



Vestil Manufacturing Co.
 2999 North Wayne Street, P.O. Box 507, Angola, IN 46703
 Telephone: (260) 665-7586 Toll Free (800) 348-0868
 Fax: (260) 665-1339 Web: www.vestilmfg.com

SWA-54 & SWA-60 Semi-Automatic Stretch Wrap Machines Instruction Manual



Receiving instructions:

After delivery, remove the packaging from the product. Inspect the product closely to determine whether it sustained damage during transport. If damage is discovered, record a complete description of it on the bill of lading. If the product is undamaged, discard the packaging.

NOTE: The end-user is solely responsible for confirming that product design, use, and maintenance comply with laws, regulations, codes, and mandatory standards applied where the product is used.

Replacement Parts and Technical Assistance:

For answers to questions not addressed in these instructions and to order replacement parts, labels, and accessories, call our Technical Service and Parts Department at (260) 665-7586. The department can also be contacted online at http://www.vestilmfg.com/parts_info.htm.

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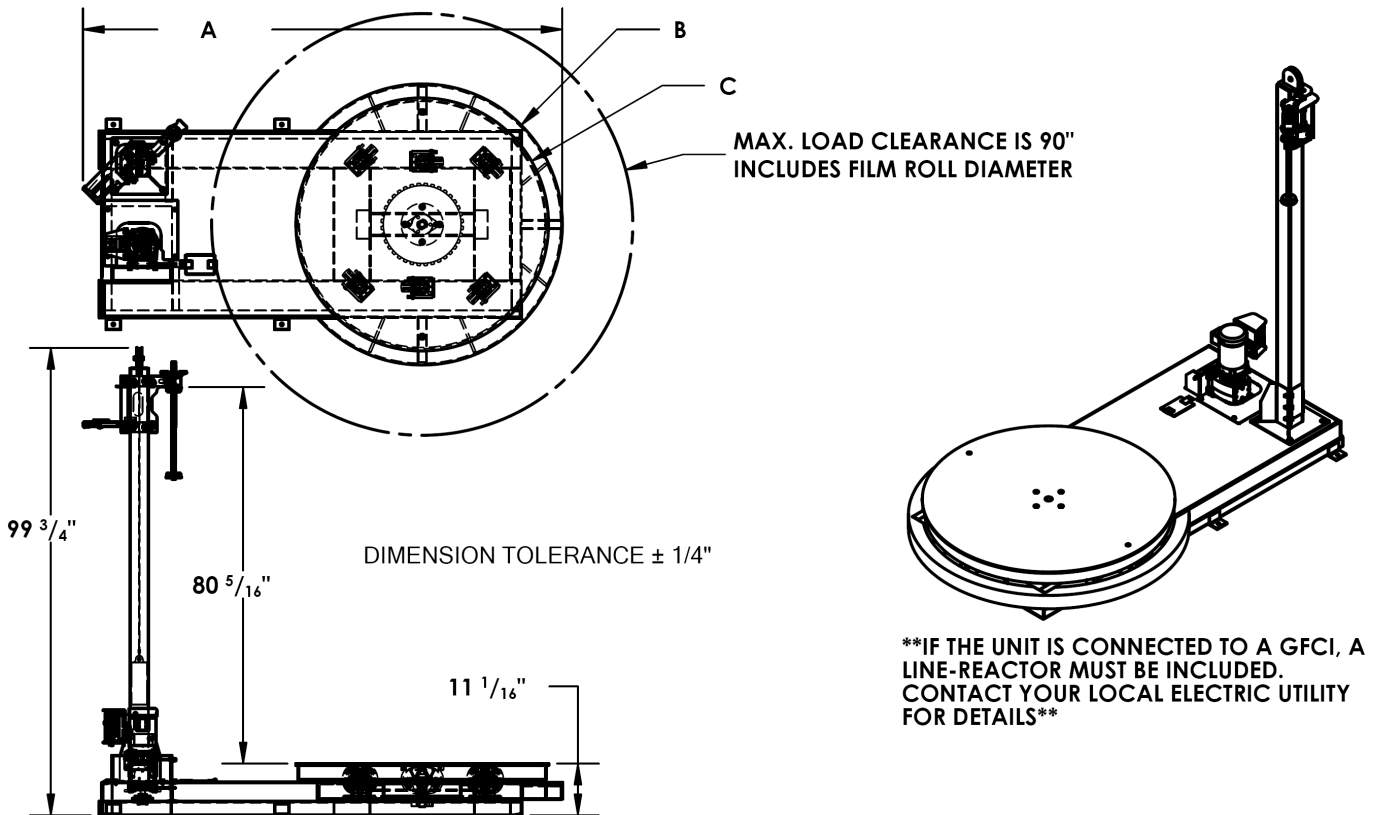
Specifications

Thank you for purchasing a semi-automatic stretch wrap machine made by Vestil Manufacturing Company ("Vestil"). Our wrapping machines are designed to be dependable and incorporate numerous safety-enhancing features. All persons who use or maintain this product must familiarize themselves with the instructions provided in this manual before beginning their duties.

Notable features of standard models include:

- Carousel rotation controlled by a (foot) pedal switch connected to an 8 foot cord. The standard 115V, variable AC motor allows adjustable rotation speeds of 3-12 rpm and includes soft-starting and stopping capability.
- Adjustable stretch-wrap tension controlled with a friction-brake. Film placement is controlled manually by moving the carriage assembly up and down on the vertical mast. An easy-to-release, hand operated carriage-brake allows the carriage to move freely making film application fast and simple.
- Can use stretch wrap rolls 10"-20" long.
- Minimal assembly. Each wrapping machine is shipped with the mast disconnected. Assembly simply requires raising the mast and bolting it in place.
- The stretch-wrap delivery mechanism can be upgraded to a 115V, single phase, AC-powered mast option (PMO).

Dimensions and other product specifications appear in the following diagrams and tables.



Model	A	B	C	Uniform capacity	Net weight
SWA-54	102 ⁷ / ₁₆ "	60"	54"	5,000lb. (2,273 kg)	1371 lb. (~623.2kg)
SWA-60	104	63"	60"	5,000lb. (2,273 kg)	1443 lb. (~656.4kg)

Signal Words

This manual uses SIGNAL WORDS to identify hazards that could occur while using this product. DANGER, WARNING, and CAUTION draw attention to hazards likely to cause personal injuries. Each signal word implies a specific level of injury. NOTICE is used to indicate hazards likely to result in property damage. The following are definitions for each word:



Identifies a hazardous situation which, if not avoided, WILL result in DEATH or SERIOUS INJURY. Use of this signal word is limited to the most extreme situations.



Identifies a hazardous situation which, if not avoided, COULD result in DEATH or SERIOUS INJURY.



Indicates a hazardous situation which, if not avoided, COULD result in MINOR or MODERATE injury.



Identifies practices likely to result in product/property damage, such as operation that might damage the product.

Hazards of Improper Use

We strive to identify all hazards that could occur while using our products, but no manual can address every risk. The most effective way to avoid injury is to exercise sound judgment whenever using this device and to read the entire manual carefully before installing, using, or servicing the product. Vestil recommends that you contact its [Technical Service Department](#) (the “TSD”) if you have any questions about instructions in the manual. We intend to provide our customers with the best instructions possible and encourage you to contact the TSD if you believe that a necessary instruction is missing or incomplete.



