	6-32 X .375 LG FHCS	6-32 X 3/8 LG FHCS	2
32	6-32 X .75 LG FHCS	6-32 X 3/4 LG FHCS	4
33	10-24 x .5 LG FHCS	10-24 x 1/2 LG FHCS	4
34	0.5-13 X 2.5 LG HHCS	1/2-13 X 2 1/2 LG HHCS	2
35	0.5 LW	WASHER, LOCK, 0.5	2

# ES-300 PARTS LIST AND ASSEMBLY DRAWINGS

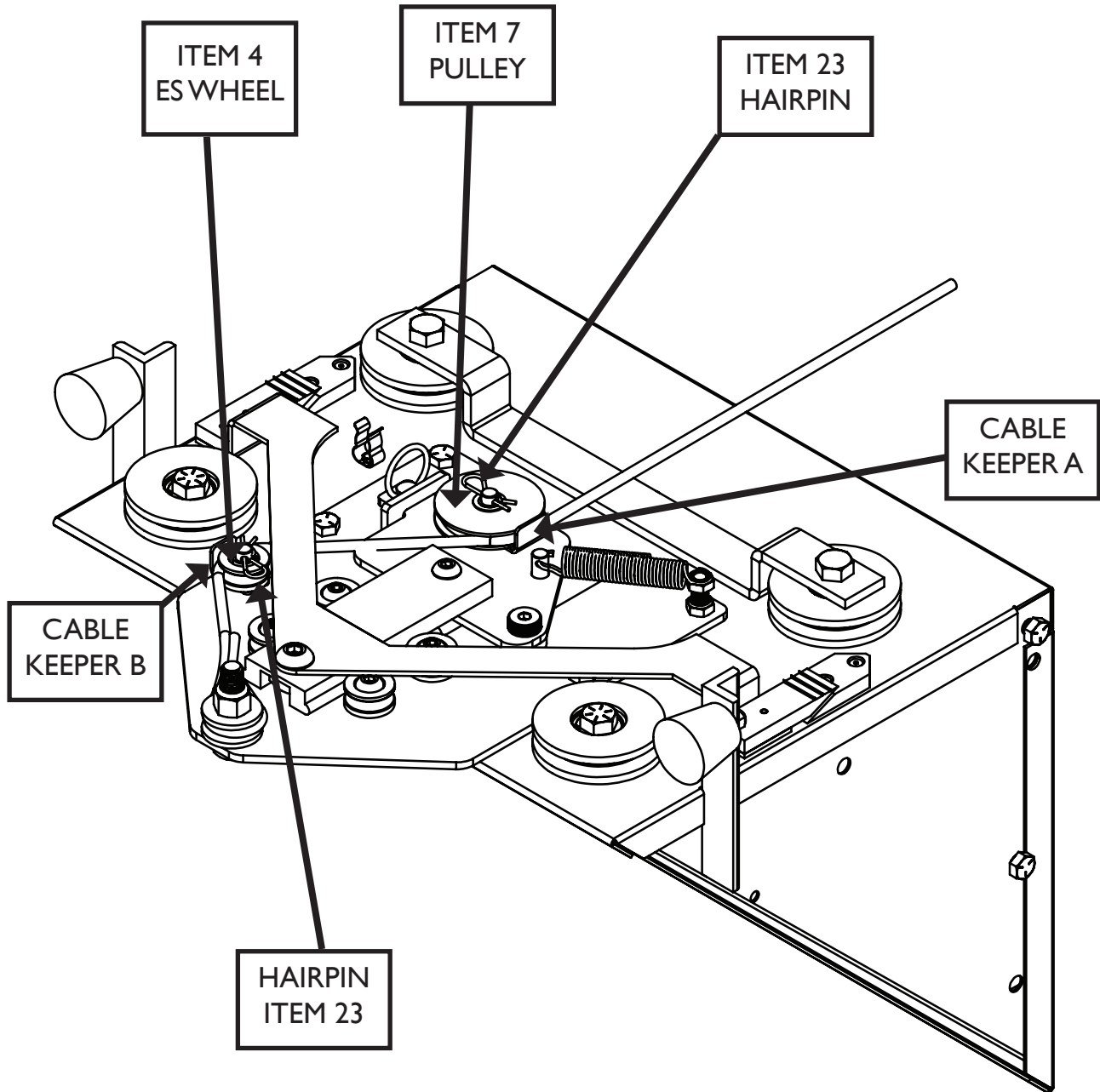
## FIGURE 3: CABLE ROUTING

To install the cable, the pulley (item 7) and the ES wheel (item 4) must be lifted from their respective positions by removing the hairpins (item 23). Route the cable as shown in figure 3 and reinstall items 4,7 and 23. The cable can now be attached to the anchor bolt.



