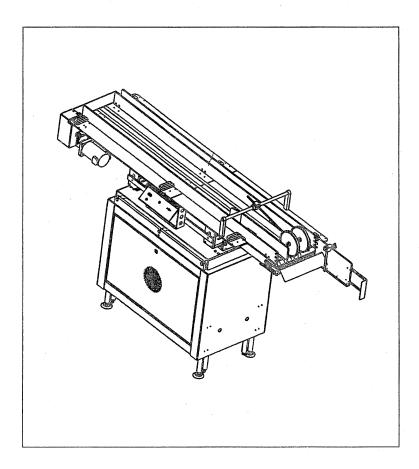
Kirk-Rudy, Inc.

Instruction and Parts Manual KR533 Autoloader



Manufactured by Kirk-Rudy, Inc.

Before using this machine, all operators must study this manual to understand and follow the <u>safety warnings and instructions</u>. Keep these instructions with the machine for future reference. If you have any questions, contact your local Kirk-Rudy, Inc. Distributor.

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1 Important Safety Instructions

Intended Use Statement: The autoloader has three possible setups: right hand feed to a friction feeder, right hand feed to a shuttle table feeder or inline feed to a shuttle table feeder. Which setup is used is determined by the type feeder in use and characteristics of the product. In all three setups, a beam switch is used to detect a minimum level of product in the feeder hopper and activate a clutch to engage motor driven belts to convey more products into the hopper. To smooth out the autoloading process, a time delay relay is used to keep the clutch engaged momentarily after the product level is the minimum level. A knob on the control panel controls the speed of the autoloader belts. A motor driven jogger can be switched on for right hand feed. Usage for other purposes may lead to an unsafe condition.

SAVE THESE INSTRUCTIONS. Read all instructions before using this product.



WARNING

- * NEVER OPERATE THE MACHINE WITHOUT ALL GUARDS OR SAFETY DEVICES IN PLACE.
- * ALWAYS TURN POWER OFF WHEN MAKING ADJUSTMENTS.
- * ALWAYS DISCONNECT THE POWER SUPPLY BEFORE ANY MAINTENANCE OR SERVICE WORK.
- * NEVER START THE MACHINE WITHOUT FIRST CHECKING ALL PERSONNEL ARE CLEAR OF MOVING PARTS.
- * KEEP FINGERS CLEAR OF ALL MOVING PARTS.
- * NEVER REMOVE THE PRODUCT FROM THE MACHINE WHILE MACHINE IS RUNNING.
- * SHOULD MISFED PRODUCT JAM THE MACHINE AND STOP IT FROM RUNNING, ALWAYS PRESS THE STOP BUTTON BEFORE CLEARING PRODUCT. IF THE STOP BUTTON IS NOT PRESSED AND THE JAM IS CLEARED, THE MACHINE WILL BEGIN RUNNING.
- * IT IS NOT RECOMMENDED THAT LOOSE CLOTHING, JEWELRY AND LONG HAIR BE WORN WHILE OPERATING THIS MACHINERY.
- \ast ALWAYS USE AN EXPERIENCED ELECTRICIAN WHEN TROUBLE-SHOOTING ELECTRICAL PROBLEMS.
- * CHANGES OR MODIFICATIONS TO THIS UNIT NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

2 SPECIFICATIONS

ELECTRICAL REQUIREMENTS

110 VAC, 5 Amp., 60Hz Single Phase

MAXIMUM BELT SPEEDS (Autoloader)

100 FPM

PHYSICAL SIZE (Autoloader)	<u>ENGLISH</u>	<u>METRIC</u>
Length:	70"	177.8 cm
Width:	20"	50.8 cm
Height: (tabletop)	36.5-42.5"	92.7-107.9 cm
Height Bottom Clearance:	33.38"- 39.38"	84.8-100 cm

PRODUCTS (Autoloader)

MAX: 15"W X 13"L MIN: 3"W X 3.5"L

OPTIONAL ITEMS (see assembly prints)

544866-01 ASSY, KIT DRIVE ROLLER KR533 544870-01 ASSY, KIT PRODUCT SLIDE KR533

3 INSTALLATION



WARNING

Read and follow all Safety Instructions in Section 1, Page 3 before proceeding.

3.1 Uncrating and Unpacking

- 1. Position the crate near the installation site.
- 2. Remove crate top and sides.
- 3. Remove plastic cover.
- 4. Remove metal strapping and securing blocks.
- 5. Use a forklift to lift machine off skid. Be sure to position the forks in a central location.
- 6. Machine is on casters and can be rolled into position with the feeder base.

3.2 Accessories and Spare Parts

The accessories and spare parts are packaged and located inside the base cabinet. The box should be opened and checked against the enclosed packing list.