Failure to read and understand the entire manual before assembling, installing, using and servicing the product is a misuse of the product. If this product is used improperly or carelessly, the operator and/or bystanders might sustain serious personal injuries. To reduce the likelihood of injury:

- DO NOT modify the product in any way UNLESS you first obtain written approval from Vestil. Unapproved modifications automatically void the Limited Warranty and might make the product unsafe to use.
- Read the manual whenever necessary to refresh your understanding of proper use and maintenance procedures.
- DO NOT exceed the capacity of the unit. See Label 287 in [Labeling diagram](#) on p. 15.
- DO NOT stand, or sit, on the turntable or on the load.
- Loads must not extend over the shelves of the cart.
- Install the machine indoors on even, level surfaces capable of supporting it and a maximum capacity load. The wrapping machine must not be exposed to the outdoor environment.
- Keep hands, clothing, etc. out of contact with all moving parts of the machine during operation.
- BEFORE using the wrapping machine, instruct all bystanders to clear of the machine and the load.
- During operation, stand with the mast between yourself and the turntable.
- DO NOT activate the turntable UNLESS the load is centered on it and stable. Be prepared to stop the turntable, because rotation can cause the load become unstable. An unstable load might topple during the wrapping process. EVERY person in the area should remain far enough away from the machine to avoid contact with the load if it falls. Higher rotation speed might cause an unstable load to slide off of the turntable.
- DO NOT continue to use the machine if you observe abnormal motion or noise. Immediately tag the unit “Out of service” and report the problem to maintenance personnel.
- If you notice a malfunction during operation, DO NOT attempt to resolve it unless you are both authorized to do so and *certain* that it will be safe to use afterwards. The unit must be in normal operating condition whenever it is used. See [Inspections & Maintenance](#) on p. 14).
- Inspect the product as directed on page 14. DO NOT use the machine unless it is in [normal condition](#).
- DO NOT use this machine UNLESS all product labels are readable and undamaged. See [Labeling Diagram](#), p. 15.



- Proper use, maintenance, and storage are essential for this product to function properly.
- Always use this product in accordance with the instructions in this manual and consistent with any training relevant to machines, devices, etc. used in conjunction with this product.
 - Periodically lubricate the chain.
 - Keep the product clean & dry.
 - Only use approved replacement parts.

Introduction

Vestil's Medium Duty Powered Stretch Wrap Machines offer the same great features as our standard duty machines in a 5,000-lb capacity unit. Standard features include a powered turntable and counterbalanced mast. Press the foot pedal to rotate the turntable. Film placement is manually controlled by moving the carriage assembly up and down the mast. Film tension is controlled by an adjustable friction brake assembly. The wrap holder accepts rolls that are at least 10" long and up to 20" long. Each unit ships with the mast disconnected so minor assembly is required (raise the mast and clamp it in place). The standard manual wrap carriage is upgradable to a powered, 120 volt, single phase, AC powered version (suffix –PMO). Units equipped with powered masts use a hand held control to raise/lower the film.

Installation

Review this entire instruction manual before installing the stretch wrap machine. Contact the Technical Service department at (260)665-7586 for answers to questions or problems that arise during installation or for information about optional features not covered in this instruction manual. The department can also be contacted online at http://www.vestilmfg.com/parts_info.htm.

- Do not use this machine until it is removed from the shipping crate and securely anchored to the floor.
- Installation must comply with all laws, regulations, codes, ordinances, etc. applied to the machine in the jurisdiction where it is located.
- Verify that the equipment is suited to the environment where it will be used.
- This machine should be installed only by trained, competent personnel. In particular, the electrical aspects of the installation must be performed by an electrician.
- Choose an obstruction-free site to install the machine. Make sure that the largest load that could be applied to the turntable will be able to rotate freely before anchoring the machine to the floor. Also consider factors such as proximity to vehicle traffic (pallet trucks, fork trucks, etc.) when selecting an installation site. The site should afford both the machine and its operator(s) protection from injury and damage.

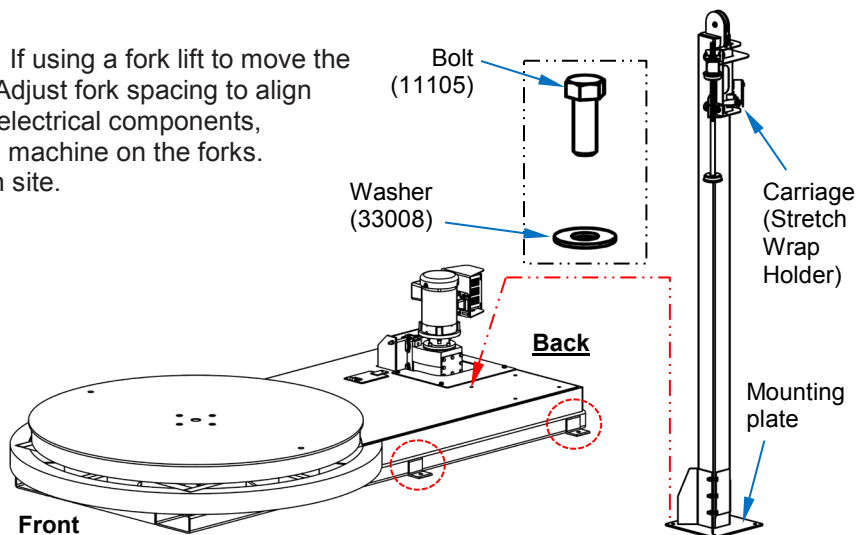
The following tools and equipment is needed for a typical installation:

- Lift truck or hoist:** Equipment to unload the machine from the freight truck and to set it in place at the installation site.
- Concrete surface:** The surface must be smooth, level, adequately strong to support the machine (SWA-54 = 1,371 lb.; SWA-60 = 1,444 lb.) and a full capacity load (5,000 lb.).
- Tools to attach the machine to the concrete surface:** Masonry drill, a masonry bit, hand tools, grout, and steel shims. Your facility engineer should select the optimal hardware for anchoring the machine to the floor.
- Electrical service:** A power supply circuit and disconnect matching the motor voltage and current requirements of the machine. Electrical specifications are provided on the machine's data label and labels on the electrical control enclosure. Also refer to [Turntable Electric Circuit Diagram](#) on p. 12. Overcurrent and short circuit protection are mandatory.

NOTE: Static electricity is produced on the stretch-wrap film as it pulls off the roll. The static effect might intensify in dry air. Apply ESD (electrostatic discharge) dissipation methods to reduce static.

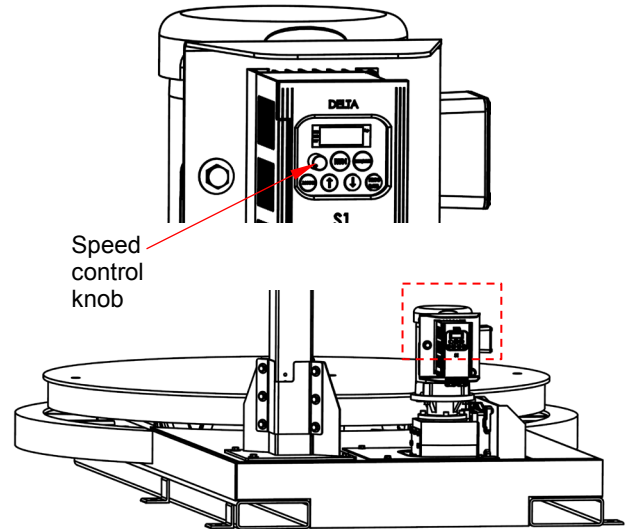
Installation procedure:

1. Move the machine to its installation site. If using a fork lift to move the machine, insert the forks back-to-front. Adjust fork spacing to align with the fork tubes. Do not damage the electrical components, especially the cable, while mounting the machine on the forks. Transport the machine to the installation site.
2. Stand the mast assembly upright. Pick it up and set the mounting bracket on the frame next to the motor. Align the holes in the corners of the mounting plate with corresponding holes in the frame. Attach the plate to the frame with the fasteners shown (1 set of fasteners in each of the 4 holes).
3. Remove the counterbalance retaining screw located approximately 12" from the bottom of the mast.



Installation procedure (continued from p. 4)

4. Fasten the frame to the floor through all four anchoring tabs (2 are circled in the diagram on p. 4; there are 2 on the opposite side as well). Each tab has a 9/16" hole located at its center. Drill holes for 1/2" anchor bolts and install them through the tab holes. Anchor bolt length should be determined by your facility engineer. Tighten the anchors only to the point that the frame is level.
5. Shim and/or grout under the frame sides as necessary to prevent the frame from twisting.
6. Tighten all of the floor anchors wrench-tight.
7. Connect the wrapping machine to an AC power source: Plug the turntable power cord into a 115 VAC outlet.
 - [Only if unit equipped with powered mast] Powered mast models have 2 power cords: one for the turntable and another for the wrapping carriage. The 2 cords can either both be plugged into a power outlet, or be connected and plugged into an outlet. To connect the cords, plug the turntable power cord into the pigtail cord of the mast control enclosure; then plug the power cord for the mast into a 115 VAC receptacle.
8. Test the powered functions:
 - Turntable rotation: press the foot pedal. The turntable will rotate as long as the pedal is pressed.
 - **Delta speed controller:** turn the speed control knob (in diagram; also refer to the Delta operation manual). Confirm that that the turntable rotates faster as the speed control knob is turned clockwise, and slows down when the knob is turned counterclockwise.
 - Powered mast models (option –PWO): raise and lower the stretch wrap carriage with the UP and DOWN buttons on the handheld control. Press and hold the UP button. The carriage should automatically stop moving when it reaches its upper travel limit. Press and hold the DOWN button. Confirm that the carriage stops on its own at the lower limit of travel. The carriage should move smoothly up and down the mast.
10. Confirm that all labels are intact and easily readable. See [Labeling diagram](#) on p. 15.

