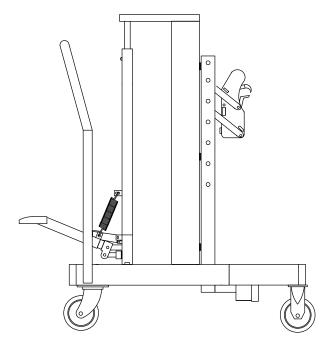


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# OPERATION / MAINTENANCE INSTRUCTIONS FOR

ERGONOMIC DRUM TRANSPORTER

Model DRUM-55-FSP



### INTRODUCTION

Ergonomic drum transporters are designed for lifting and moving drums/barrels in a wide variety of industrial settings. They can be used for loading and unloading of drums from conventional wood pallets, containment or "spill" pallets and platform scales. These units vary in capacity up to 800lbs. An assortment of options and modifications to suite the customer's needs are also available. This manual contains information to acquaint you with the safe and proper use of the drum transporter as well as its upkeep. This manual should be available to personnel working with the unit. Before operating this unit, read and understand the entire section to become familiar with the unit.

## SAFETY PRACTICES

- 1. Do not lift loads that exceed the unit's rated capacity.
- Do not transport or move a drum while the mast is raised to, or near, its maximum height. Lower the mast so the drum has only the necessary floor clearance.
- 3. Keep hands or feet away from "V" area in front of the unit, as well as, out from under the bottom of the drum during operation.
- 4. Do not use the unit on inclined floors having a slope of more than 5 degrees. Consult your supervisor if you are unsure of this requirement.
- 5. Keep hands or other objects clear of the lifting cylinder, clamping head and moving mast during operation.
- 6. Be certain that the lift cylinder rod is securely in place before lifting.
- 7. Never lay the unit down horizontally without locking the inner mast and outer mast together.
- 8. Never leave the unit unattended without applying the foot wheel lock.

### ECONOMY DRUM TRANSPORTER OPERATING INSTRUCTIONS

This unit incorporates the use of an automatic positive clamping mechanism. Clamping jaws will grab or release the drum automatically when the clamping head is raised (against the drum) or lowered.

The unit is designed to handle a wide variety of rimmed drums with different heights. The clamping head is pin-mounted on the outer mast. There are seven adjustment holes on the mast to allow adjustment of the clamping head to different drum heights. The height of the clamping head can be adjusted by positioning it to the different adjustment holes. Units are shipped preset to pick up a 35" tall, standard 55-gallon drum.

- 1. Remove all packing materials, protective strapping and wood shipping blocks. Before using the unit, open the breather screw on the hydraulic cylinder (figure 1) to prevent airlock.
- 2. To lift a drum, push the unit toward the drum until the clamping head contacts firmly against the drum sidewall. If desired, the unit can be secured in this position by engaging the foot wheel locks. Raise the clamping head by stepping on the pump pedal located on the right back side of the unit. The jaws will automatically grab the top chime when the clamping head is raised. The drum will be raised with further pumping. For use on fibre drum, do not engage the lower jaw against the drum sidewall until it is positioned above the skirt below the drum chime. Failure to do so will cause the clamping head to slip and may tear the skirt. The jaws will automatically grab the top chime when the clamping head is raised. WARNING: Do not attempt to overload the unit beyond its rated capacity, or raise the drum beyond its maximum lifting height.
- 3. To transport a drum, disengage foot wheel locks, if applicable. Adjust the height of the drum to approximately 2 or 3 inches above the floor. WARNING: Never move the drum at its maximum lifting height. Then push or pull the unit to the desired location. WARNING: Never leave the loaded unit without applying foot wheel locks. Doing so may cause the unit to roll by itself and cause property damage or personal injury. WARNING: Never operate the unit on an inclined on an inclined floor with a slope of more than 5 degrees.
- To pickup a drum from a pallet, push the unit forward and approach the drum from a corner of pallet until the clamping head firmly contacts sidewall of the drum. Then follow Step 2.