# ES-300 PARTS LIST AND ASSEMBLY DRAWINGS

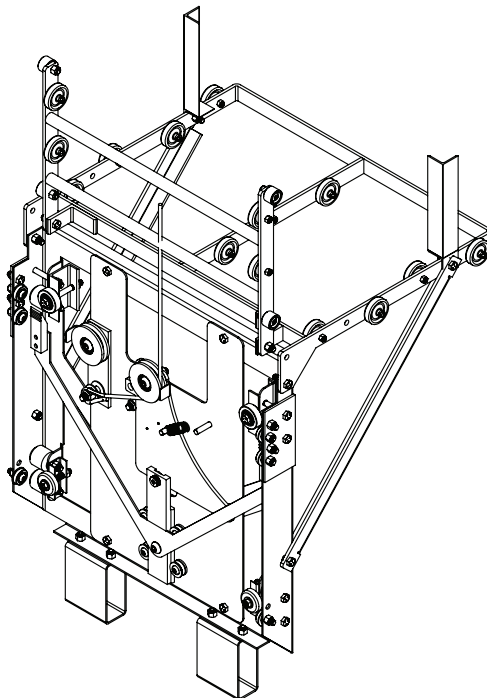
FIGURE 4: CABLE PROPERLY ROUTED





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

## **ES-500 ASSEMBLY INSTRUCTIONS & PARTS LIST/ASSEMBLY DRAWINGS**



# ASSEMBLY INSTRUCTIONS

Your new emergency stop braking system has been designed to prevent the uncontrolled descent of the carriage due to a cable or brake failure. It is **EXTREMELY IMPORTANT** to follow all of the instructions and warnings in this manual. Failure to do so could result in equipment damage or personal bodily injury.

- |   |
|---|
| 1.) Remove all parts from the box and inspect for any damage - <b>See Figure 1</b>  |
| 2.) If there is any damage, please contact Safety Hoist Company at 877-99-HOIST   |
| 3.) If there is no damage, assemble existing carriage flap and deck to the new trolley using the hardware provided  |
| 4.) Install the brake lockout pin by pulling the cam plate down so the holes on the cam plate match the holes on the backing plate. <b>If you do not install the brake lockout pin, it will be very difficult to install carriage onto track - See Figure 2</b>   |
| 5.) Install the carriage assembly on top of the track and ensure that the carriage assembly runs smoothly on the track, run the carriage assembly along the track until it reaches the base track section   |
| 6.) String the cable. Draw out enough cable to run up the backside of the track, through the peak, and back down to the carriage on the front side (the carriage side)  |
| 7.) <i>Single string instructions</i> - Run cable between the carriage guide wheel (item #11a) and "cable keeper A", and attach to anchor point - <b>See Figure 3</b><br>Please refer to ES-500 assembly drawing on page 21.<br><b>PLEASE SEE STEP "7a" ON THE NEXT PAGE TO VIEW THE INSTRUCTIONS TO DOUBLE STRING THE ES-500</b> |

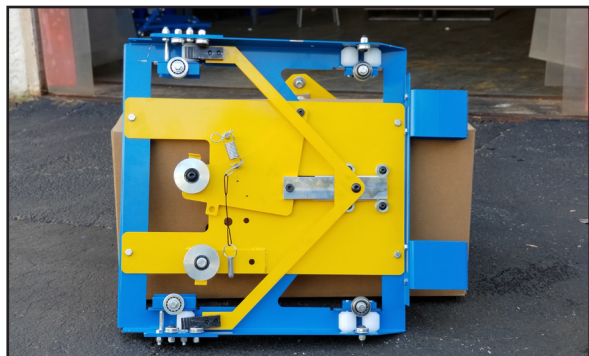


FIGURE 1



FIGURE 2



FIGURE 3

Item #11a      Cable Keeper A

# ASSEMBLY INSTRUCTIONS

Your new emergency stop braking system has been designed to prevent the uncontrolled descent of the carriage due to a cable or brake failure. It is **EXTREMELY IMPORTANT** to follow all of the instructions and warnings in this manual. Failure to do so could result in equipment damage or personal bodily injury.