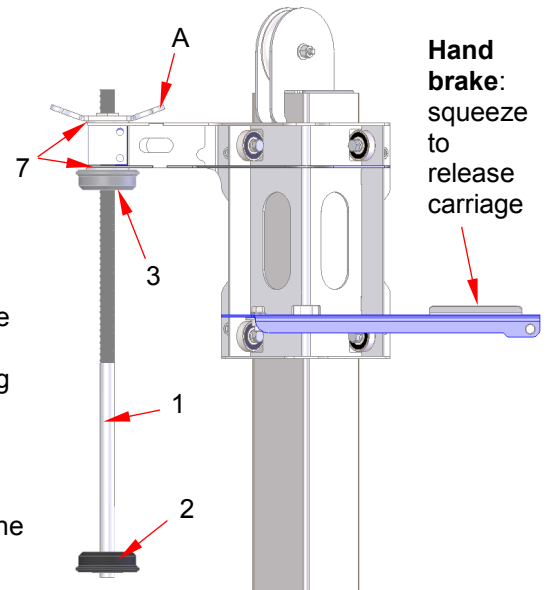


Carriage / Stretch Wrap Holder Assembly (SWH):

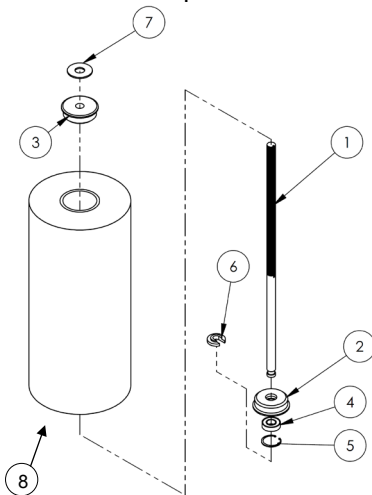
The wrap holder accommodates 10-20 inch rolls of stretch wrap.

Loading stretch wrap:

1. Unwind the wing nut (A) sufficiently to remove the lock spacer (6) underneath the bottom retainer (2).
2. Remove the lock spacer.
3. Remove the bottom tube retainer (2).
4. Remove the spent roll of stretch wrap and install a new roll.
5. Reinstall the bottom tube retainer (2) and the lock spacer (6).
6. Tighten the wing nut (A) until the roll is snugly pressed between the tube retainers (2) and (3). Adjust the tightness of the wing nut to achieve the desired degree of material stretch—the tighter the wing nut the more the wrap will stretch as it unrolls.



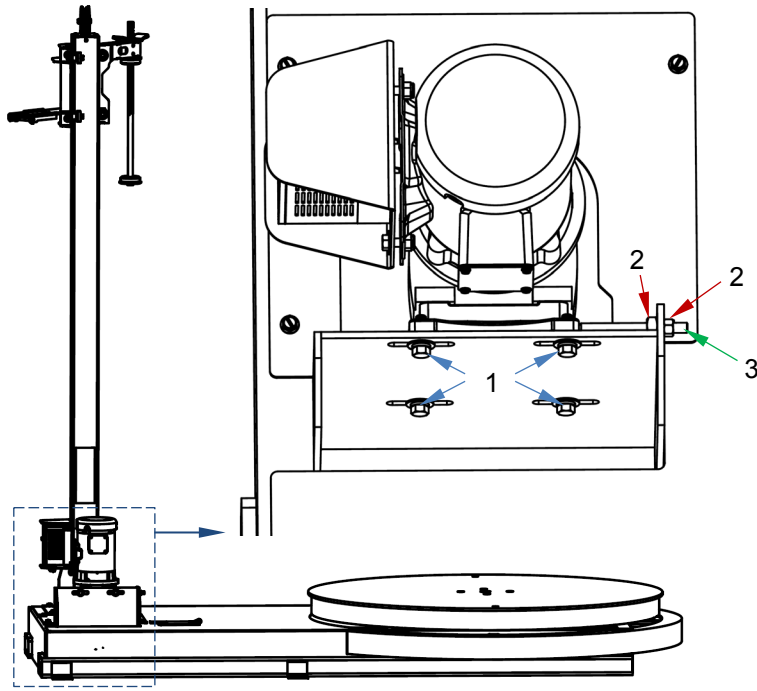
NOTE: Items 4 & 5 are housed inside a cavity in the bottom tube retainer.



Item	Part no.	Description	Quantity
1	20-014-116	Frame, rod, wrap retainer	1
2	20-014-006	Tube retainer (bottom)	1
3	20-014-005	Tube retainer (top)	1
4	20-110-002	Bearing, ball, 3/4 in., shield	1
5	68061	1 9/8 in. retainer ring	1
6	20-113-022	Spacer, lock	1
7	20-113-003	1/8 in. fiber washer	2
*8	SRF-18	20in. plastic wrap	1

*Not included. The carriage accepts 10"-20" rolls.

Chain Tensioning Procedure



Numbers in the diagram to the left correspond to the following (procedure) numbers. To adjust the chain tension:

1. Loosen all 4 bolts which hold the gear reducer to its mounting bracket.
2. Loosen the jam nuts.
3. Turn the screws clockwise to increase belt tension (CCW to reduce tension).
4. Retighten the jam nuts (2) and mounting bolts (1).

Using the Wrapping Machine

All personnel who use (operate and/or maintain) this machine must understand and apply these instructions.

Standard SWA-54 & SWA-60 wrapping machines are suitable for moderate duty, i.e. intermittent cycling with loads up to 5,000 pounds (2,273kg). This machine should only be used indoors in industrial or commercial settings to wrap palletized loads of non-hazardous material.

The machine applies stretch-wrap material at a rate of 3-12 revolutions per minute (RPM). The turntable rotates clockwise. The maximum load width, measured corner-to-corner, must not exceed 76". Maximum load height is 78". Load must always be centered on the turntable *before* it is activated.

The **carriage**, also called the **stretch wrap holder assembly** (see p. 5), accepts rolls of material 10"-20". The SWA will generally be capable of achieving stretch rates of 150-200%.

Loading:

WARNING

- Verify that no part of the load overhangs the turntable. A damaged skid with a dragging board or an overhanging load that sags below the turntable can cause the entire load to shift suddenly if, for instance, it catches on the frame.
- Do not exceed the capacity of your wrapping machine! Damage to, or premature failure of, the drive system could result from exceeding the listed capacity. Place loads onto the turntable slowly and gently using a pallet truck or walk-behind fork lift, using an optional approach ramp, or with a fork truck.
- Do not drop loads onto the turntable. Even a two-inch drop onto the turntable creates a shock load on the load bearings that can cause premature failure.
- See the installation page in this manual for instructions on how to install a roll of stretch-wrap material onto the mast carriage.

Gently set, and center, palletized loads on the turntable. Load weight must be evenly distributed on the pallet. The net weight applied to the machine must not exceed the capacity. The capacity, in pounds and kilograms, is shown on the machine data label (see label 287 in [Labeling Diagram](#) on p. 15). Adding ancillary equipment to the turntable, like a conveyor, must be taken into account when determining the maximum load that can be placed on the turntable.