4 MACHINE DESCRIPTION

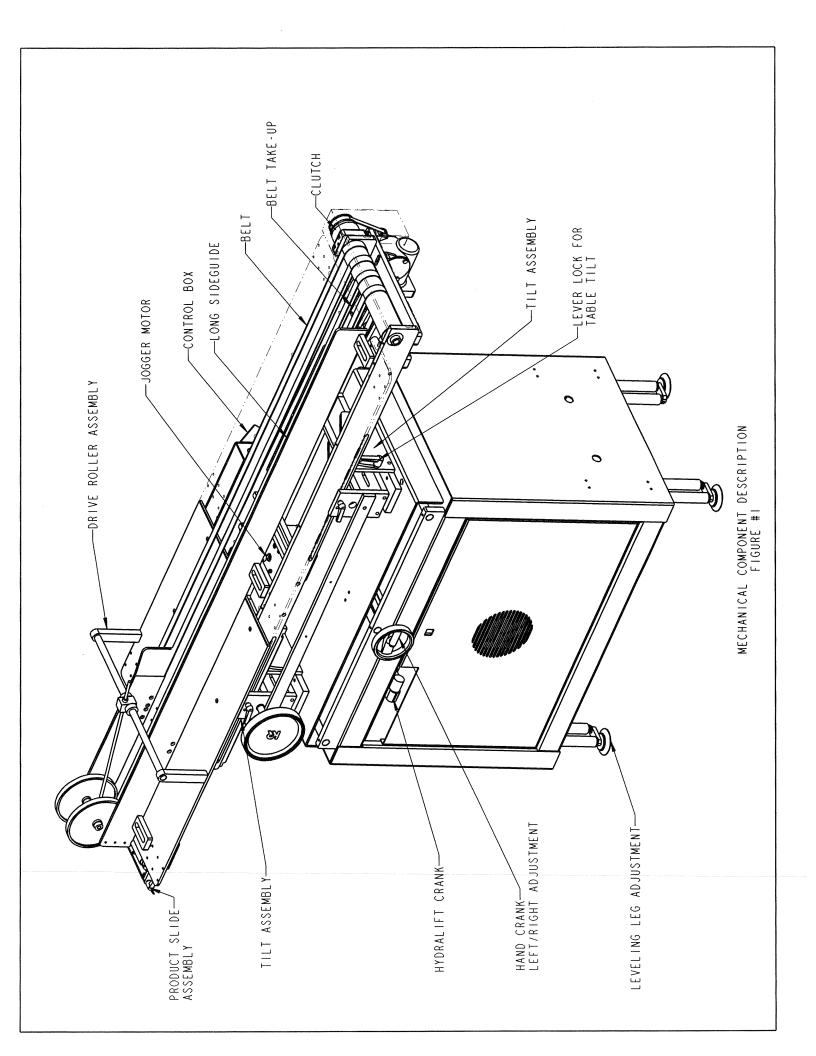
4.1 Mechanical Component Description (see figure #1)

- 4.1.1 Hydralift: a storable crank handle is used to elevate or lower the unit. The crank handle activates a pump unit that hydraulically extends and re-tracks legs attached to each corner of the unit. Full extension of the legs lifts the unit approximately six inches. A footpad on the end of each leg can be screwed in or out if necessary for leveling. (see #544850-01)
- 4.1.2 Hand Crank: the hank crank is used to move the autoloader tabletop left or right. Full movement is approximately six inches. The handle on the hank crank is storable. (see assembly #544561-01)
- 4.1.3 Hand Wheel: the hand wheel is used to move the autoloader tabletop in and out. Full movement is approximately fifteen inches. Two levers type knobs are used to lock the fore and aft moment in place. (see assembly #537692-10)
- 4.1.4 Table Tilt: the tabletop can be tilted to 25 degrees. Two lever type knobs, one for each tilt assembly, are use to lock the angle in place. (see assembly #538182-02)
- <u>4.1.5 Jogger:</u> a motor driven plate on the outfeed end of the tabletop moves in and out for jogging. Power to the jogger can turned on and off by a switch on the control box. (see diagram 544858-01)
- 4.1.6 Belts and Belt Takeups: the tabletop has four conveyor belts. A belt takeup is used to control the position and tightness of each belt. The belt takeups are located underneath the infeed end of the tabletop. (see assembly #539325-01)
- 4.1.7 Drive Roller Assembly: a driver roller assembly controls the shingle during autoloading. It is especially useful from keeping slick product from sliding uncontrollably as the shingle moves downward into the feeder. (see assembly #544866-01)
- 4.1.8 Product Slide: a plate held in place by two adjustable arms is used to autoload flimsy product inline to the shuttle feeder. It is not used for a side delivery. Locked in place by two sets of lever knobs, the plate supports the product as the shingle slides into the feeder. The product slide is not used if the product is stiff enough so as not to sag as it shingles into the feeder. (see assembly #544870-01)
- 4.1.9 Long Side Guide: the long sideguide is used on the right side of the autoloader table top for autoloading the KR 496F friction feeder and the left side for autoloading the KR 215 shuttle feeder. When used in a right hand set up for a KR215 shuttle table feeder, a backstop is attached to provide the shuttle table feeder with a rear guide. A large product rear side guide is attached to the backstop to act as a rear side guide for large products. For smaller products, a small product rear sideguide assembly can be mounted to the backstop.

4.1.10 Short Side Guide: the short sideguide is used on the right side of the autoloader tabletop for inline autoloading the KR215 shuttle feeder.

4.2 Electrical Component Description (see figure #1)

- 4.2.1 Electrical Connection: the electrical cord has a standard 15 amp, 110 volt electrical plug.
- 4.2.2 Control Box: the control box has an on/off switch that lights up when the power is on, a locking speed control and an on/off switch for the jogger.
- 4.2.2Beam Switch and Time Delay Relay: a beam switch is used to control the clutch. When product is not detected by the beam switch, the clutch is engaged to drive the belts. The clutch will stay engaged after the beam switch again detects product until the time set on the relay expires.



