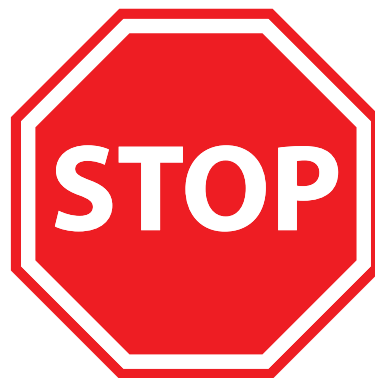


SAFETY HOIST^{CO.}

OPERATOR'S MANUAL

Emergency Stop Braking System

MODELS: ES-300 / ES-500



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.

DO	DON'T
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

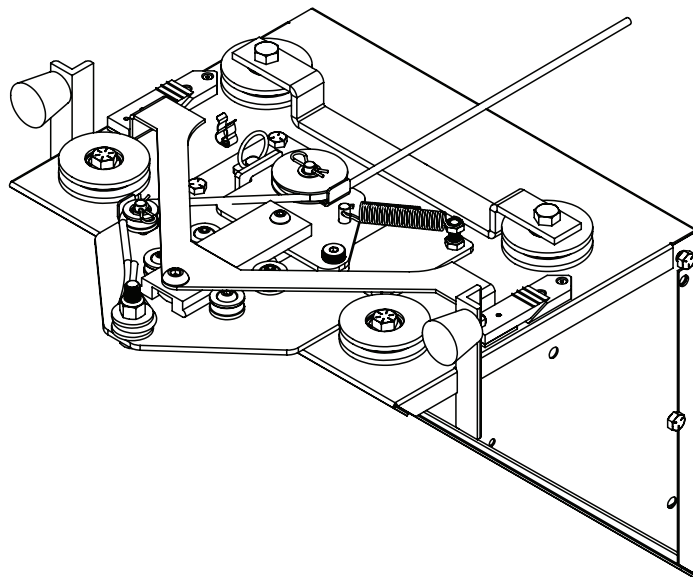
EMERGENCY ENGAGEMENT:

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^{CO.}

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 - **See Figure 1**
- 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. **If you do not install the brake lockout pin, it will be very difficult to install carriage onto track - See Figure 2**
- 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)