Operation:

	<ul style="list-style-type: none"> Stand clear of the machine while it operates. No part of any person, clothing, fork truck, or other object must contact the rotating load. Do not activate the turntable (by pressing the foot control) until all persons, equipment, etc. are outside the zone of danger. Do not stand or sit on the turntable or its load at any time and particularly when the turntable is in use. Keep all parts of your body and clothing away from the drive system. Always carefully watch the load while the turntable rotates.
	<p>Do not use the stretch-wrap machine:</p> <ol style="list-style-type: none"> If any damage or unusual noise is observed; If repairs are necessary; Is missing any label; Any label is damaged or not easily readable (e.g. faded); or If it is malfunctioning. <p>Notify your supervisor or maintenance personnel if you notice anything out of the ordinary.</p>

The standard stretch-wrap machine includes a constant-pressure (“dead-man”) foot pedal switch. Pressing the pedal turns on the motor and rotates the turntable. The turntable rotates only while the pedal is pressed and coasts to a stop once the pedal is released.

Turntable rotation speed is adjustable. A speed control knob on the front of the [Delta motor speed controller](#) (p. 7) adjusts the revolutions per minute of the motor shaft. Turn the speed control knob clockwise to increase speed and counterclockwise to decrease speed. The display on the front of the Delta controller shows the approximate number of revolutions per minute for the current setting.

Squeeze the hand brake on the carriage assembly to allow it to move up or down the mast..

Stretch-wrap tension is also adjustable. The tension applied to the roll of wrap determines how much the wrapping stretches as it covers the load. Turning the wing nut of the stretch wrap holder (p. 5; the “SWH”) clockwise increases the wrapping tension and degree of stretch. Turning the nut counterclockwise decreases material stretch. Set the tension according to your preference.

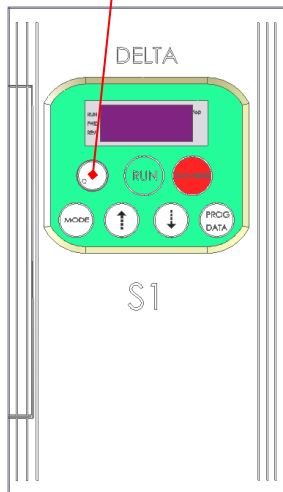
Begin a wrapping operation by lowering the SWH. Pull some material from the roll and tie it to the pallet. Press the foot pedal to rotate the turntable and load. Make 2-3 full revolutions before adjusting the tension on the wrapping material to achieve the desired stretch rate. Raise and lower the SWH until the load is covered 100%, with two or three overlapping layers of wrap. Stop the turntable (release the pedal). To finish the wrapping process, either cut (or tear) the strip of wrapping and press it against the side of the load.

Note: Best results are achieved by overlapping the sides of the pallet at the bottom and extending slightly above the load at the top.

Delta Motor Speed Controller (DMSC)

To change the controller parameters, use the buttons on the keypad to select the desired settings. See [Parameter settings](#) table on p. 8.

Speed control knob Press to enter program mode.



- appears on the screen. This indicates a specific parameter group.
- Use the following keys to choose settings shown in the “Parameter settings” table on p. 8.

	Press "PROG/DATA" key to select parameter group and to store entered data. "END" displays for approx. 0.5 sec. if input has been accepted.
	Press "MODE" to scroll through all status at the drive; To show the turntable speed on the display, press "mode" three times after initial power-up. For example, when the turntable is rotating at 12 rpm, the display will appear as "u 12."
	Press "UP" or "DOWN" key to scroll through different parameters.
	Press "UP" or "DOWN" key momentarily will change parameter settings in single-unit increments.

Parameter Settings (DMSC)

Parameter	Parameter Description	Setting	Setting Description
0-03	Start-Up Display Selection	d 2	Display the content of user-defined unit.
0-05	User Defined Coefficient K	d 0.3	Scales the frequency value so the display shows the approximate turntable rpm.
1-02	Maximum Output Voltage	d 255	Sets the maximum voltage to the motor
1-07	Upper Bound of Frequency	d 65	Sets the maximum rotation speed with the speed knob turned fully clockwise (about 11 rpm).
1-08	Lower Bound of Frequency	d 15	Sets the minimum rotation speed with the speed knob turned fully counterclockwise (about 3 rpm).
1-09	Acceleration Time 1	d 10	Time to accelerate the motor to the drive's maximum output frequency set point, in seconds.
1-15	Auto Acceleration / Deceleration	d 0	Allows for a linear acceleration rate of the motor.
1-16	S-Curve in Acceleration	d 7	Determines how smoothly the drive accelerates.
2-00	Source of Frequency Command	d 3	Allows the turntable speed to be controlled by the knob of the drive's keypad.
2-01	Source of Operation Command	d 1	Makes the drive turn on the external foot switch.
2-02	Stop Method	d 1	Allows the turntable to coast to a stop.
6-02	Over-Current Stall Prevention Level	d 150	Sets the maximum motor current, as a percentage of the drive's rated output.
6-03	Over-Torque Detection Mode	d 3	Detection is enabled during Acceleration and continues until the Continuous Output Time Limit is reached.
6-04	Over-Torque Detection Level	d 200	Sets the maximum output torque, as a percentage of the drive's rated output.
6-05	Continuous Output Time Limit	d 10	Determines the time the drive will run after over torque is detected, in seconds.
7-00	Motor Rated Current	d 120	Affects the point at which the drive limits its output current, in percent of drive's rated output.
7-01	Motor No-load Current	d 75	Affects the drive's motor slip compensation.
7-02	Torque Compensation	d 10	Controls the motor's maximum start-up torque.

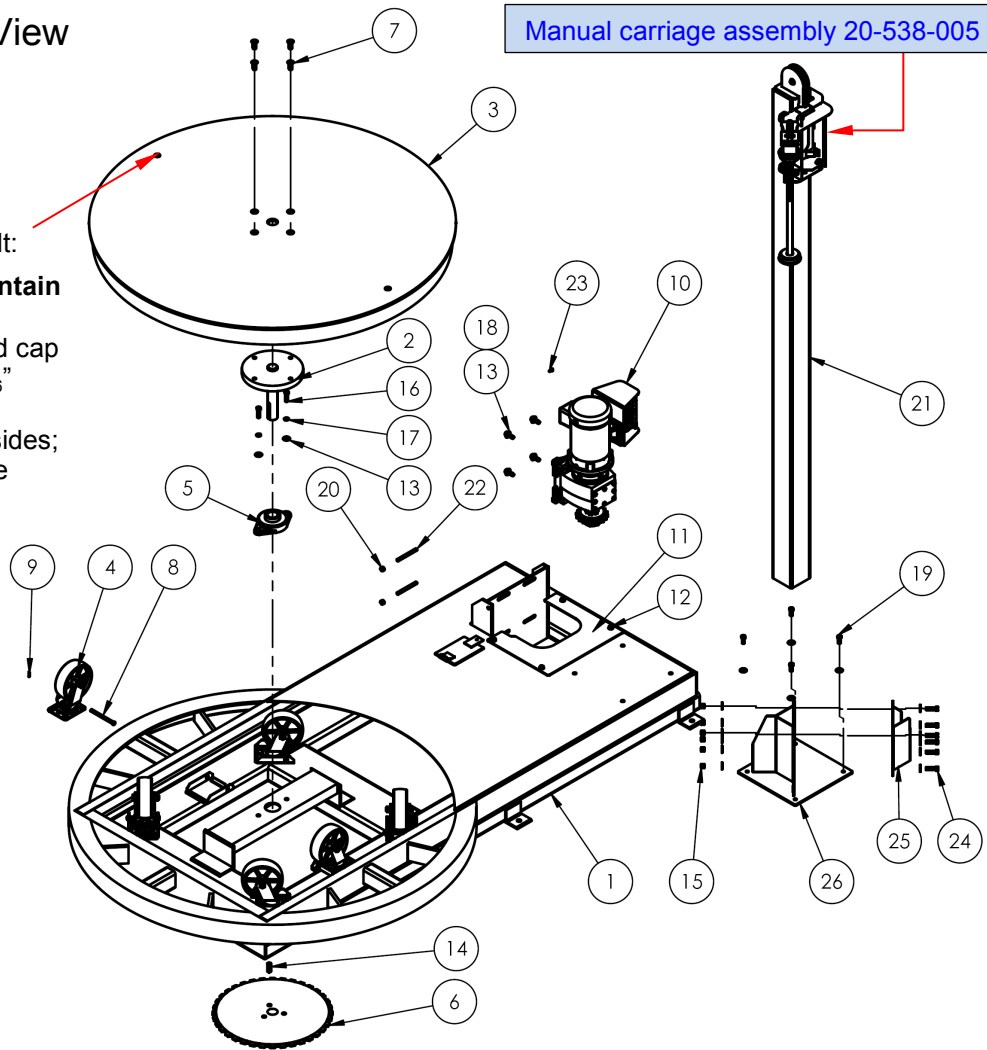
**SWA-54 Exploded View
& Bill of Materials**
20-006-026

Manual carriage assembly 20-538-005

$\frac{3}{4}$ " threaded hole for eye bolt:

To remove tabletop to maintain interior components:

- 1) Remove all 4 socket head cap screws (item 7) with a $\frac{5}{16}$ " Allen wrench;
- 2) Install eye bolts on both sides;
- 3) Attach hoist rigging to eye bolts.



Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	20-514-024	Weldment, frame	1	14	20-145-013	Key	1
2	20-526-003	Weldment, shaft	1	15	37024	Lock nut, gr. 2, zinc finish, $\frac{3}{8}$ "-16	8
3	20-513-024	Weldment, deck	1	16	13109	Bolt, HHCS #5, z-plated, $\frac{3}{8}$ "-16x1 $\frac{1}{2}$ "	2
4	16-132-154	Caster/wheel, 6" diameter	6	17	33622	Split lock washer, CS, med. z-finish, $\frac{3}{8}$ "	6
5	20-110-010	Bearing, 2-bolt flange, 1 $\frac{1}{2}$ " diameter	1	18	13107	Bolt, HHCS, #5, z-plated, $\frac{3}{8}$ "-16x1 $\frac{1}{4}$ "	4
6	20-042-016	Sprocket, #60 roller chain, 72 teeth	1	19	11105	Hex bolt, gr. A, z-plated, $\frac{3}{8}$ "-16x1"	4
7	24362	Flat socket head cap screw	4	20	36106	Hex nut, gr. A, z-plated, $\frac{3}{8}$ "-16	2
8	99-112-006	Pin, clevis	6	21	20-514-084	Subassembly, counterbalanced mast, manual	1
9	65074	Cotter pin	6	22	25552	Socket set screw, black oxide, $\frac{3}{8}$ "-16x4"	2
10	20-641-005	Subassembly, control box/motor/reducer, 115V AC	1	23	31802	Screw, self-tapping, #8-18x1 $\frac{1}{2}$ "	2
11	20-024-009	Guard, sprocket	1	24	11109	Hex bolt, gr. A, zinc finish, $\frac{3}{8}$ "-16x1 $\frac{1}{2}$ "	6
12	32415	$\frac{5}{16}$ "-18x1 $\frac{1}{2}$ " thread cutting screw, type F, zinc	4	25	20-016-114	Bracket, clamp, formed	1
13	33008	Flat washer, low carbon, USS, z-plated $\frac{3}{8}$ "	22	26	20-516-014	Weldment, post bracket	1

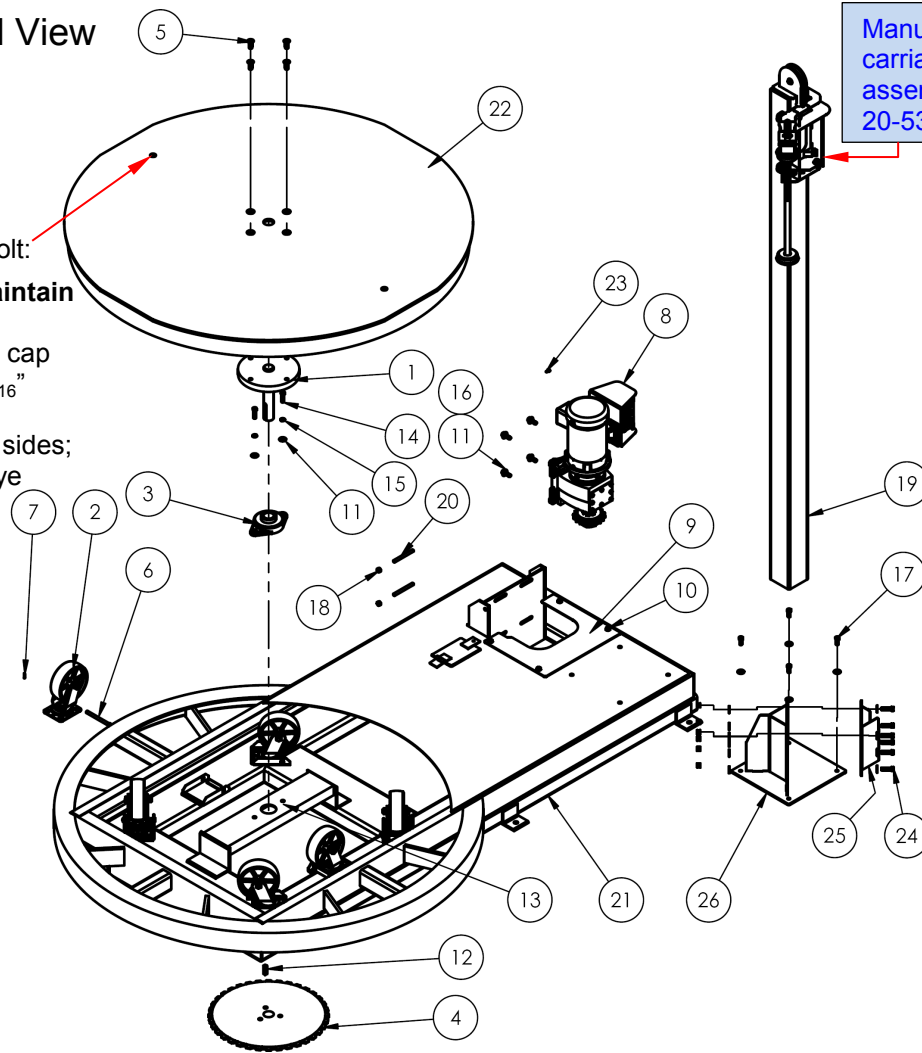
**SWA-60 Exploded View
& Bill of Materials**
20-006-027

Manual carriage assembly 20-538-005

$\frac{3}{4}$ " threaded hole for eye bolt:

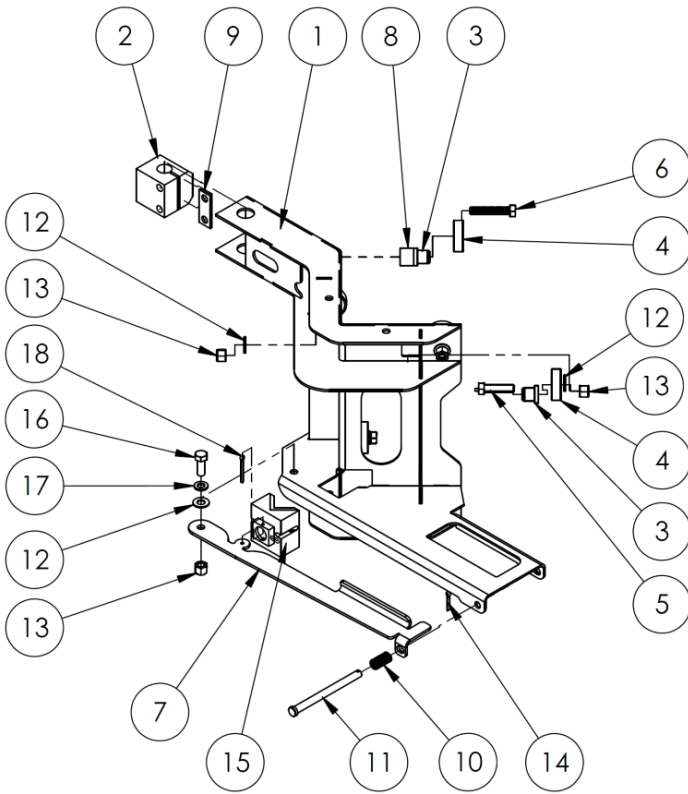
To remove tabletop to maintain interior components:

- 1) Remove all socket head cap screws (item 5) with a $\frac{5}{16}$ " Allen wrench;
- 2) Install eye bolts on both sides;
- 3) Attach hoist rigging to eye bolts.