- 5. To disengage the drum, use your foot to gently depress the release valve pedal on the left back side of the unit. The clamping jaws will retract automatically when the drum comes to rest on the floor or pallet. Simply pull the unit away from the drum to free it from the drum. WARNING: Never press the release valve pedal too hard. It may cause the drum to fall to fast and damage the drum.
- 6. To adjust the clamping head to a different adjustment hole, use one hand to hold the clamping head and use another hand to pull out the L-shaped adjusting pin. Slide the head up or down to the desired height and re-insert the pin securely in place.

### **MAINTENANCE INSTRUCTIONS**

- Before every use, check that all springs, pins, casters and its anchors are in good working order. Check that all hydraulic jack works properly without leakage. WARNING: Do not operate the unit if any part is missing or in poor condition, as this will directly affect the performance of the unit.
- 2. On a monthly basis, spray light grade oil on moving parts in the clamping mechanism to ensure smooth operation. We recommend the clamping mechanism be kept well oiled and free from foreign materials that may impede proper operation of jaws and springs. The caster wheels equipped on this unit have grease fittings and require periodic lubrication. WARNING: Do not leave unit outside in rain, snow, etc., for extended periods.
- 3. For heavy use, we recommend that all springs, hydraulic oil and hydraulic cylinder sealing components be replaced once each year to ensure a long working life.

# **Ergonomic Drum Transporter with EG1 Single Clamping Mechanism for use on Fiber Drums**

## **IMPORTANT NOTE FOR HANDLING FIBER DRUMS**





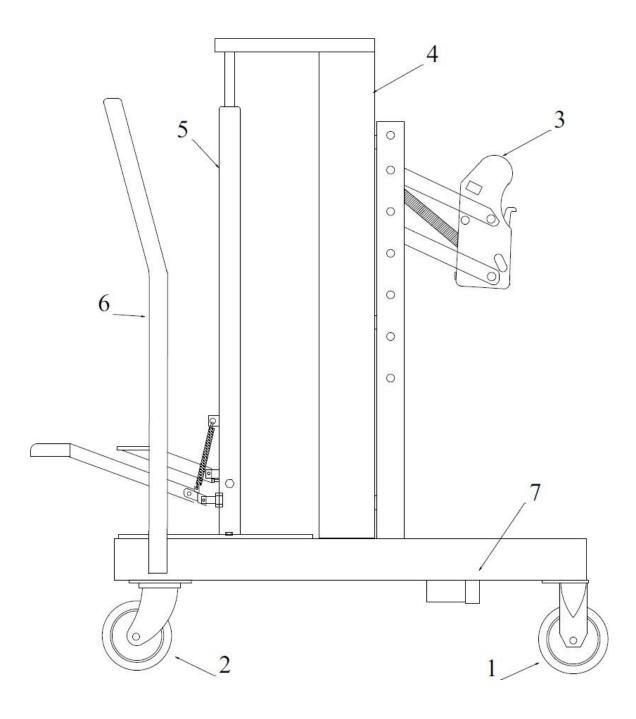
Raise the clamping mechanism until the lower jaw is just high enough to contact the metal skirt just below the locking band.