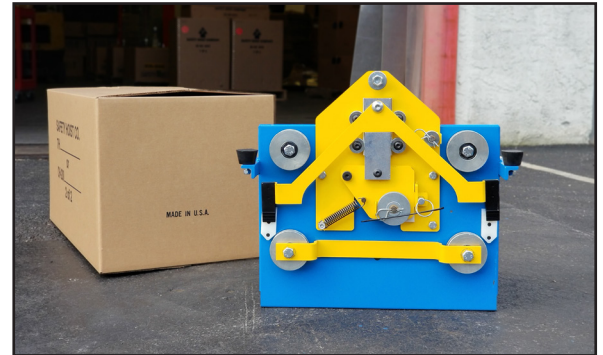


FIGURE 1

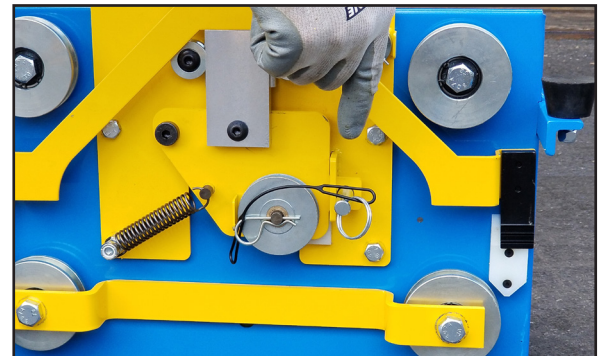


FIGURE 2

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**

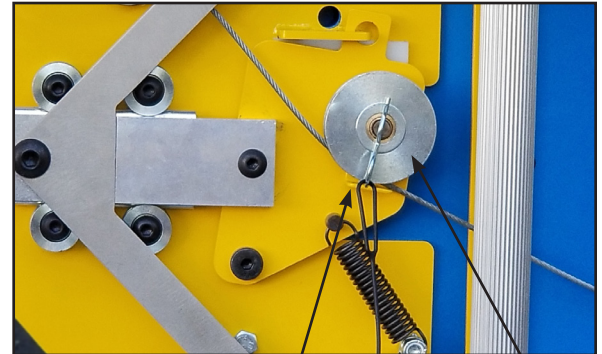


FIGURE 3 Cable Keeper A Item #7

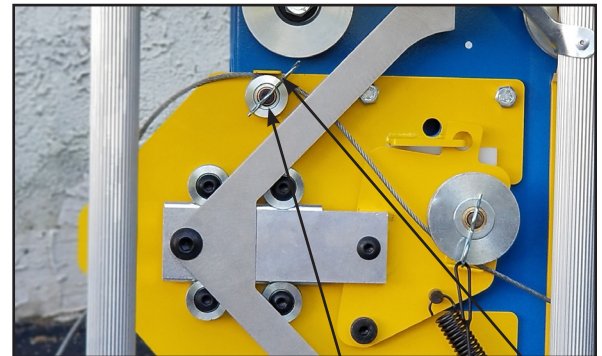


FIGURE 4 Item #4 Cable Keeper B



FIGURE 5

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

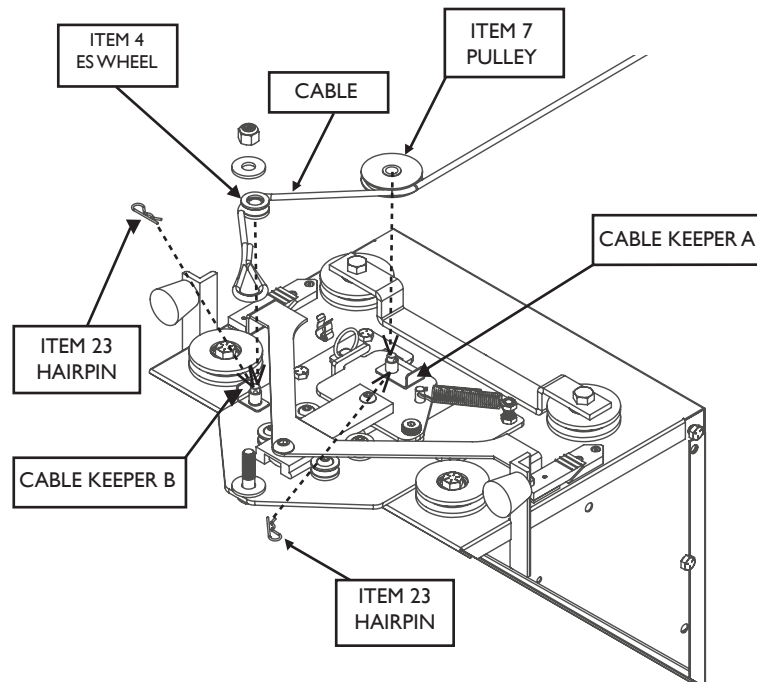
13.) Attach the V-belt to the power pack by pushing it over the belt guide bar, between the belt guard opening and then looping it over the engine drive pulley