5 OPERATING INSTRUCTIONS

5.1 Set Up for Right Hand KR 496F Feeder (see figure #2)

- 1. Setup and adjust the KR 496 friction feeder on the KR215 for feeding the product. Remove the rear side guides. Remove the left sideguide from the slide block and install the large left sideguide (part #530545-12) provided with the autoloader. Remove the right side guide and leave the product in place for positioning the autoloader.
- 2. Set the autoloader tabletop in the flat position and move the tabletop completely to the out position using the hand wheel. Crank the left/right hand crank so that the autoloader tabletop is set to mid travel (approximately five cranks from a left or right stop).
- 3. Roll the autoloader in alignment with the friction feeder and perpendicular to the base. Important: to be able to adjust from minimum to maximum size product without repositioning the autoloader, the distance between the base of the autoloader and the base of the KR215 should be 14 inches. The tabletop will move approximately three inches to the right when tilted. Aligning the outside edge of the autoloader tabletop (right side) with the friction feeder bridge will position the edge of the cutout portion of the autoloader tabletop to clear the friction feeder bridge when the tabletop is tilted.
- 4. Crank the hydralift crank handle clockwise till the unit is fully elevated.
- 5. Tilt the tabletop fully forward and lock in place using the lever type knobs.
- 6. Use the handwheel to move the autoloader up to the edge of the product leaving about an eighth of an inch for product to autoload and drop down to the belts during feeding. Lock the in and out movement in place using the two lever type knobs provided.
- 7. Fine-tune the elevation and angle of the autoloader to match the tabletop of the friction feeder. Lock the angle in place using the lever type knobs on the tilt assembly. Store the hydralift crank handle.
- 8. Using the clamp type belt guides under the tabletop, set the position and tension of the autoloader tabletop belts to convey the product.
- 9. Install the long side guide assembly (with out the back stop attachment) on the right side of the autoloader tabletop. Important: the long side guide assembly should be lined up slightly in front of the front guide of the friction feeder (towards the product in the feeder) in order to keep product from catching on the edge of the front guide when autoloaded into the feeder.
- 10. Fill the hopper of the shuttle feeder by hand to the minimum level. Plug in the autoloader. With the autoloader empty, attach the autoloader beamswitch, turn the autoloader on and set at the beamswitch to activate the autoloader at the minimum product level.
- 11. Turn off the autoloader and remove product from the feeder till the product is just below the minimum level. Load the autoloader with product and turn on. The autoloader should shingle product into the feeder till the beamswitch deactivates the autoloader clutch. Turn on the jogger and check operation.

12. Test feed and adjust the speed of the autoloader belts for smooth autoloading.

5.2 Set Up for Right Hand KR 215 Feeder (see figure #3)

- 1. Set up and adjust the KR 215 shuttle feeder for feeding the product.
- 2. Remove the jogging table assembly. Remove the right sideguide assembly by sliding the block off. Remove the slide plates for the right sideguide. Install the bridge plate (part #544771-02) provided with the autoloader. Remove the left sideguide and replace with sideguide assembly #544748-02. Place the midpoint of the product at the midpoint of the feed gate and set the left sideguide to the edge of the product. Leave the product in position for alignment of the autoloader.
- 3. Set the autoloader tabletop in the flat position and move the tabletop completely to the out position using the hand wheel. Crank the left/right hand crank so that the autoloader tabletop is set to mid travel (approximately five cranks from a left or right stop).
- 4. Roll the autoloader in alignment with the KR215 feeder and perpendicular to the base. Important: to be able to adjust from minimum to maximum size product without repositioning the autoloader, the distance between the base of the autoloader and the base of the KR215 should be 14 inches. The edge of the cutout part of the autoloader table top should be aligned with the bridge plate leaving room for the autoloader to be moved in to the side of the product.
- 5. Crank the hydralift crank handle till the bottom of the autoloader tabletop clears the top of the KR215 tabletop.
- 6. Using the handwheel move the autoloader in to the edge of the product leaving about an eighth of an inch for the product to autoload and drop to the shuttle table as it feeds and lock in place. Lock the in and out movement in place using the two lever type knobs provided. Using the left/right hand crank, move the autoloader tabletop to where the cutout is against the bridge plate. Store the handcrank handle.
- 7. Using the hydralift crank handle, lower the autoloader till the spacers rest on the KR215 tabletop. Store the crank handle.
- 8. Using the clamp type belt guides under the tabletop, set the position and tension of the autoloader tabletop belts to convey the product.
- 9. Install the backstop assembly on the long sideguide (see assembly #544863-01). Using a product for spacing, install the long sideguide on the left side of the tabletop. Set either the large rear sideguide or the small rear sideguide assembly, depending on the size of the product, inline with the left sideguide.
- 10. Fill the hopper of the shuttle feeder by hand to the minimum level. Plug in the autoloader. With the autoloader empty, attach the autoloader beamswitch turn the autoloader on and set at the beamswitch to activate the autoloader at the minimum product level.
- 11. Turn off the autoloader and remove product from the feeder till the product is just below the minimum level. Load the autoloader with product and turn on. The autoloader should shingle product into the feeder till the beamswitch deactivates the autoloader clutch. Turn on the jogger and check operation.
- 12. Test feed and adjust the speed of the autoloader belts for smooth autoloading.

5.3 Set Up for Inline KR 215 Feeder (see figure #4)

- 1. Set up and adjust the KR 215 shuttle feeder for feeding the product.
- 2. Remove the jogging table assembly. Remove the left and right sideguides from the slide blocks and install the left sideguide (assembly #544748-02) and right-angled sideguide (part #500788-28r) provided with the autoloader. Place the midpoint of the product at the midpoint of the feed gate and set the left and right sideguides to the edges of the product. Leave the product in position for alignment of the autoloader.
- 3. Set the autoloader tabletop in the flat position and move the tabletop completely to the out position using the hand wheel. Crank the left/right hand crank so that the autoloader tabletop is set to mid travel (approximately five cranks from a left or right stop).
- 4. If the product is flimsy and will not shingle by itself into the feeder, install the product slide (assembly #544870-01) on the outfeed end of the autoloader. If not, rotate the clips outward on the bottom leading edge of the autoloader to act as a backstop for the shuttle feeder.
- 5. Using the clamp type belt guides under the tabletop, set the position and tension of the autoloader tabletop belts to convey the product.
- 6. Center a product on the autoloader belts and install the short sideguide on the right side and the long sideguide (see assembly #544772-01), without the backstop assembly on the left side.
- 7. Install the drive roller assembly.
- 13. Roll the autoloader in alignment with the KR215 feeder. Important: to be able to adjust from minimum to maximum size product without repositioning the autoloader, the distance between the base of the autoloader and the base of the KR215 should be 12 1/8 inches.
- 8. Crank the hydralift crank handle till the bottom of the autoloader tabletop clears the top of the KR215 tabletop.
- 9. If not using the product slide, use the handwheel to move the autoloader in to the back edge of the product leaving about an eighth of an inch for the product to autoload and drop to the shuttle table as it feeds and lock in place. Lock the in and out movement in place using the two lever type knobs provided.
- 10. If using the product slide, remove the product from the feeder and use the handwheel to move the autoloader in till the edge of the product slide is just aft of the feed plate when the plate is in its most rearward position.
- 11. Using the handcrank, fine-tune the alignment of the autoloader tabletop to the product. Store the hand crank handle.
- 12. Using the hydralift crank handle, lower the autoloader till the spacers rest on the KR215 tabletop. Store the crank handle.
- 13. Fill the hopper of the shuttle feeder by hand to the minimum level. Plug in the autoloader. With the autoloader empty, attach the autoloader beamswitch turn the autoloader on and set at the beamswitch to activate the autoloader at the minimum product level.