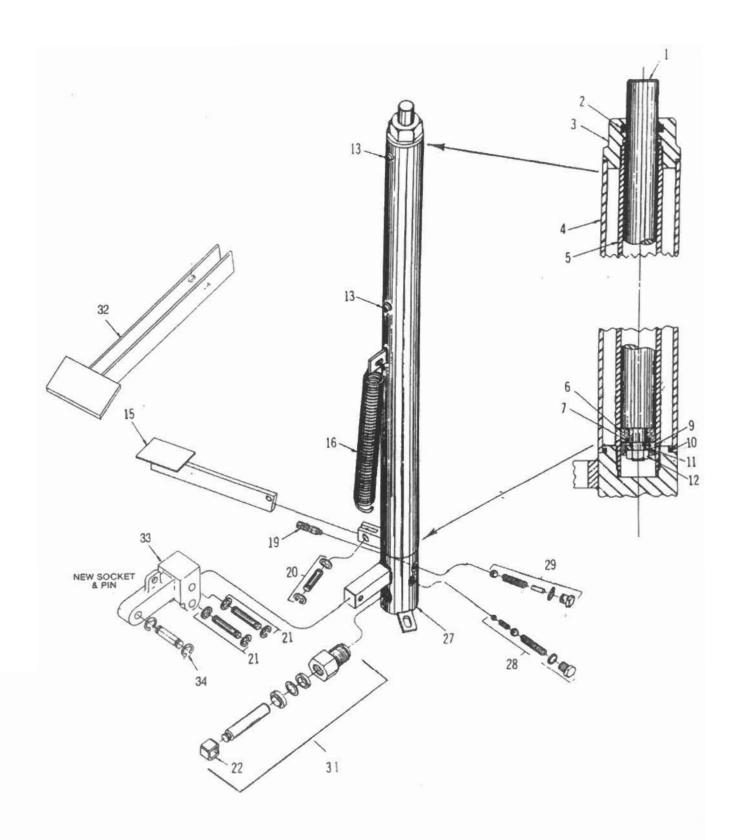
Then move the transporter forward so the lower jaw contacts the metal skirt under the drums locking band and continue to elevate the drum upward. Do not allow the lower jaw to make contact with the paper portion of the fiber drum when trying to elevate the drum.

## **IMPORTANT:**

It is important that the lower jaw does not contact the paper portion of the drum when raising the drum. Keep the lower jaw away from the paper portion of the drum until the lower jaw of the clamping mechanism is high enough to contact the metal skirt below the locking band. Then push the transporter forward to contact the skirt and continue to elevate the clamping mechanism. If the lower jaw contacts the paper portion of the drum when elevating the drum, the clamping mechanism will attempt to clamp the drum in this position and miss or tear the skirt. If this is done incorrectly, lower the clamp and try again. The clamping mechanism can also grip the drum without the lid and locking band.