7a.) Double string instructions - Run cable between item #1 Ia and cable keeper A and around item #1 Ib and cable keeper B, than back up to the snap hook on pulley - **See Figure 4**

*Please refer to ES-500 assembly drawing on page 22.*

8.) **WARNING! VERY IMPORTANT!** Remove the brake lockout pin that was installed in STEP 3

9.) At this point you are ready to raise the ladder to its desired position for operation

10.) Once in position, go behind/underneath the ladder and while wearing protective gloves, pull the cable down, causing the carriage to rise. Then quickly release the cable to stimulate failure. If the carriage stops in place you are ready to attach the power unit. If it does not, please review step 3 - 9. If it still does not work, call us at 877-99-HOIST - **See Figure 5**

11.) Attach the power unit at this time by hooking it onto the fifth rung from the bottom and pin in place with eyebolt

12.) Before operating, make sure that the cable slack is evenly distributed across the winch drum by applying tension to the cable with a gloved hand. At this point you are now ready to operate your hoist



FIGURE 4

Cable Keeper B

Item #1 Ib



FIGURE 5

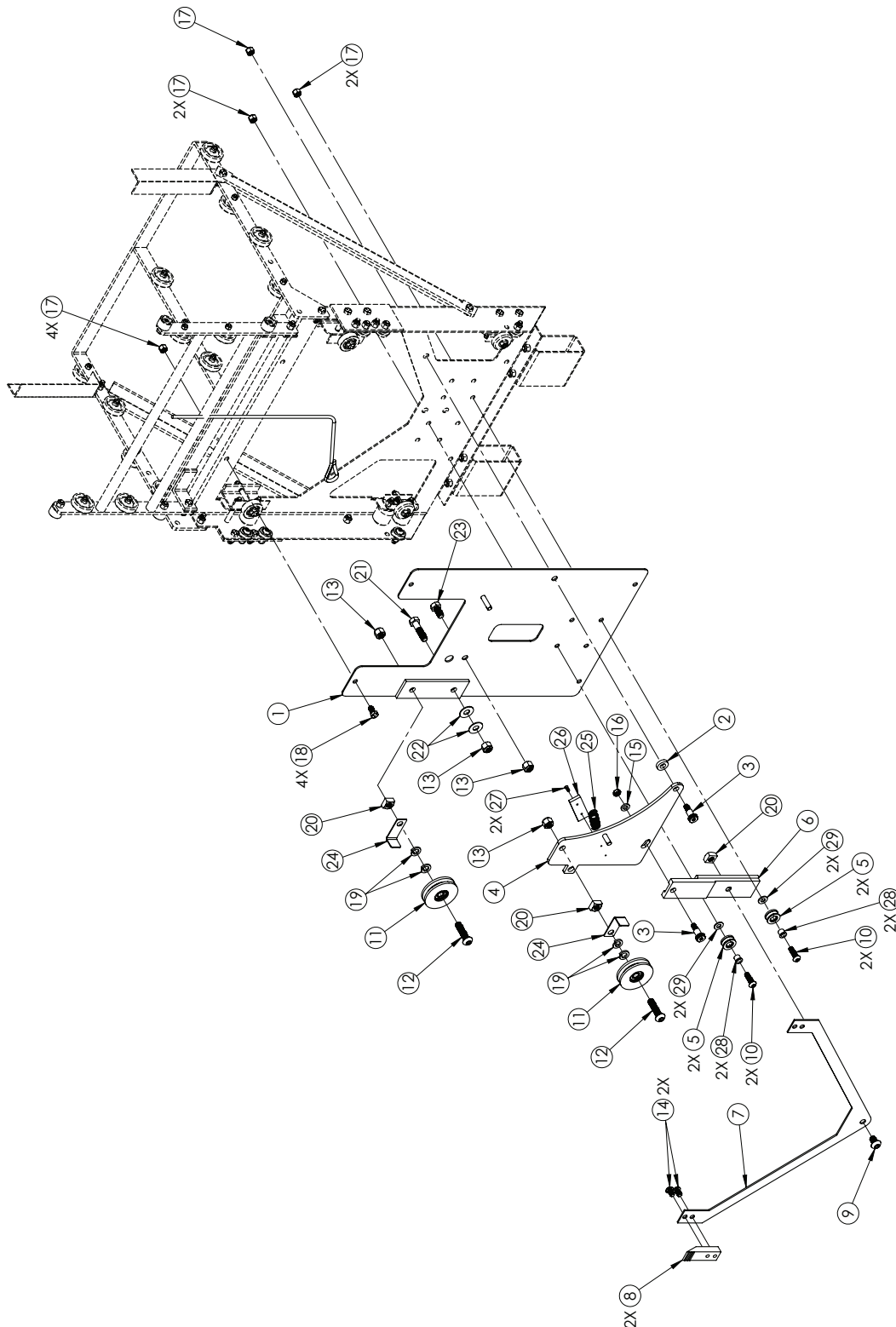
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## DISASSEMBLY AND STORAGE