- 14. Turn off the autoloader and remove product from the feeder till the product is just below the minimum level. Load the autoloader with product and turn on. The autoloader should shingle product into the feeder till the beamswitch deactivates the autoloader clutch. Adjust the product drive wheel over the bow of the shingle to keep product from sliding into the feeder. Leave the jogger switch off.
- 15. Test feed and adjust the speed of the autoloader belts for smooth autoloading.

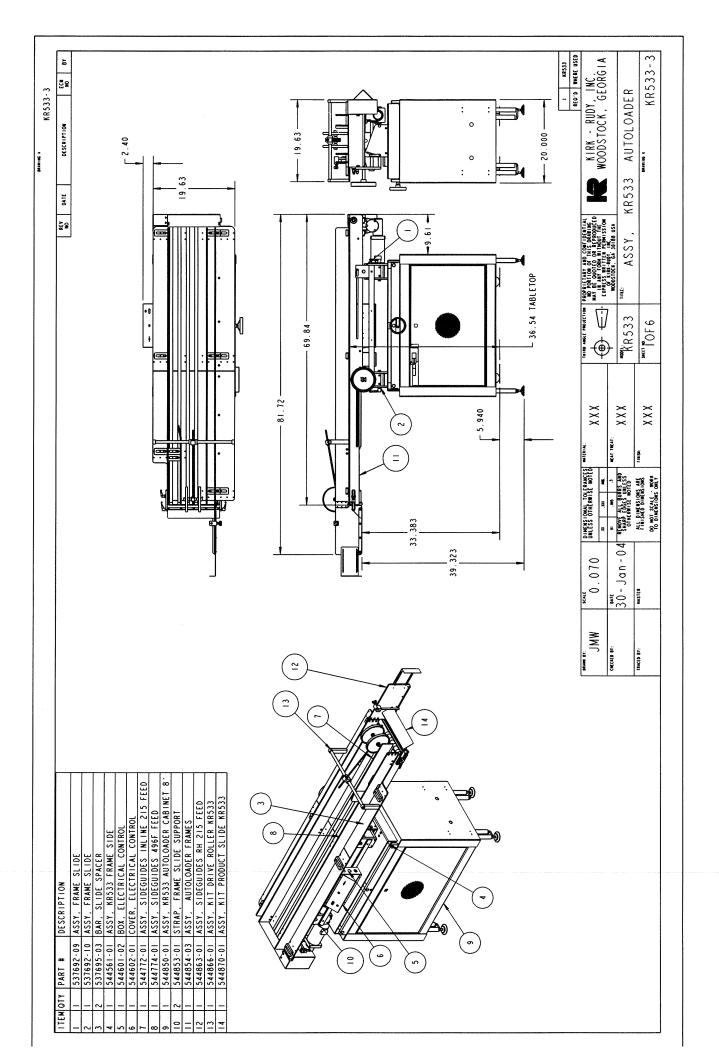
6 MAINTENANCE

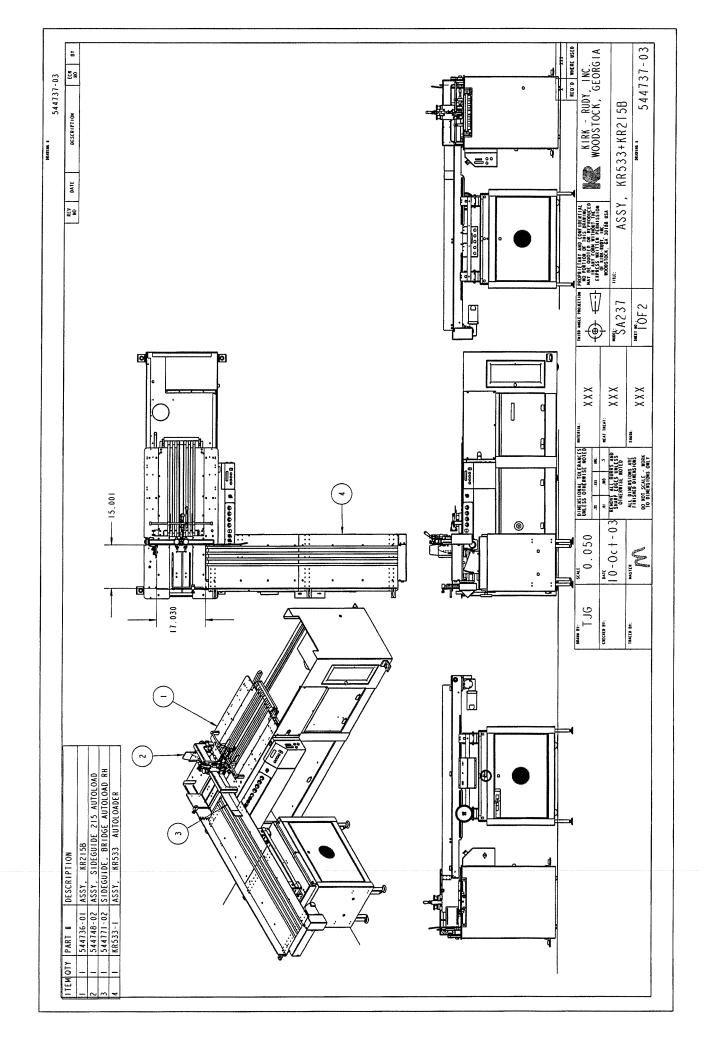
- 1. Check belts for wear and proper tension. Replace belt if necessary.
- 2. Remove dust from sensor using a soft, clean cloth.
- 3. Clean the tabletop with a clean, damp cloth and a mild detergent or cleaner.