HF500 HYDRAULIC FOOT OPERATED LIFT CYLINDER PARTS

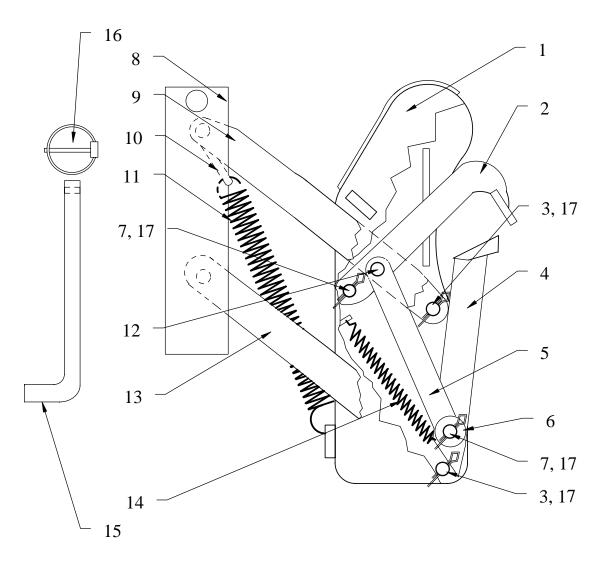


## HF500 FOOT OPERATED HYDRAULIC CYLINDER PARTS LIST

ITEM		PART NO.	DESCRIPTION
1		HF500-6	RAM - Specify travel
2	К	HF500-4	Top Nut O-Ring
3		HF500-3	Top Nut
4		HF500-2	Reservoir Tube - Specify Travel
5		HF500-5	Inside Cylinder Tube - Specify Travel
6		HF500-8	RAM Cup Support Washer
7		HF500-8A	Turn Piston Over
9	К	HF500-7	RAM Cup
10	К	HF500-32	Body O-Ring (2)
11		HF500-9	RAM Cup Washer
12		QH525-13	RAM Cup Nut
13		HF500-30	Filler Screw & Washer (2)
15		HF500-23	Foot Release Lever Assembly
16		HF500-22	Piston Lever Return Spring
19	К	HF500-15RP	Release Plunger (including seals)
20	К	HF500-24RP	Release Lever Pin (including rings)
21	К	HF500-25RP	Lever Socket Pin (2) (including ring)
22	К	HF500-29	Pump Piston Clip
27		HF500-1RP	Body Assembly - NOT AVAILABLE
28	К	HF500-51RP	Pump Valve
29	К	HF500-50RP	Release Valve
30		HF500-53RP	Hydraulic Repair Kit (all K items)
30		HF500-53RP-SA	Hydraulic Repair Kit (all K items) w/ SS & FDA applications
31	К	HF500-54RP	Pump Piston Assembly (complete)
31	К	HF500-54RP-SA	Pump Piston Assembly (complete) w/ SS & FDA applications
32		MK2295-44	Lever Arm with Rubber
33		HF500-43	Socket Cap Screw
34	К	HF500-42RP	Lever Arm Pin (including rings)
		HF500-38	Pump Piston ONLY

NOTE: RV model overload assembly parts are not available. Unit must be returned to factory for repair.

## ERGO CLAMP MECHANISM - Part List



# **1 SERIES LIGHT DUTY SINGLE CLAMPING MECHANISM PARTS LIST**

<b>ITEM</b>	<u>PART NO.</u>	DESCRIPTION	<u>QTY</u>
1	6302	Housing (Black Powder Coating)	1
1	6302SS	Housing (Stainless Steel)	1
2	9107	Upper Jaw (Black Powder Coating)	1
2	9107SRJ	Upper Jaw (Spark Resistant)	1
3	15104-1	Pin, Fibre Guard, Housing to Clevis (zinc)	2
4	7107	Lower Jaw (Black Powder Coating)	1
4	7107SRJ	Lower Jaw (Spark Resistant)	1
5	13009-1	Link, Jaw to Jaw (zinc)	2
6	1470-6	Custom Washer EG (zinc)	2
7	16104-1	Pin, Upper Jaw Link (zinc)	2
8	8002	Adjustment Slide (Black Powder Coating)	2
8	8002Z	Adjustment Slide (FDA Powder Coating)	2
8	8002SS	Adjustment Slide (Stainless Steel)	2
9	5912	Upper Clevis 8" (Black Powder Coating)	1
9	5912Z	Upper Clevis 8" (FDA Powder Coated)	1
9	5912SS	Upper Clevis 8" (Stainless Steel)	1
9	5912S	Upper Clevis 6" (Black Powder Coating - Double Mast)	1
9	5912ZS	Upper Clevis 6" (FDA Powder Coating - Double Mast)	1
9	5912SS-S	Upper Clevis 6" (Stainless Steel - Double Mast)	1
10	8996-2	Clevis Spring Hook (Stainless Steel)	1
11	8206	Clevis Spring (zinc)	2
12	41041	Pin, Upper Jaw to Link, short (zinc)	1
13	6912	Lower Clevis 7 1/2" (Black Powder Coating)	1
13	6912Z	Lower Clevis 7 1/2" (FDA Powder Coated)	1
13	6912SS	Lower Clevis 7 1/2" (Stainless Steel)	1
13	6912S	Lower Clevis 5 1/2" (Black Powder Coating - Double Mast)	1
13	6912ZS	Lower Clevis 5 1/2" (FDA Powder Coated - Double Mast)	1
13	6912SS-S	Lower Clevis 5 1/2" (Stainless Steel - Double Mast)	1
14	1206	Spring, Jaw to Housing (zinc)	1
15	10204-1	Adjusting Pin (zinc)	1
16	9016	Circle Cotter "Hang 1" Pin Clip (zinc)	1
17	3006-CP	Cotter Pin, 1/8" x 3/4" (zinc)	8
	WLG	12oz White Lithium Grease	1