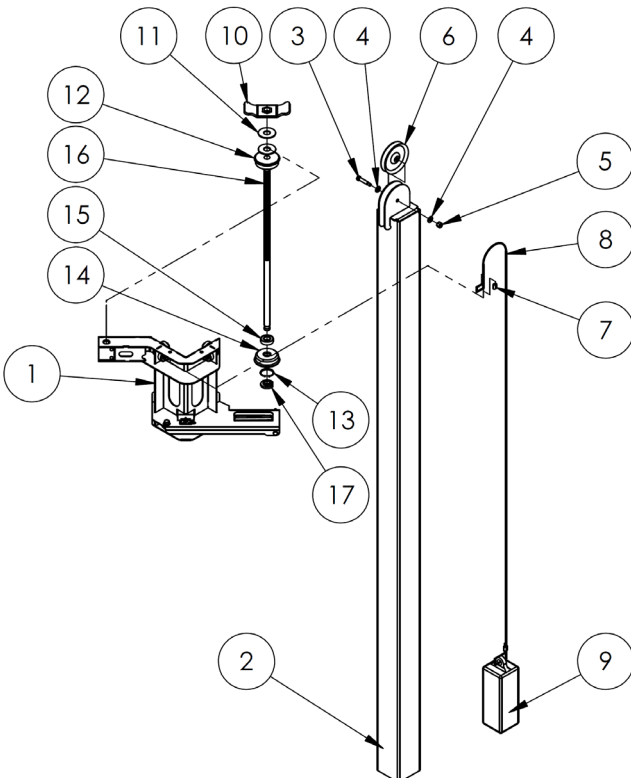
Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	20-526-003	Weldment, shaft	1	14	13109	Bolt, HHCS #5, z-plated, $\frac{3}{8}$ "-16x1 $\frac{1}{2}$ "	2
2	16-132-154	Caster/wheel, 6" diameter	6	15	33622	Split lock washer, CS, med. z-finish, $\frac{3}{8}$ "	6
3	20-110-010	Bearing, 2-bolt flange, 1 $\frac{1}{2}$ " diameter	1	16	13107	Bolt, HHCS, #5, z-plated, $\frac{3}{8}$ "-16x1 $\frac{1}{4}$ "	4
4	20-042-016	Sprocket, #60 roller chain, 72 teeth	1	17	11105	Hex bolt, gr. A, z-plated, $\frac{3}{8}$ "-16x1"	4
5	24362	Flat socket head cap screw	4	18	36106	Hex nut, gr. A, z-plated, $\frac{3}{8}$ "-16	2
6	99-112-006	Pin, clevis	6	19	20-514-084	Subassembly, counterbalanced mast, manual	1
7	65074	Cotter pin	6	20	25552	Socket set screw, black oxide, $\frac{3}{8}$ "-16x4"	2
8	20-641-005	Subassembly, control box/motor/reducer, 115V AC	1	21	20-514-023	Weldment, frame	1
9	20-024-009	Guard, sprocket	1	22	20-513-024	Weldment, deck	1
10	32415	$\frac{5}{16}$ "-18x $\frac{1}{2}$ " thread cutting screw, type F, zinc	4	23	31802	Screw, self-tapping, #8-18x $\frac{1}{2}$ "	2
11	33008	Flat washer, low carbon, USS, z-plated $\frac{3}{8}$ "	22	24	11109	Hex bolt, gr. A, zinc finish, $\frac{3}{8}$ "-16x1 $\frac{1}{2}$ "	6
12	20-145-013	Key	1	25	20-016-114	Bracket, clamp, formed	1
13	37024	Lock nut, gr. 2, zinc finish, $\frac{3}{8}$ "-16	8	26	20-516-014	Weldment, post bracket	1

20-538-005: Carriage subassembly exploded view & bill of materials



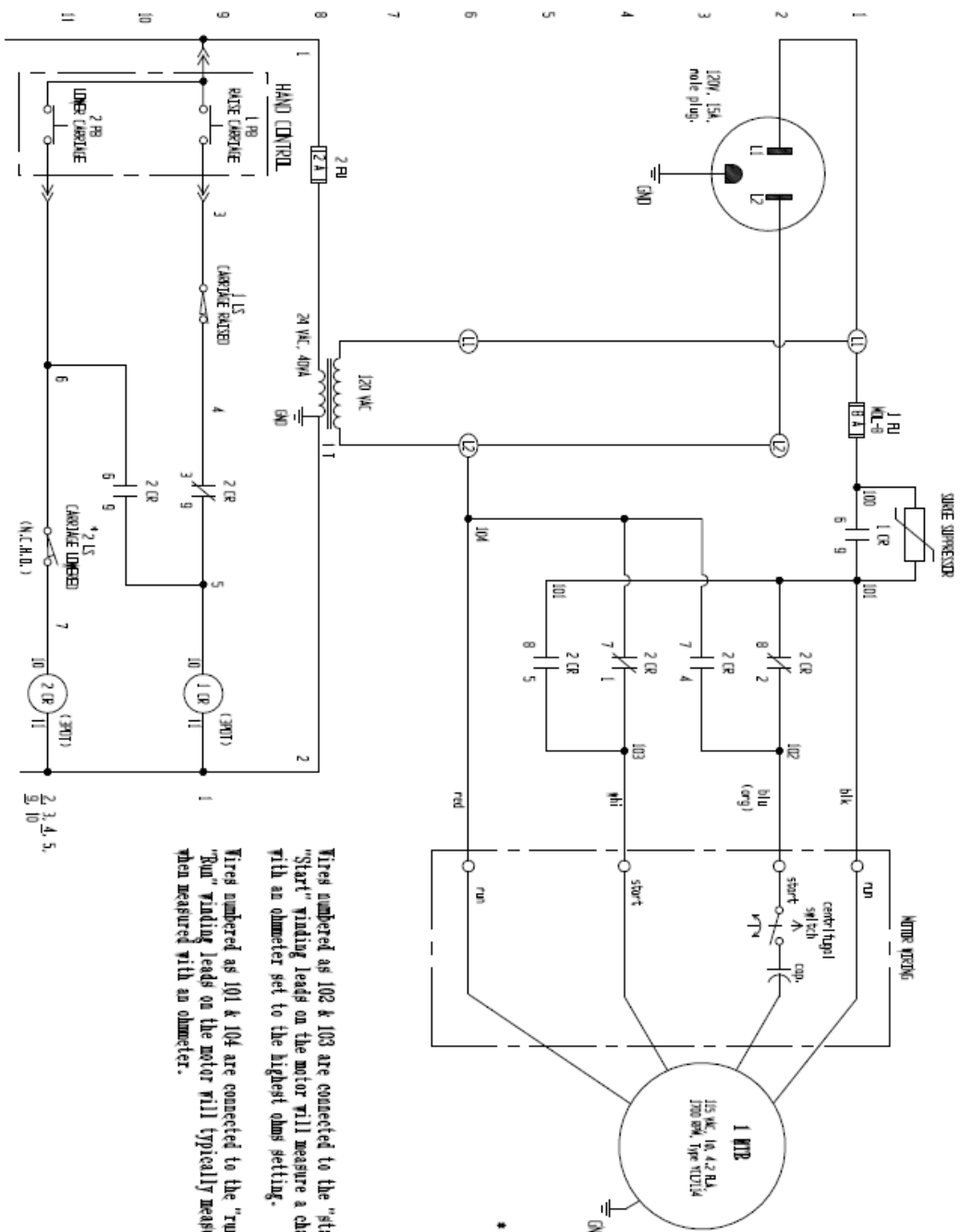
Item	Part no.	Description	Qty.
1	20-514-080	Weldment, carriage frame	1
2	20-145-010	Specialty hardware, clamp, wrap, mounting	1
3	21-113-021	Spacer, bearing shaft	8
4	20-110-006	Roller bearing	8
5	11109	³ / ₈ in. – 16 x 1 ¹ / ₂ in. HHCS #2 zinc-plated bolt	4
6	11111	³ / ₈ in. – 16 x 2in. HHCS #2 zinc-plated bolt	4
7	20-040-001	Lever, brake release, formed	1
8	21-113-020	Spacer, bearing	4
9	20-113-023	Spacer	1
10	20-146-008	Spring, compression spring	1
11	99-112-006	Pin, clevis	1
12	33008	³ / ₈ in. USS zinc-plated flat washer	10
13	37024	³ / ₈ in. Nylock insert nut	9
14	64076	¹ / ₈ in. x 1in. zinc-plated cotter pin	1
15	20-537-018	Brake pad assembly	1
16	11105	³ / ₈ in. – 16 x 1in. HHCS #2 zinc-plated bolt	1
17	33622	³ / ₈ in. zinc-plated lock washer	1
18	65078	¹ / ₈ in. x 1 ¹ / ₂ in. zinc-plated cotter pin	1