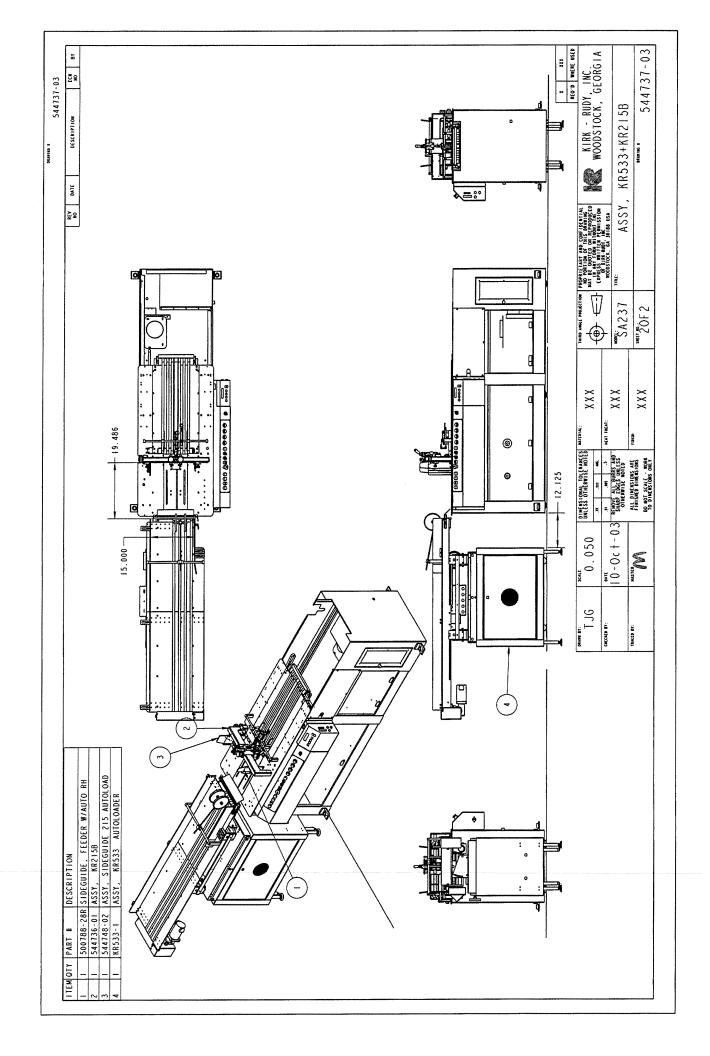
7 PARTS LIST AND DIAGRAMS

7.1 DIAGRAMS

ASSEMBLY #	DESCRIPTION	PAGES
544737-03	ASSY, KR533+KR215B	6
KR533-3	ASSY, KR533 AUTOLOADER	1
537692-09	ASSY, FRAME SLIDE	1
538182-02	ASSY, ANGLE ADJ. STAND	1
537692-10	ASSY, FRAME SLIDE	1
544561-01	ASSY, KR533 FRAME SLIDE	1
537280-01	ASSY, BUSHING BLOCK	1
544772-01	ASSY, SIDEGUIDES INLINE 215 FEED	1
544774-01	ASSY, SIDEGUIDES 496F FEED	1
544850-01	ASSY, KR533 AUTOLOADER CABINET	1
539424-01	ASSY, RH HYDRALIFT LEG	1
539425-01	ASSY, LH HYDRALIFT LEG	1
544854-03	ASSY, AUTOLOADER FRAMES	1
530676-04	ASSY, DRIVE ROLLER	1
535878-02	ASSY, OUTFD ROLLER	1
539325-01	ASSY, ¾ IN FLAT BELT TAKEUP	1
544858-01	ASSY, JOGGER AUTOLOADER	1
544863-01	ASSY, SIDEGUIDE RH 215 FEED	1
544866-01	ASSY, KIT DRIVE ROLLER KR533	1
544870-01	ASSY, KIT PRODUCT SLIDE KR533	1
SP58900-4	ASSY, 496F FEEDER AUTOLOADER	1
530549-04	ASSY, BACKSTOP 496F AUTOLOAD	1
530887-12	ASSY, BRIDGE 496F	1
544748-02	ASSY, SIDEGUIDE 215 AUTOLOAD	1