## Assembled Price #1 thru #17

9004	EG1 Single Clamping Mechanism (Black Powder Coating)
9004S	EG1 Single Clamping Mechanism (Black Powder Coating - Double Mast)
9004SRC	EG1 Single Clamping Mechanism (Stainless Steel Housing - Non-Sparking)
9004SRC-S	EG1 Single Clamping Mechanism (Stainless Steel Housing - Non-Sparking - Double Mast)
9004SS	EG1 Single Clamping Mechanism (Stainless Steel - Non-Sparking)
9004SS-S	EG1 Single Clamping Mechanism (Stainless Steel - Non-Sparking - Double Mast)

Updated: 2/5/2014

# **1 SERIES PREVENTATIVE MAINTENANCE KIT**

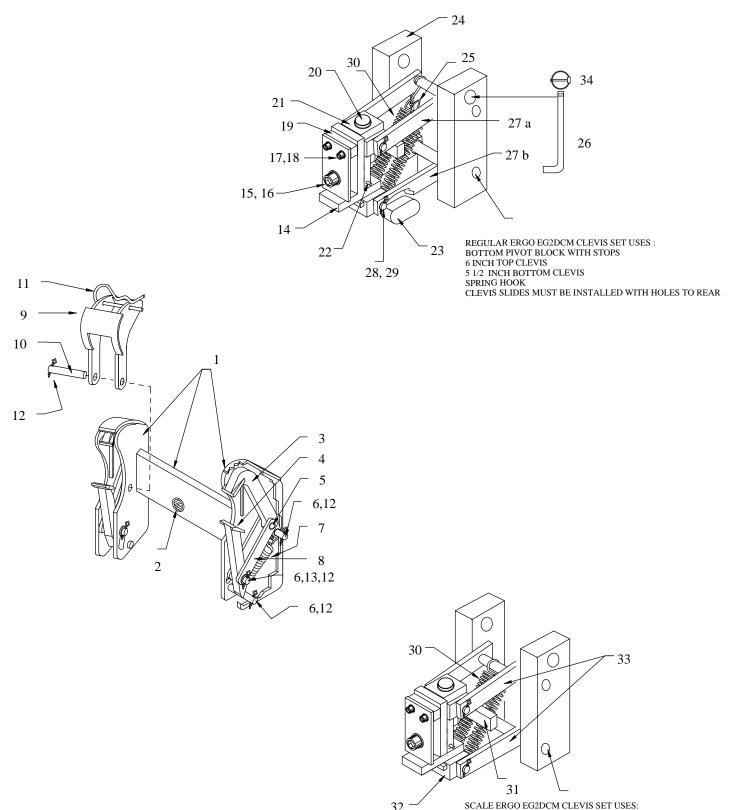
<u>ITEM</u>	<u>PART NO.</u>	DESCRIPTION	<u>QTY</u>
11	8206	Clevis Spring (zinc)	2
14	1206	Spring, Jaw to Housing (zinc)	1
16	9016	Circle Cotter "Hang 1" Pin Clip (zinc)	1
17	3006-CP	Cotter Pin, 1/8" x 3/4" (zinc)	8
	WLG	12oz White Lithium Grease	1

## **1 SERIES PREVENTATIVE MAINTENANCE WITH BELT CRADLE KIT**

<b>ITEM</b>	<u>PART NO.</u>	DESCRIPTION	<u>QTY</u>
11	8206	Clevis Spring (zinc)	2
13	5516E	Optional: Belt Cradle Kit (includes all hardware)	1
14	1206	Spring, Jaw to Housing (zinc)	1
16	9016	Circle Cotter "Hang 1" Pin Clip (zinc)	1
17	3006-CP	Cotter Pin, 1/8" x 3/4" (zinc)	8
	WLG	12oz White Lithium Grease	1