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

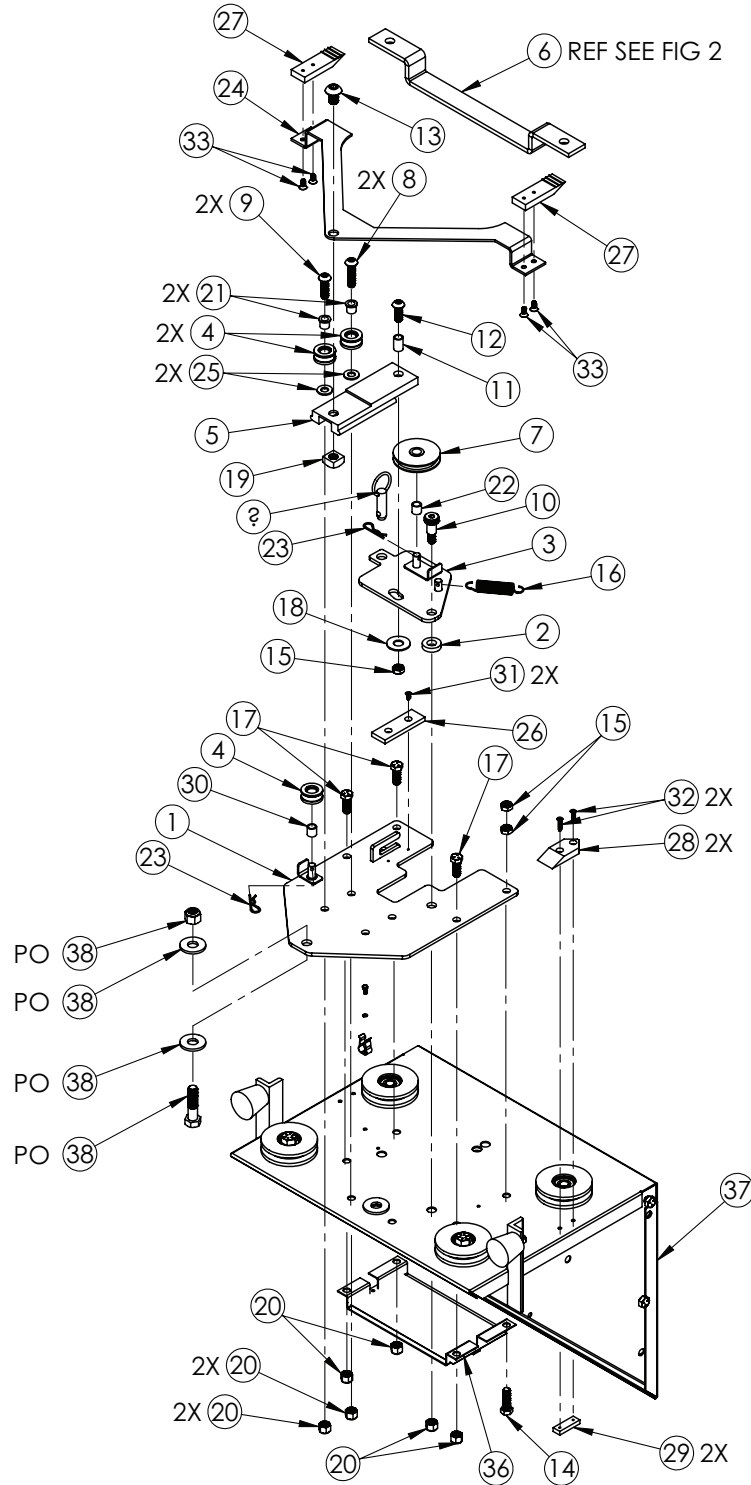
- 1.) Lower the carriage to the ground and remove the cable from the carriage anchor bolt
- 2.) Remove hairpin (**item 23**) from ES wheel (**item 4**)
- 3.) Pull cable free of ES wheel (**item 4**) and cable keeper B
- 4.) Reinstall ES wheel (**item 4**) and hairpin (**item 23**)
- 5.) Remove hairpin (**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