20-514-084: Manual counterbalanced mast subassembly exploded view & bill of materials



Item	Part no.	Description	Quantity
1	20-538-005	Subassembly, carriage	1
2	20-514-082	Subassembly, mast, manual	1
3	26333	Shoulder screw 0.375in. x 1.5in.	1
4	33008	³ / ₈ in. USS zinc-plated flat washer	2
5	37024	³ / ₈ in. Nylock insert nut	1
6	20-027-001	Pulley, counterweight	1
7	20-145-019	Specialty hardware, swage sleeve	2
8	20-145-018	Specialty hardware, cable	1
9	28-014-179	Cast, counterweight (SWA-48)	1
10	20-620-001	Weldment, specialty hardware, rod tension wing nut	1
11	20-113-003	⁷ / ₈ in. fiber washer	2
12	20-014-005	Frame, tube retainer, (top)	1
13	68061	¹ / ₂ in. retainer ring	1
14	20-014-006	Tube, retainer, (bottom)	1
15	20-111-002	Bearing, 7R16	1
16	20-014-116	Frame, rod, wrap retainer	1
17	20-113-022	Spacer, lock	1

Powered Mast Electrical Circuit Diagram

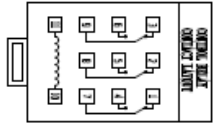


* ALL COMPONENTS ARE REPRESENTED AS THEY WOULD BE WITH THE CARTRIDGE IN ITS "HOME", OR RESTING, POSITION. HOME POSITION IS DEFINED TO BE WHEN THE CARTRIDGE IS FULLY LOWERED AND ALL POWER IS OFF.

NOTES:

Tires numbered as 102 & 103 are connected to the "start" winding on the motor.
 "Start" winding leads on the motor will measure a changing resistance when measured with an ohmmeter set to the highest ohms setting.
 Tires numbered as 101 & 104 are connected to the "run" windings on the motor. The "Run" winding leads on the motor will typically measure about 3 ohms of resistance when measured with an ohmmeter.

RELAY BASE (TOP VIEW) LAYOUT



Record of Normal Condition

Before putting the unit into service, make a written record that describes its functions and appearance. Move the carriage up and down the mast. Explain how much effort is necessary to move the carriage. Describe sounds heard while the carriage moves. Activate the turntable by pressing the pedal. How much force is required to press the pedal? How quickly does the turntable achieve the set rotation speed? How noisy is the turntable when it is operating? Photograph the unit from several vantage points. Add the photographs to the record. Include photographs of all labels applied to the unit. Indicate where the labels are applied. This record establishes normal condition. Always compare your observations during later inspections to the record to determine if the unit requires repair(s).

Inspections & Maintenance

Never perform maintenance on the unit unless electrical power is disconnected. Resolve all issues found during each inspection before returning the machine to service.

Before each use, inspect the listed components:

1. **Wiring:** Examine the wires for fraying and damage.
2. **Mast, turntable, and frame:** Handrails: check each structure for bends, warps and cracks.
3. **Power transmission and control equipment** (particularly the foot pedal): Inspect each component and associated guards and cords for damage.
4. **Operate the wrapper:** Observe and listen to the machine as it operates for unusual noise or movement, or binding.
5. **Labels:** All labels should be readable and located as shown in the [Labeling diagram](#) on p. 15. If a label(s) is unreadable or missing, order a replacement.

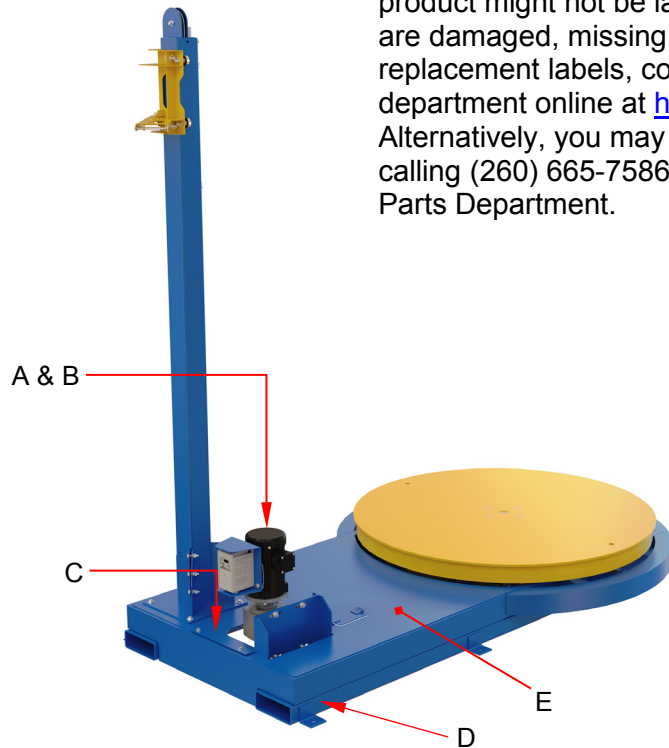
NOTE: Label appearance and content is subject to change over time, and consequently, replacement labels might differ from labels shown in the manual supplied with the unit.

At least 1 time per month, inspect:

1. **Electrical wiring:** Closely inspect wiring for regions of significant wear, cuts, frays, and other damage.
2. **Fasteners (hardware):** Check fasteners for looseness and damage. Tighten all loose fasteners; replace any that are damaged: Bolts, nuts, washers.
3. **Turntable:** Examine the turntable for significant wear and impact damage. Sharp projections might develop along the edge of the turntable. Sand or grind off all projections, burrs, etc.
4. **Turntable drive chain:** Remove the turntable and top inspect the drive chain for significant wear and looseness. To remove the top, use a 1/2" hex key to remove the (4) lugs located near the center of the tabletop. If the chain is significantly worn, replace it. Operate the turntable. If the chain is slipping over the gear teeth, it should be tightened. Apply the [Chain tensioning procedure](#) on p. 6. Lightly oil the chain. DO NOT apply grease. The turntable is driven by a clutch drive system. Grease interferes with the clutch drive.
5. **Motor speed control:** if the speed control enclosure is broken, then the drive should be replaced.
6. **Load bearings/wheels:** If the turntable is noisy while it rotates or wobbles during rotation, [remove the tabletop](#) (the procedure for removing the tabletop is described in the exploded views on [p. 9](#) and [p. 10](#)) and lubricate the wheels. Replace any wheel that is damaged or significantly worn.
7. **Turntable main bearing** (part no. 20-110-010 in the exploded views on [p. 9](#) and [10](#)): The top of the turntable should be parallel to the supporting frame; it should not wobble. Press down and pull up on the edge of the turntable. There should be very little to no wobble. If the tabletop does wobble, tighten the 4 flat socket head cap screws (part no. 24362 on [p. 9](#) and [p. 10](#)) near its center; then operate the turntable to see if it still wobbles. If wobbling still occurs, [remove the tabletop](#) (the procedure for removing the tabletop is described in the exploded views on [p. 9](#) and [p. 10](#)). Check the load wheels (part no. 16-132-154 on [p. 9](#) & [10](#)) closely for wear and damage.
8. **Carriage assembly:** if the hand brake is functioning correctly, the carriage maintains position until the brake is released by squeezing the release lever. Squeeze the brake and move the carriage up and down the mast. It should move smoothly. Tighten the roller fasteners if the carriage wiggles. Inspect the rollers for wear.
9. **Fiber washer** (see item no. 7 on [p. 5](#)): Check the condition of the fiber washers. Make sure that both are in normal condition. The washers are an important part of the wrap tensioning mechanism. If it becomes difficult to achieve the desired tension after the machine has been in use for a while, it is likely that one or both washers have become worn and should be replaced.
10. **Anchors:** Check each anchor bolt (4 total) and the concrete around it. The machine should be solidly attached to the floor. Tighten bolts, if necessary. The concrete around each bolt should not be cracked, chipped, etc.
11. **Labels:** Confirm that all labels (shown in [Labeling diagram](#) on p. 15) are present, undamaged and readable.
12. **Overall condition:** The machine should be clean, square and rigid, and free of rust and corrosion. Periodically clean the surfaces to remove dirt and debris. Do not use the machine if the base is excessively rusted or corroded.