Updated: 2/5/2014

# ERGO CLAMPING MECHANISM



32 -

TOP PIVOT BLOCK WITH STOP BAR 3 INCH TOP & BOTTOM CLEVISES NO SPRING HOOK SLIDES MUST BE INSTALLED WITH CLEVIS HOLES FORWARD

# 2 SERIES LIGHT DUTY DOUBLE CLAMPING MECHANISM PARTS LIST

ITEMPART NO.DESCRIPTION17302RHousing, Double Clamp Mechanism (Black Powder Coating)17302RSSHousing, Double Clamp Mechanism (Stainless Steel)210001Bushing, Housing Yolk Trunion (zinc)39107Upper Jaw (Black Powder Coating)39107SRJUpper Jaw (Spark Resistant)47107Lower Jaw (Black Powder Coating)47107SRJLower Jaw (Spark Resistant)54104-1Pin, Upper Jaw to Link, Short (zinc)616104-1Pin, Upper Jaw Link (zinc)71206Spring, Jaw to Housing (zinc)813009-1Link, Jaw to Jaw (zinc)	OTY 1 1 2 2 2 2 2 2 2 4 2 4 2 2 2 2 2 16 4
17302RSSHousing, Double Clamp Mechanism (Stainless Steel)210001Bushing, Housing Yolk Trunion (zinc)39107Upper Jaw (Black Powder Coating)39107SRJUpper Jaw (Spark Resistant)47107Lower Jaw (Black Powder Coating)47107RJLower Jaw (Spark Resistant)54104-1Pin, Upper Jaw to Link, Short (zinc)616104-1Pin, Upper Jaw Link (zinc)71206Spring, Jaw to Housing (zinc)813009-1Link, Jaw to Jaw (zinc)	1 2 2 2 2 2 2 6 2 4 2 2 2 2 2 2 16
210001Bushing, Housing Yolk Trunion (zinc)39107Upper Jaw (Black Powder Coating)39107SRJUpper Jaw (Spark Resistant)47107Lower Jaw (Black Powder Coating)47107SRJLower Jaw (Spark Resistant)54104-1Pin, Upper Jaw to Link, Short (zinc)616104-1Pin, Upper Jaw Link (zinc)71206Spring, Jaw to Housing (zinc)813009-1Link, Jaw to Jaw (zinc)	2 2 2 2 2 6 2 4 2 2 2 2 2 2 16
39107Upper Jaw (Black Powder Coating)39107SRJUpper Jaw (Spark Resistant)47107Lower Jaw (Black Powder Coating)47107SRJLower Jaw (Spark Resistant)54104-1Pin, Upper Jaw to Link, Short (zinc)616104-1Pin, Upper Jaw Link (zinc)71206Spring, Jaw to Housing (zinc)813009-1Link, Jaw to Jaw (zinc)	2 2 2 6 2 4 2 2 2 2 2 16
39107SRJUpper Jaw (Spark Resistant)47107Lower Jaw (Black Powder Coating)47107SRJLower Jaw (Spark Resistant)54104-1Pin, Upper Jaw to Link, Short (zinc)616104-1Pin, Upper Jaw Link (zinc)71206Spring, Jaw to Housing (zinc)813009-1Link, Jaw to Jaw (zinc)	2 2 6 2 4 2 2 2 2 2 16
<ul> <li>4 7107</li> <li>4 7107SRJ</li> <li>4 2000</li> <li>5 4104-1</li> <li>6 16104-1</li> <li>7 1206</li> <li>8 13009-1</li> <li>2 1000</li> <li>2 1000<td>2 6 2 4 2 2 2 2 2 16</td></li></ul>	2 6 2 4 2 2 2 2 2 16
<ul> <li>4 7107SRJ Lower Jaw (Spark Resistant)</li> <li>5 4104-1 Pin, Upper Jaw to Link, Short (zinc)</li> <li>6 16104-1 Pin, Upper Jaw Link (zinc)</li> <li>7 1206 Spring, Jaw to Housing (zinc)</li> <li>8 13009-1 Link, Jaw to Jaw (zinc)</li> </ul>	2 6 2 4 2 2 2 2 2 16