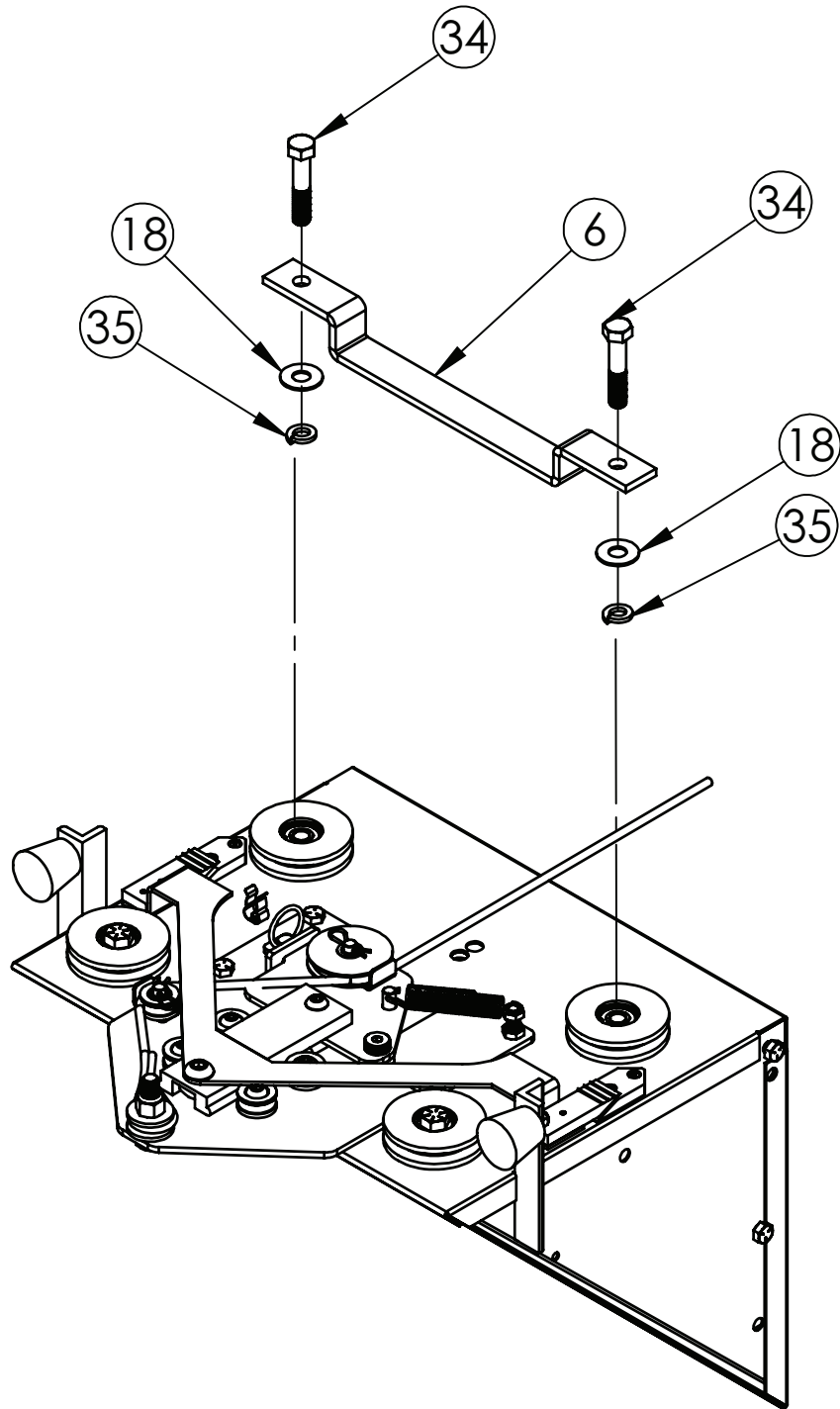
ES-300 PARTS LIST AND ASSEMBLY DRAWINGS

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

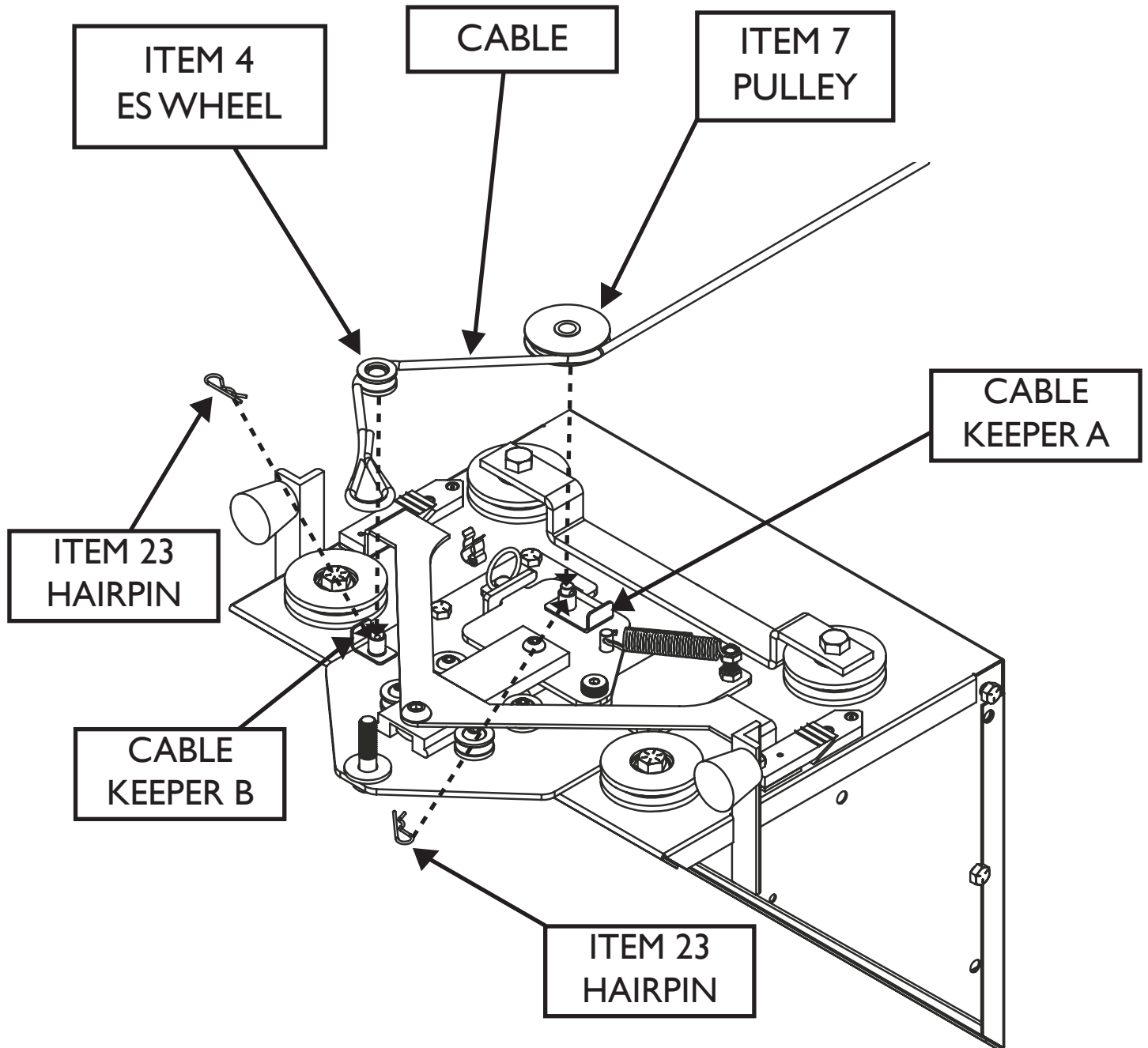
FIGURE 1 AND 2 PARTS LIST:

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