- 1.) Remove power unit and draw out enough cable to lower hoist to the ground
- 2.) Lower hoist
- 3.) SINGLE STRING: Remove cable from anchor point
  - 3a.) **DOUBLE STRING:** Remove cable from snaphook at peak
- 4.) SINGLE STRING: Remove cable from carriage guide wheel (**item #11a**) and cable keeper A
  - 4a.) **DOUBLE STRING:** Remove cable from item #11b and cable keeper B, and then item #11a and cable keeper A
- 5.) Pull cable thru peak and rewind cable on cable drum
- 6.) Reinstall the brake lockout pin to allow the carriage to be removed from the track
- 7.) Remove carriage
- 8.) Remove brake lockout pin (*by leaving lockout pin installed, it puts strain on the spring*)

# ES-500 PARTS LIST AND ASSEMBLY DRAWINGS

FIGURE I: PLEASE REFER TO PARTS LIST ON PAGE 16



PLEASE TURN THE PAGE SIDEWAYS TO VIEW

# ES-500 PARTS LIST AND ASSEMBLY DRAWINGS

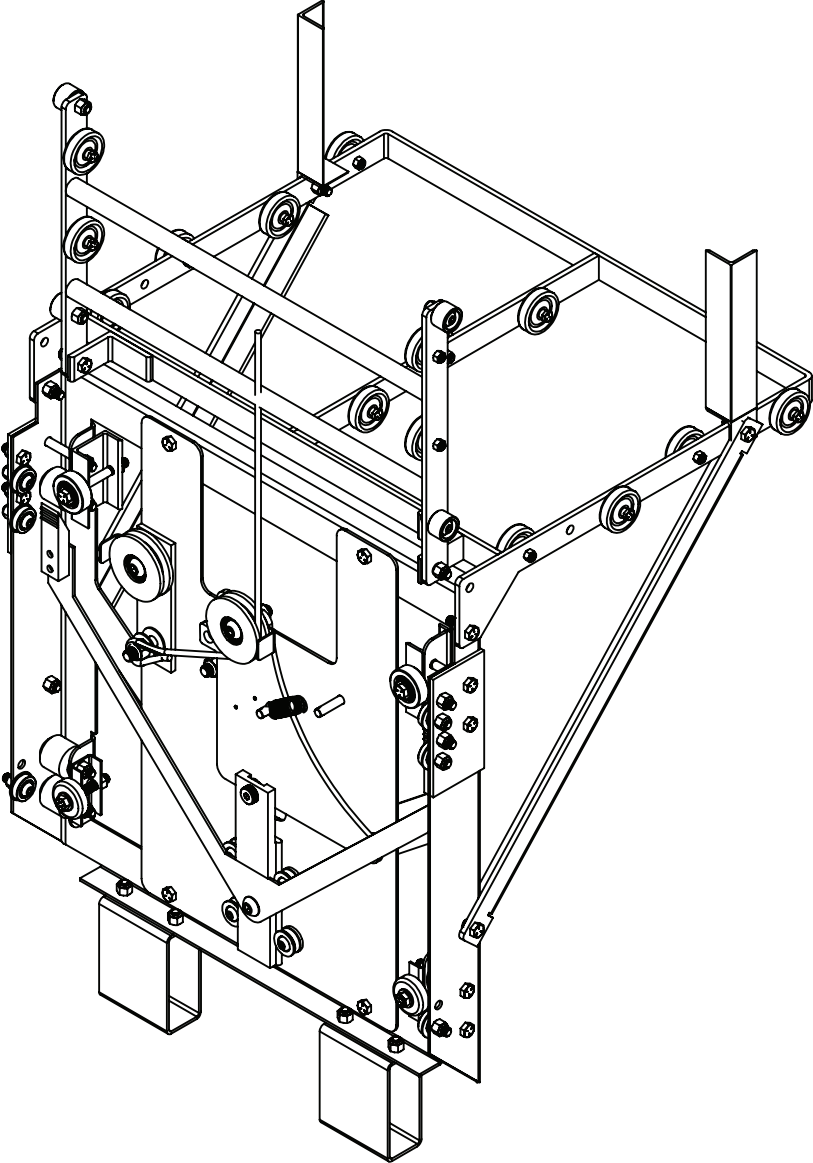
## FIGURE I PARTS LIST:

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	EB-301	PLATE, EMERGENCY BRAKE	1
2	0.5 ID X 1.0 OD X .25 THK BEARING	1/2 ID X 1.0 OD X 1/4 THK BEARING	1
3	.375-16 X .50 X .75 LG SHSS	3/8-16 X 1/2 X 3/4 LG SHSS	2
4	EB-308	CAM PLATE	1
5	MP-C040	ES WHEEL	4
6	EB-304	SLIDE	1
7	EB-302	SUPPORT ARM, BRAKE WEDGE	1
8	EB-303	BRAKE WEDGE	2
9	0.5-13 X .75 LG BHCS	1/2-13 X 3/4 LG BHCS	1
10	.375-16 X 1.25 LG BHCS	3/8-16 X 1 1/4 LG BHCS	4
11	CW101	WHEEL, CARRIAGE GUIDE	2
12	0.5-13 X 2.0 LG BHCS	1/2-13 X 2.0 LG BHCS	2
13	0.5-13 LN	1/2-13 LOCKNUT	4
14	.375-16 X .625 LG BHCS	3/8-16 X .625 LG BHCS	4
15	0.5 ID X .75 OD X .125 THK WASHER	1/2 ID X 3/4 OD X 1/8 THK WASHER	1
16	.375-16 THIN LN	3/8-16 THIN LN	1
17	.375-16 LN	3/8-16 LOCKNUT	9
18	.375-16 X .75 LG HHCS	3/8-16 X 3/4 LG HHCS	4
19	0.5 LW	WASHER, LOCK, 0.5	4
20	0.5-13 SN	NUT, SQUARE, 0.5-13	3
21	0.5-13 X 2.0 LG HHCS	1/2-13 X 2.0 LG HHCS	1
22	0.5 FW	1/2 FW	2
23	0.5-13 1.0 LG HHCS	1/2-13 X 1.0 LG HHCS	1
24	EB-109	CABLE GUARD	2
25	HD-D431	BRAKE SPRING	1
26	EB-310	WEAR PAD	1
27	6-32 X.5 LG FHCS	6-32 X .5 LG FHCA	2
28	.375 ID X .50 OD FLANGED BRG.	FLANGED SLEEVE BEARING	4
29	.375 FW	3/8 FLAT WASHER	4

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# ES-500 PARTS LIST AND ASSEMBLY DRAWINGS