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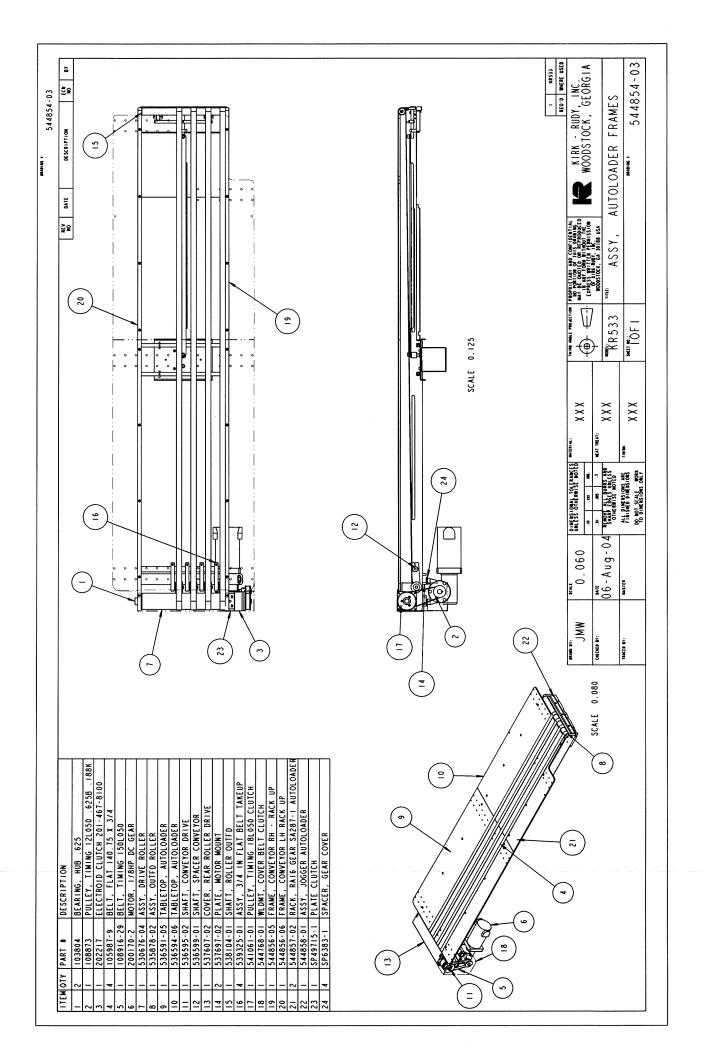
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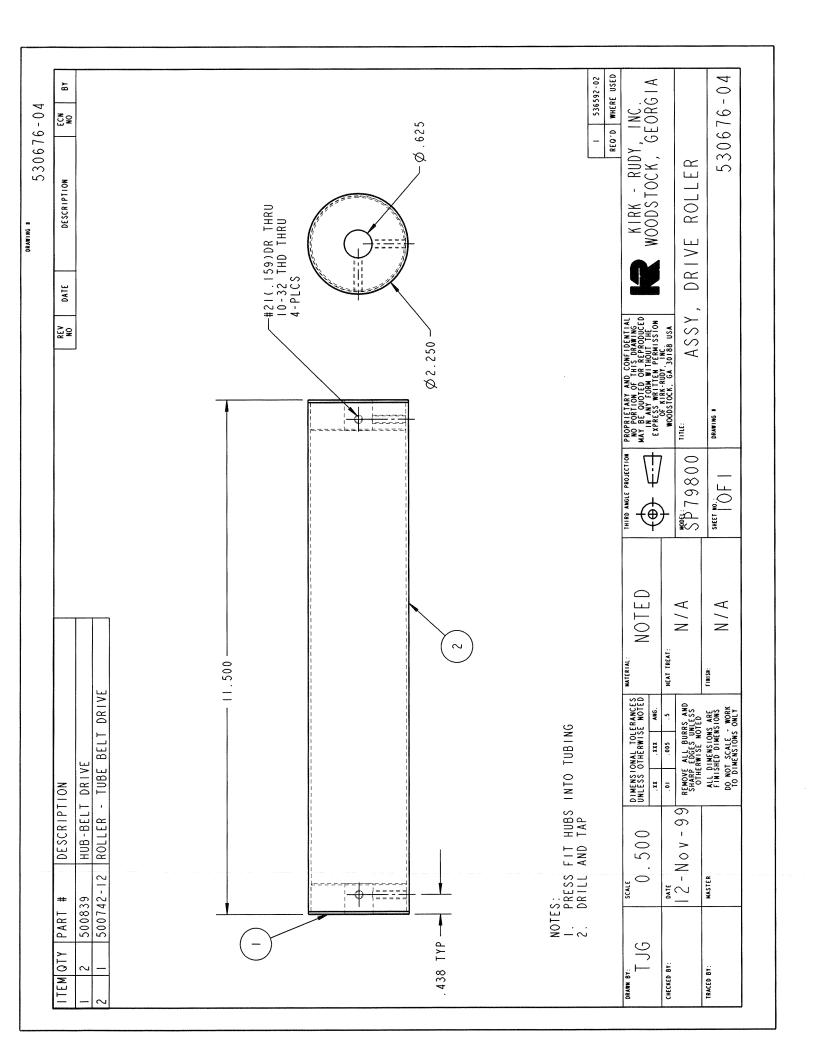
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1 5 508737-7 BRACKET 2 1 537603-09 SIDEGUIDE, PRODUCT RH 3 1 537603-10 SIDEGUIDE PRODUCT I H		7
5 SP6383-1 SPACER, GEAR COVER		
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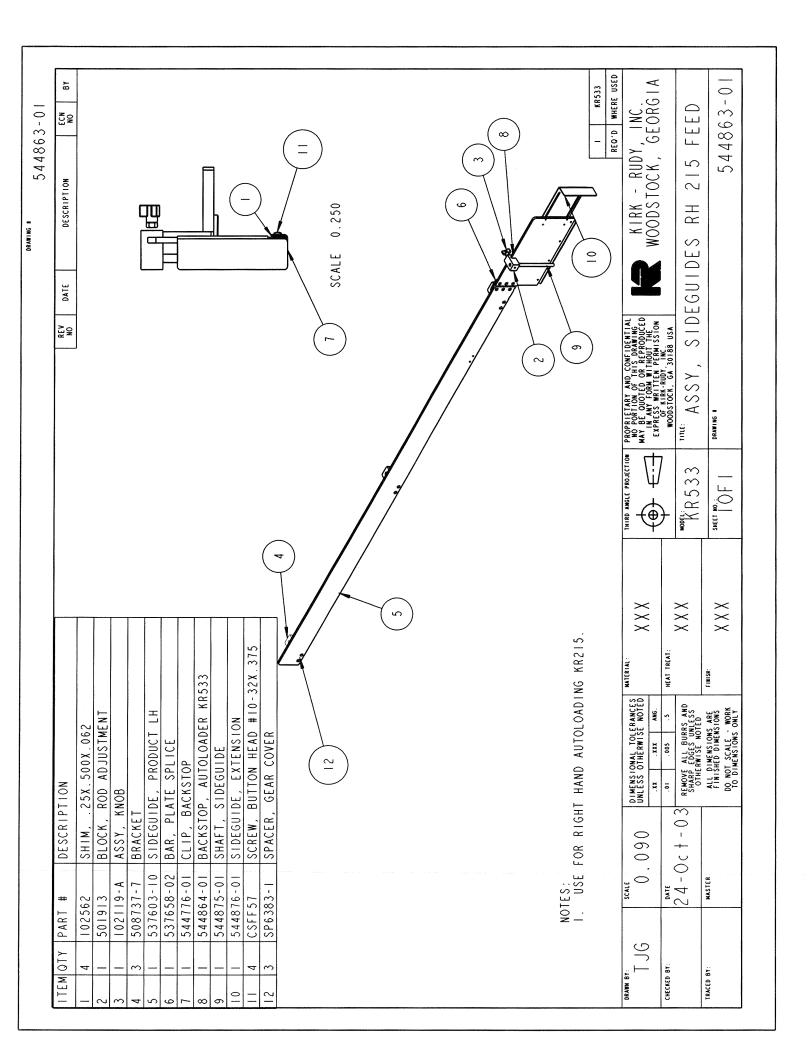
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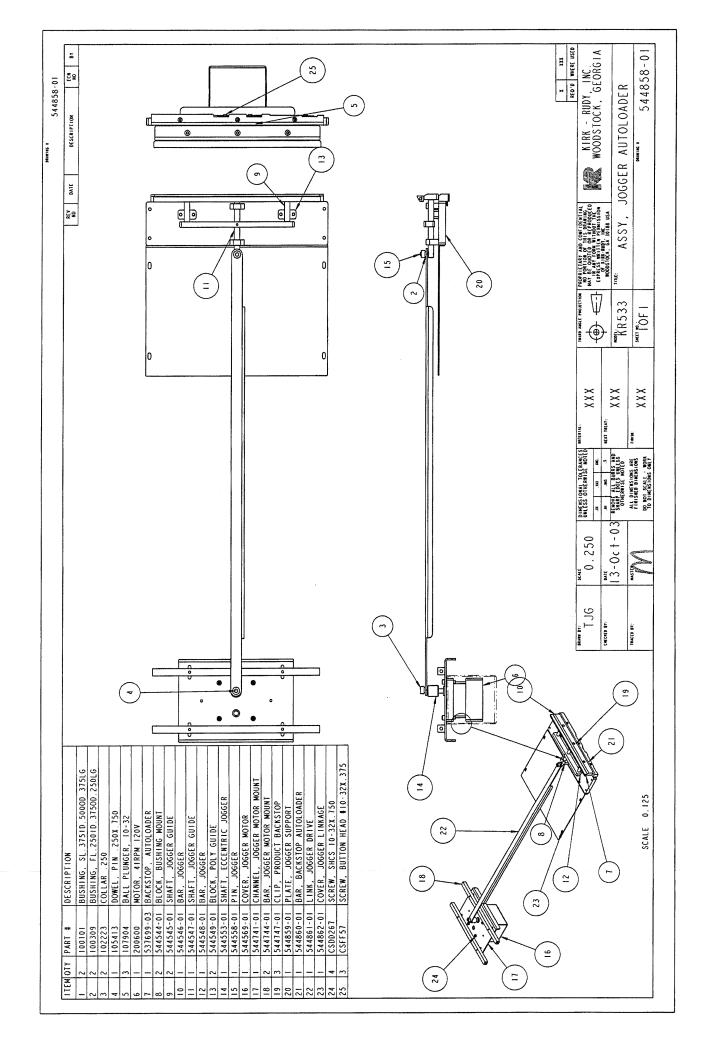