54104-1Pin, Upper Jaw to Link, Short (zinc)616104-1Pin, Upper Jaw Link (zinc)71206Spring, Jaw to Housing (zinc)813009-1Link, Jaw to Jaw (zinc)	6 2 4 2 2 2 2 16
616104-1Pin, Upper Jaw Link (zinc)71206Spring, Jaw to Housing (zinc)813009-1Link, Jaw to Jaw (zinc)	2 4 2 2 2 2 16
71206Spring, Jaw to Housing (zinc)813009-1Link, Jaw to Jaw (zinc)	4 2 2 2 2 16
	2 2 2 2 16
	2 2 2 16
9 621 Fiber Drum Guard (Black Powder Coating)	2 2 16
9 621SS Fiber Drum Guard (Stainless Steel)	2 2 16
10 15104-1 Pin, Fibre Guard, Housing to Clevis (zinc)	16
11 7019 3-7/8" Hair Pin Clip (zinc)	
12 3006-CP Cotter Pin, 1/8" x 3/4" (zinc)	Δ
13 1470-6 Custom Washer EG (zinc)	-+
14 6012R Universal Body (Black Powder Coating)	1
14 6012RZ Universal Body (FDA Powder Coating)	1
15 8116 Trunion Screw 1/2-13UNC	1
16 8706 1/2" Lock Washer	1
17 7116 Socket Cap Screw (zinc)	2
18 6008 1/4" Lock Washer (zinc)	2
19 50064 Spacer (Black Powder Coating)	1
19 50064Z Spacer (FDA Powder Coating)	1
20 64041 Universal Pin (zinc)	1
21A 50021R Upper Pivot Block (Black Powder Coating)	1
21A 50021RZ Upper Pivot Block (FDA Powder Coating)	1
21B 50021RS Upper Pivot Block (Black Powder Coating - Double Mast)	1
21B 50021RZS Upper Pivot Block (FDA Powder Coating - Double Mast)	1
22 4506 Roll Pin (zinc)	1
23A 5012R Lower Pivot Block with Oval Stop Bars (Black Powder Coating)	1
23A 5012RZ Lower Pivot Block with Oval Stop Bars (FDA Powder Coating)	1
23B 5012RS Lower Pivot Block (Black Powder Coating- Double Mast)	1
23B 5012RZS Lower Pivot Block (FDA Powder Coating - Double Mast)	1
24 8002 Adjustment Slide (Black Powder Coating)	2
24 8002Z Adjustment Slide (FDA Powder Coating)	2
25 8996-2 Clevis Spring Hook (Stainless Steel)	1
26 10204-1 Adjusting Pin (zinc)	1
27A 5912R Upper Clevis 6" (Black Powder Coating)	2
27A 5912RZ Upper Clevis 6" (FDA Powder Coating)	2
27A 5912RS Upper Clevis 4 7/16" (Black Powder Coating - Double Mast)	2
27A 5912RZS Upper Clevis 4 7/16" (FDA Powder Coating - Double Mast)	2
27B 6912R Lower Clevis 5 1/2" (Black Powder Coating)	2
27B 6912RZ Lower Clevis 5 1/2" (FDA Powder Coating)	2
27B 6912RS Lower Clevis 4" (Black Powder Coating - Double Mast)	2
27B 6912RZS Lower Clevis 4" (FDA Powder Coating - Double Mast)	2
28 16033-1 Pin, Clevis (zinc)	2
29 6006-CP Cotter Pin, 5/32" x 1" (zinc)	4
30 8206 Clevis Spring (zinc)	2
31 9016 Circle Cotter "Hang 1" Pin Clip (zinc)	1