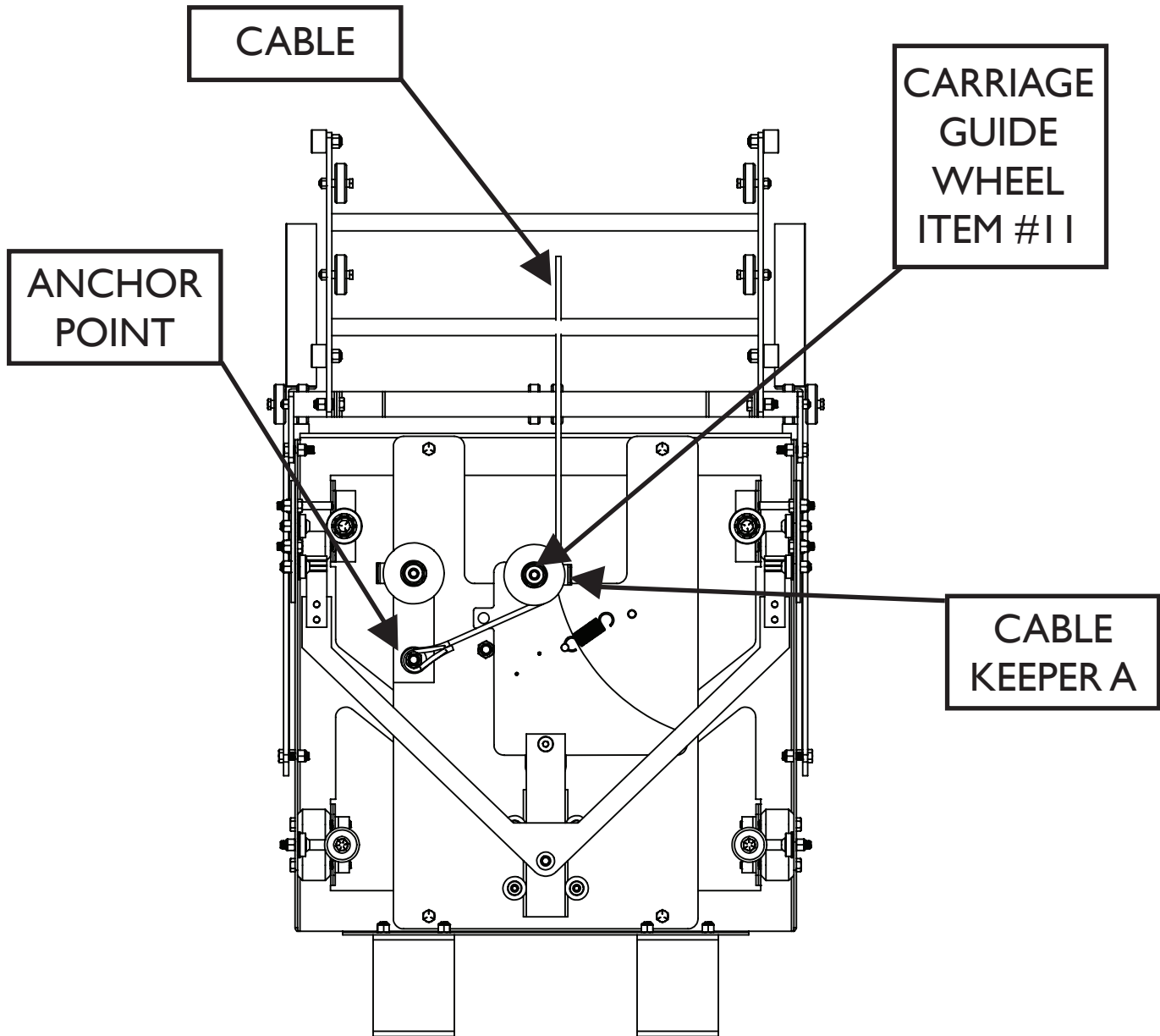
FIGURE 2: FULL ASSEMBLY





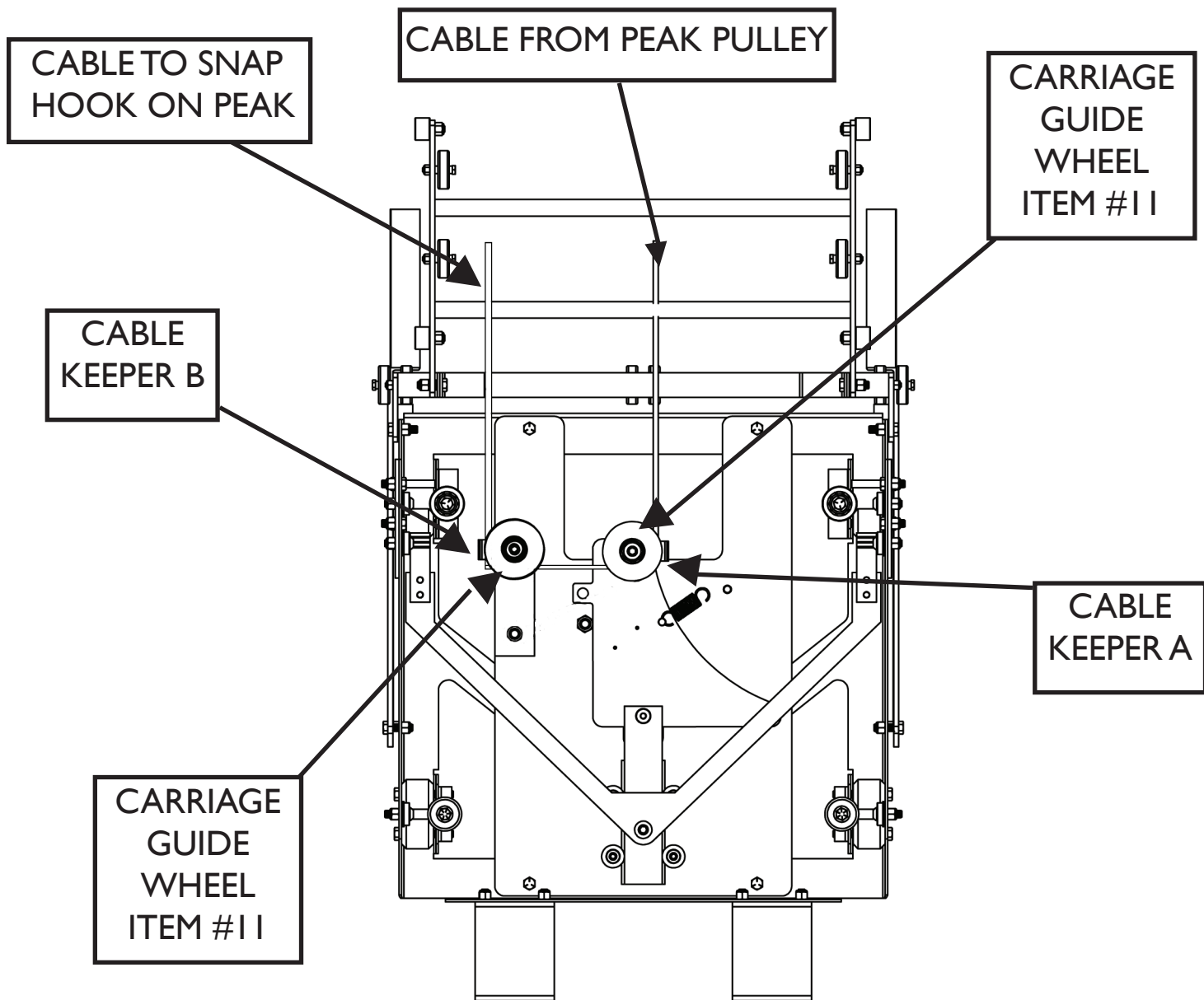
# ES-500 PARTS LIST AND ASSEMBLY DRAWINGS

FIGURE 3: CABLE ROUTING - SINGLE STRING



# PARTS LIST AND ASSEMBLY DRAWINGS

FIGURE 4: CABLE ROUTING - DOUBLE STRING



## **SAFETY HOIST COMPANY LIMITED WARRANTY**

REPLACES ALL DATED OR UNDATED LIMITED WARRANTIES DATED BEFORE JUNE 25, 2017.

Safety Hoist Company will at its option, repair or replace any part or parts of the Safety Hoist material hoist that are defective in material or workmanship with the exclusion of the motor/engine which maintain a separate warranty provided by the manufacturer of the motor/engine. The terms of the warranty of the motor/engine are provided on the previous page.

The limited warranty on all parts except the motor/engine is in effect for 1 year from the date of purchase.

Safety Hoist Company reserves the right to inspect the equipment for misuse, abuse or failure to maintain the equipment properly.

Safety Hoist Company will make reasonable efforts to repair or replace defective equipment in a timely manner, but assumes no liability or expenses incurred for the time lost as a result of the repair or replacement.

The defective unit or parts should be returned to the dealer where the unit was purchased or contact Safety Hoist Company at 877-994-6478.

There is no other express warranty implied. Warranties including those of merchantability and fitness for a particular purpose are limited to one year from purpose or to the extent permitted by law. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you. This is the exclusive remedy and liability for incidental and consequential damages under any and all warranties are excluded to the extent permitted by law. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Safety Hoist Company shall be relieved of its performance of the duties under this warranty if any damage has been caused to the product as a result of misuse, abuse, failure to maintain the equipment or Act of God.