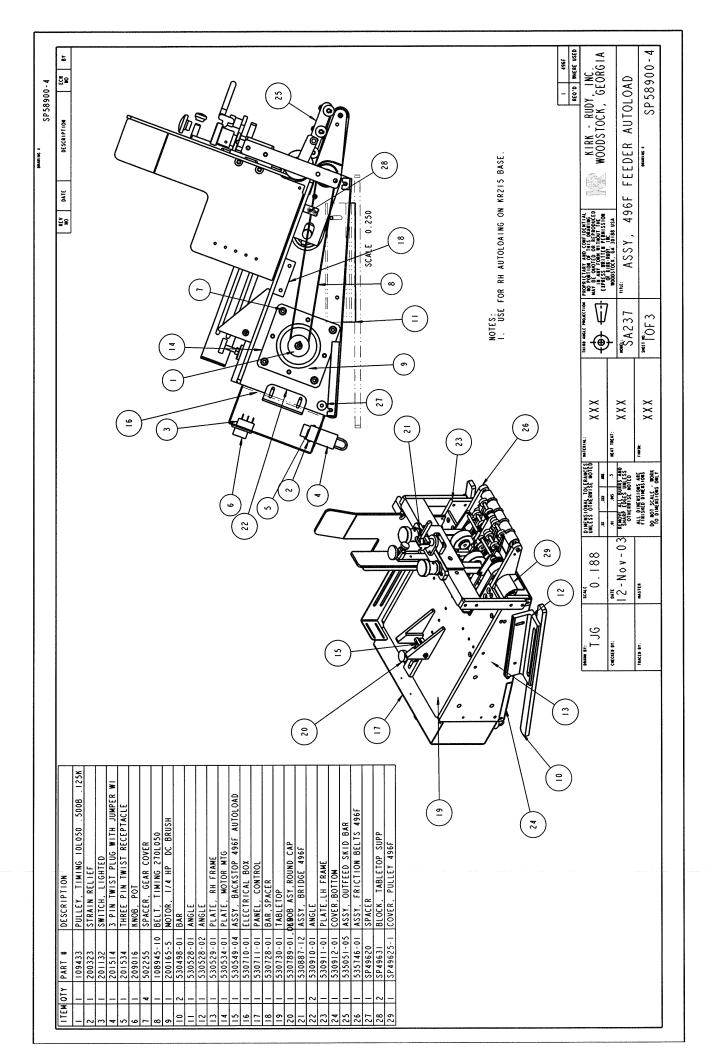
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	AKEUP AKEUP	HEAT TREAT: N/A WOOD: SALOOO	N/A SHETT NO. F
T # DESCRIPTION	WASHER, THRUST TB612 BEARING, FLAT .375 ARM BELT TIGHTENER SHAFT, BELT GUIDE ROLLE 11 ROLLER, IDLER -01 ASSY, 3/4 IN FLAT BELT 3 3	SCALE O O O DIMENSIONAL TOLERANCES XX	MASTER OTHERWISE MOTED OTHERWISE MOTED FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY
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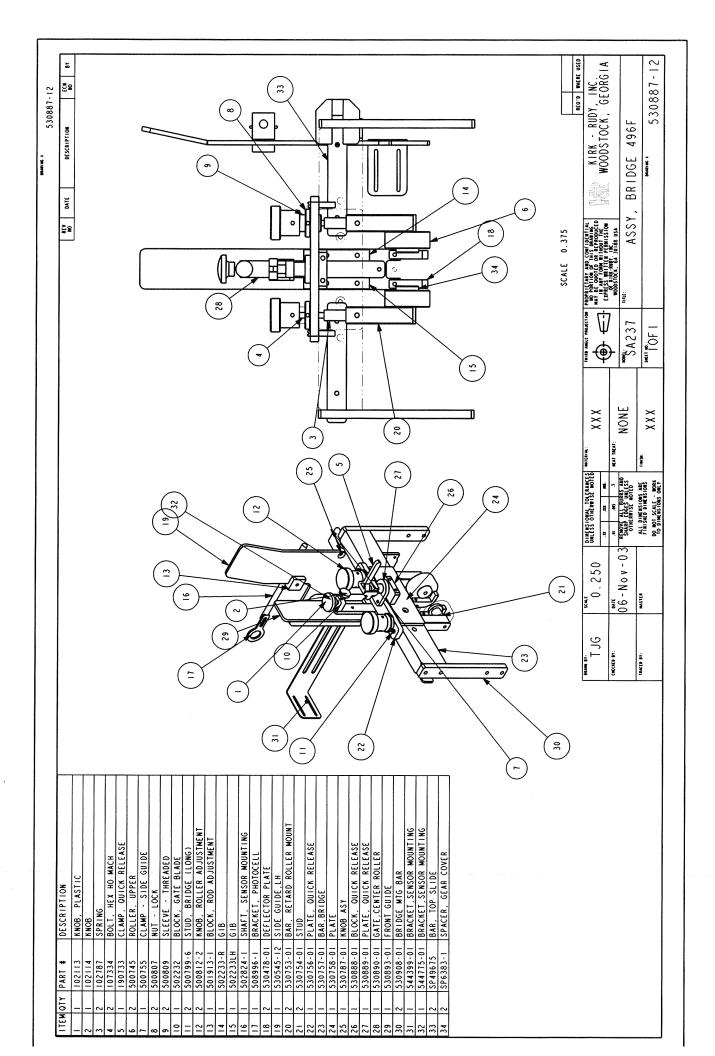