## Assembled Price #1 thru #31

4004R	EG2L Double Clamping Mechanism (Black Powder Coating)
4004RS	EG2L Double Clamping Mechanism (Black Powder Coating - Double Mast)
4004RSRC	EG2L Double Clamping Mechanism (Stainless Steel Housing - Non-Sparking)
4004RSRC-S	EG2L Double Clamping Mechanism (Stainless Steel Housing - Non-Sparking- Double Mast)

## **2 LIGHT DUTY SEREIES PREVENTIVE MAINTENANCE KIT**

<u>PART NO.</u>	DESCRIPTION	<u>QTY</u>
1206	Spring, Jaw to Housing (zinc)	2
9016	Circle Cotter "Hang 1" Pin Clip (zinc)	1
7019	3-7/8" Hair Pin Clip (zinc)	2
3006-CP	Cotter Pin, 1/8" x 3/4" (zinc)	16
8206	Clevis Spring (zinc)	2
5516E	Optional: Belt Cradle Kit (includes all hardware)	1
WLG	12oz White Lithium Grease	1

Updated: 2/5/2014

### LIMITED WARRANTY

Vestil Manufacturing Corporation ("Vestil") warrants this product to be free of defects in material and workmanship during the warranty period. *Our warranty obligation is to provide a replacement for a defective original part if the part is covered by the warranty, after we receive a proper request from the warrantee (you) for warranty service.* 

### Who may request service?

Only a warrantee may request service. You are a warrantee if you purchased the product from Vestil or from an authorized distributor AND Vestil has been fully paid.

### What is an "original part"?

An original part is a part used to make the product as shipped to the warrantee.

### What is a "proper request"?

A request for warranty service is proper if Vestil receives: 1) a photocopy of the <u>Customer Invoice</u> that displays the shipping date; AND 2) a <u>written request</u> for warranty service including your name and phone number. Send requests by any of the following methods:

<u>Mail</u>	<u>Fax</u>	<u>Email</u>
Vestil Manufacturing Corporation	(260) 665-1339	sales@vestil.com
2999 North Wayne Street, PO Box 507	Phone	
Angola, IN 46703	(260) 665-7586	

In the written request, list the parts believed to be defective and include the address where replacements should be delivered.

### What is covered under the warranty?

After Vestil receives your request for warranty service, an authorized representative will contact you to determine whether your claim is covered by the warranty. Before providing warranty service, Vestil may require you to send the entire product, or just the defective part or parts, to its facility in Angola, IN. The warranty covers defects in the following *original* dynamic components: motors, hydraulic pumps, electronic controllers, switches and cylinders. It also covers defects in *original* parts that wear under normal usage conditions ("wearing parts"): bearings, hoses, wheels, seals, brushes, batteries, and the battery charger.

#### How long is the warranty period?

The warranty period for original components is <u>30 days</u>. The warranty period begins on the date when Vestil ships the product to the warrantee. If the product was purchased from an authorized distributor, the period begins when the distributor ships the product. Vestil may extend the warranty period for products shipped from authorized distributors by *up to* 30 days to account for shipping time.

#### If a defective part is covered by the warranty, what will Vestil do to correct the problem?

Vestil will provide an appropriate replacement for any *covered* part. An authorized representative of Vestil will contact you to discuss your claim.

#### What is not covered by the warranty?

- 1. Labor;
- 2. Freight;
- 3. Occurrence of any of the following, which automatically voids the warranty:
  - Product misuse;
  - Negligent operation or repair;
  - Corrosion or use in corrosive environments;
  - Inadequate or improper maintenance;
  - Damage sustained during shipping;
  - Collisions or other incidental contacts causing damage to the product;
  - <u>Unauthorized modifications</u>: DO NOT modify the product IN ANY WAY without first receiving written authorization from Vestil. Modification(s) might make the product unsafe to use or might cause excessive and/or abnormal wear.

### Do any other warranties apply to the product?

Vestil Manufacturing Corp. makes no other express warranties. All implied warranties are disclaimed to the extent allowed by law. Any implied warranty not disclaimed is limited in scope to the terms of this Limited Warranty.