Labeling Diagram

The unit should always be labeled as shown in the diagram. However, label content and location are subject to change so your product might not be labeled exactly as shown. Replace all labels that are damaged, missing, or not easily readable (e.g. faded). To order replacement labels, contact the technical service and parts department online at http://www.vestilmfg.com/parts_info.htm. Alternatively, you may request replacement parts and/or service by calling (260) 665-7586 and asking the operator to connect you to the Parts Department.



Powered mast models:
A and B also applied to junction box at base of mast.

A (Label 221)

⚠ DANGER	ELECTRICAL SHOCK Shut power off and consult owners manual before working on this equipment.
⚠ PELIGRO	EI GOLPE ELECTRICO Corte la corriente consulte el manual de propietario antes de trabajar en este equipo.
⚠ DANGER	CHOC ELECTRIQUE Couper le courant et consulter le manuel d'utilisation avant de travailler sur cet équipement.

221 Rev 0305

B (Label 325)

NOTICE NOTA AVIS		
POWER SUPPLY: 115 V/1 Phase/60 HZ		
CONTROL VOLTAGE: 115V AC		
CORRIENTE: 115 V/1 Fase/60 HZ		
VOLTAJE DE CONTROL: 115V CA		
ALIMENTATION ÉLECTRIQUE: 115 V/1 Monophasé/ 60 HZ		
VOLTAGE DE CONTRÔLE: 115V AC		

325

C (Label 287)

MODEL/MODÉLO/MODÈLE	_____
CAPACITY	_____ lbs.
CAPACIDAD/CAPACITÉ	_____ kgs.
SERIAL/SERIE/SÉRIE	_____
VESTIL MANUFACTURING CORPORATION	
sales@vestilmfg.com • www.vestilmfg.com	

287 rev 0910

D (Label 204)

⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
SECURE FRAME TO FLOOR	ASEGURE EL BASTIDOR AL PISO	FIXER SOLIDEMENT LE CADRE AU PLANCHER

204 Rev 1110

E (Label 220)

⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
KEEP CLEAR WHEN IN USE	MANTENGASE ALEJADO CUANDO SE ESTA OPERANDO	SE TENIR À DISTANCE LORS DU FONCTIONNEMENT

220 rev 0111

Troubleshooting:

Issue	Possible Cause	Corrective Action
1) Turntable does not rotate	<p>a) No power supply voltage</p> <p>b) Speed control on lowest setting</p> <p>c) No signal from pedal control</p> <p>d) Motor controller fault or defective motor controller</p> <p>e) Chain is broken or slipping</p>	<p>a) Check outlet for 115V power. If outlet lacks power, determine cause of power loss before restoring power to the wrapping machine. [NOTE: If turntable power cord is plugged into the pigtail cord of the powered mast, confirm that powered mast cord is plugged into a wall socket.]</p> <p>b) Increase turntable speed using the speed control knob. See p. 5 & 7.</p> <p>c) Check continuity of foot pedal and the cable connected to it.</p> <p>d) Check the display on the Delta motor speed controller for a fault code. If a fault code is displayed, contact Vestil Manufacturing (phone number on cover of this manual).</p> <p>e) If fan of drive motor spins but table does not rotate, release the foot pedal; then inspect the chain.</p>
2) Turntable cannot rotate without assistance, rotates more slowly while loaded, or does not achieve set speed	f) Chain is broken or slipping	f) If fan of drive motor spins but table does not rotate, release the foot pedal; then inspect the chain.
3) Mast motor or control enclosure hums, chatters, or buzzes, and the stretch wrap holder moves slowly or not at all.	<p>g) Excessive voltage drop to motor due to:</p> <ul style="list-style-type: none"> • Inadequate wiring; • Wire run too long; or • Incoming voltage too low. <p>h) Damaged mast or stretch wrap holder</p> <p>i) Low control voltage or bad connection in control circuit</p>	<p>g) Check power supply for adequacy. Check incoming voltage while motor runs. If the voltage is too low, correct by</p> <ul style="list-style-type: none"> • Installing circuit with larger wire; • eliminating extension cord(s); or • installing a buck/boost transformer. <p>h) Examine mast and holder for damage or excessive wear.</p> <p>i) Confirm 24VAC at transformer secondary. Examine all wiring and connections in the mast for looseness, etc.</p>
4) Powered stretch wrap holder does not respond to commands (UP and DOWN)	<p>j) Low control voltage or bad connection in control circuit</p> <p>k) Blown transformer fuse</p> <p>l) No power supply voltage</p> <p>m) Mast limit switch engaged or malfunctioning</p> <p>n) Control relay 1 CR contact is burnt</p> <p>o) Control relay 1 CR is loose</p>	<p>j) Confirm 24VAC at transformer secondary. Examine all wiring and connections in the mast for looseness, etc.</p> <p>k) Test with meter; replace if bad (replace with same fuse type and ampere rating)</p> <p>l) Check outlet for 115V power. If outlet lacks power, determine cause of power loss before restoring power to the wrapping machine. [NOTE: If turntable power cord is plugged into the pigtail cord of the powered mast, confirm that powered mast cord is plugged into a wall socket.]</p> <p>m) Inspect and test switch, Replace if bad.</p> <p>n) Examine contact. Clean contact or replace relay as necessary.</p> <p>o) Verify that the relay is firmly in place.</p>
5) Powered stretch wrap holder elevates on command but does not lower	<p>p) Control relay 2 CR is loose</p> <p>q) CR 2 is defective</p> <p>r) Bad connection in control circuit</p> <p>s) Physical blockage in mast</p>	<p>p) Confirm that the relay is firmly in place</p> <p>q) Examine and test 2 CR. Replace if necessary.</p> <p>r) Test all parts of circuit with meter</p> <p>s) Determine cause of blockage and remove it from the path of the holder.</p>

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 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.

Definition of “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 Customer Invoice that displays the shipping date; AND 2) a written request for warranty service including your name and phone number. Send requests by one of the following methods:

<u>US Mail</u>	<u>Fax</u>	<u>Email</u>
Vestil Manufacturing Corporation 2999 North Wayne Street, PO Box 507 Angola, IN 46703	(260) 665-1339 <u>Phone</u> (260) 665-7586	info@vestil.com Enter “Warranty service request” in subject field.

In the written request, list the parts believed to be defective and include the address where replacements should be delivered. 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 will require you to send the entire product, or just the defective part (or parts), to its facility in Angola, IN.

What is covered under the warranty?

The warranty covers defects in the following original, dynamic parts: motors, hydraulic pumps, motor controllers, and cylinders. It also covers defects in original parts that wear under normal usage conditions (“wearing parts”), such as bearings, hoses, wheels, seals, brushes, and batteries.

How long is the warranty period?

The warranty period for original dynamic components is 1 year. For wearing parts, the warranty period is 90 days. Both warranty periods begin on the date Vestil ships the product to the Warrantee. If the product was purchased from an authorized distributor, the periods begin when the distributor ships the product. Vestil may, at its sole discretion, extend a 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?

The Warrantee (you) are responsible for paying labor costs and freight costs to return the product to Vestil for warranty service.

Events that automatically void this Limited Warranty.

- Misuse;
- Negligent assembly, installation, operation or repair;
- Installation/use in corrosive environments;
- Inadequate or improper maintenance;
- Damage sustained during shipping;
- Collisions or other accidents that damage the product;
- Unauthorized modifications: Do not modify the product IN ANY WAY without first receiving written authorization from Vestil.

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. Vestil makes no warranty or representation that this product complies with any state or local design, performance, or safety code or standard. Noncompliance with any such code or standard is not a defect in material or workmanship.