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8 ELECTRICAL SCHEMATICS AND PARTS

- **8.1 WIRING DIAGRAMS LIST** SCHEMATIC # 210212-06-00
- 8.2 PARTS LIST

9 APPENDIX

10	NOTES	
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11 WARRANTY AND SERVICE

WARRANTY

Warranty: Kirk-Rudy, Inc., warrants to the original retail purchaser that this product is free from defects in the material and workmanship, and agrees to repair or replace, at Kirk-Rudy's option, any defective product within (90) days from the date of purchase. This warranty is not transferable. It covers damage resulting from defects in material or workmanship, and it does not cover conditions or malfunctions resulting from normal wear, neglect, abuse or accident.

THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESSED WARRANTIES ANY IMPLIED WARRANTY OF MERCHANTABLITIY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE.

Limitation of Remedies: If product is proven to be defective within the warranty period stated above, THE EXCLUSIVE REMEDY, AT KIRK-RUDY'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE PRODUCT, provided that the defective product is, at Kirk-Rudy's choice, returned immediately to Kirk-Rudy or authorized service representative designated by Kirk-Rudy, or made available at user's premises in a location suitable for servicing.

Limitation of Liability: Kirk-Rudy shall not otherwise be liable for any losses or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal or equitable theory asserted, including contract, negligence, warranty, or strict liability.

To obtain replacement parts and service, contact an Authorized Kirk-Rudy Dealer. Use Kirk-Rudy part numbers when ordering.

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www.kirkrudy.com