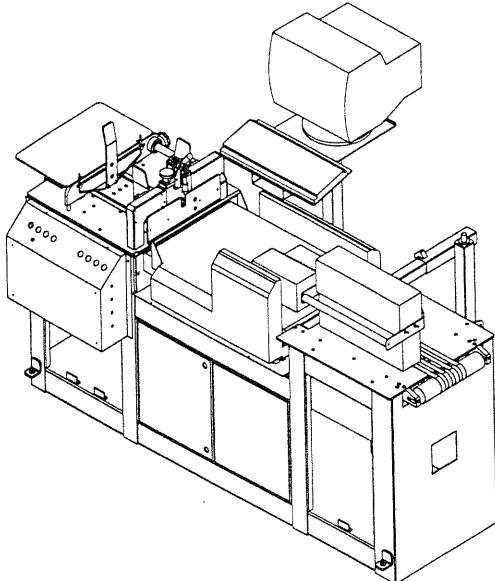


Kirk-Rudy Inc.

Instruction and Parts Manual

KR315A



NOTES: Some items shown are for view reference only.

Before using this machine, all operators must study this manual to understand and follow the safety warnings and instructions. 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: This product has been designed to be a sheet-fed, top loading, bottom feed, vacuum shuttle system. The feed product will enter an ink-jet device for printing, followed by a conveyor table for ink drying. 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.
- * 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.
- * READ ANY ADDITIONAL PRODUCT MANUALS THAT ARE SUPPLIED WITH THE KR315A FOR INSTRUCTIONS AND IMPORTANT SAFETY INSTRUCTIONS.

2 SPECIFICATIONS

PRODUCT SIZE RANGE	English	Metric
Minimum Size:	3" W x 5" L	76mm W x 127mm L
Maximum Size:	9" W x 12" L	229mm W x 305mm L
Minimum Thickness:	Card Stock (.007")	Card Stock (.18mm)
Maximum Thickness:	3/8"	9.5mm

SPEED

Maximum 15,000/hr.

MACHINE DATA

BASE

Length:	75"	191cm
Width:	33"	84cm
Height:	50"	127cm
Weight: Net	400 lbs.	227.3 kgs
Shipping Crate:	500 lbs.	318.2 kgs

ELECTRICAL

Base Main Power Input:	220 VAC, Single Phase, 4-WIRE 60/50 Cycle, 30 A
Feeder Drive Motor:	1/4 H.P. DC
Vacuum Pump:	1/2 H.P. DC
Table Conveyor Motor:	1/8 H.P. DC
Vacuum Blower:	120 Volt, AC 60/50 Cycle, 1.4 A
Speed Up Conveyor Motor:	1/4 H.P. DC

CONNECTIONS SUPPLIED FOR NON KIRK-RUDY EQUIPMENT

InkJet Printer	120/220 Vac, 60/50 Hz, 4/2 Amps
Dryer	120/220 Vac, 60/50 Hz, 12.5/12.5 Amps
Computer/Monitor	120 Vac, 60/50 Hz

NOTE: The above noted non-Kirk-Rudy Equipment is shown in this manual for view reference only. Please reference the equipment's manufacturers supplied manual.

3 INSTALLATION

3.1 UNCRATING AND UNPACKING



WARNING

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

The machinery is crated. Remove machines and all packaging from crates. Note: Some boxes are located inside the base cabinet.

Note: A forklift should be used to lift machine form pallet.

The Base is mounted on rollers.

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.

3.3 ASSEMBLY OF BASE

NOTE: Read all Safety and Operating Instructions contained in this manual before beginning operation and assembly.

1. Locate machine in final location and mount the (4) 4" leveling screws and pads on the corners of the machine.
2. Locate and attach electrically the KR Conveyor (if purchased with KR315A). The electrical connections for the conveyor are located on the left side of the machine from the direction of product flow.
3. Locate and attach electrically the dryer. Connect the 120 AC or 220 AC (15 A max.) power cord to the outlet box located in the machine cabinet to power the dryer.

Warning: If dryer requires more than 15 amps, it must be externally powered. The electrical connections (two pin twist) to enable the dryer are located on the left side of the machine from the direction of product flow.

4 OPERATING INSTRUCTIONS

4.1 BASE – ELECTRICAL OPERATION

4.1.1 OVERVIEW OPERATOR CONTROLS



WARNING

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

The following controls are located on the operator side of the feeder base. (**FIG. 1 & 2**)

Main Power Off Switch: This switch cuts power to the entire machine. Twist to unlatch.

Main Power Switch: When this two-position switch is depressed, source voltage is supplied to the electrical panel. This will make all of the switches on the electrical control panel active.

Indicator Lights:

1, Red Main power is on.

Vacuum Switch, Feeder: Rotate this switch to actuate the feeder vacuum pump.

Blower Switch: Rotate this switch to actuate the vacuum blower for dryer table.

315 or 496 Mode Switch: This (optional) switch enables a 496 friction feeder which can be used on top of the existing shuttle feeder. The 496 feeder (optional) will plug (two pin twist) into the left side panel of the electrical control box.

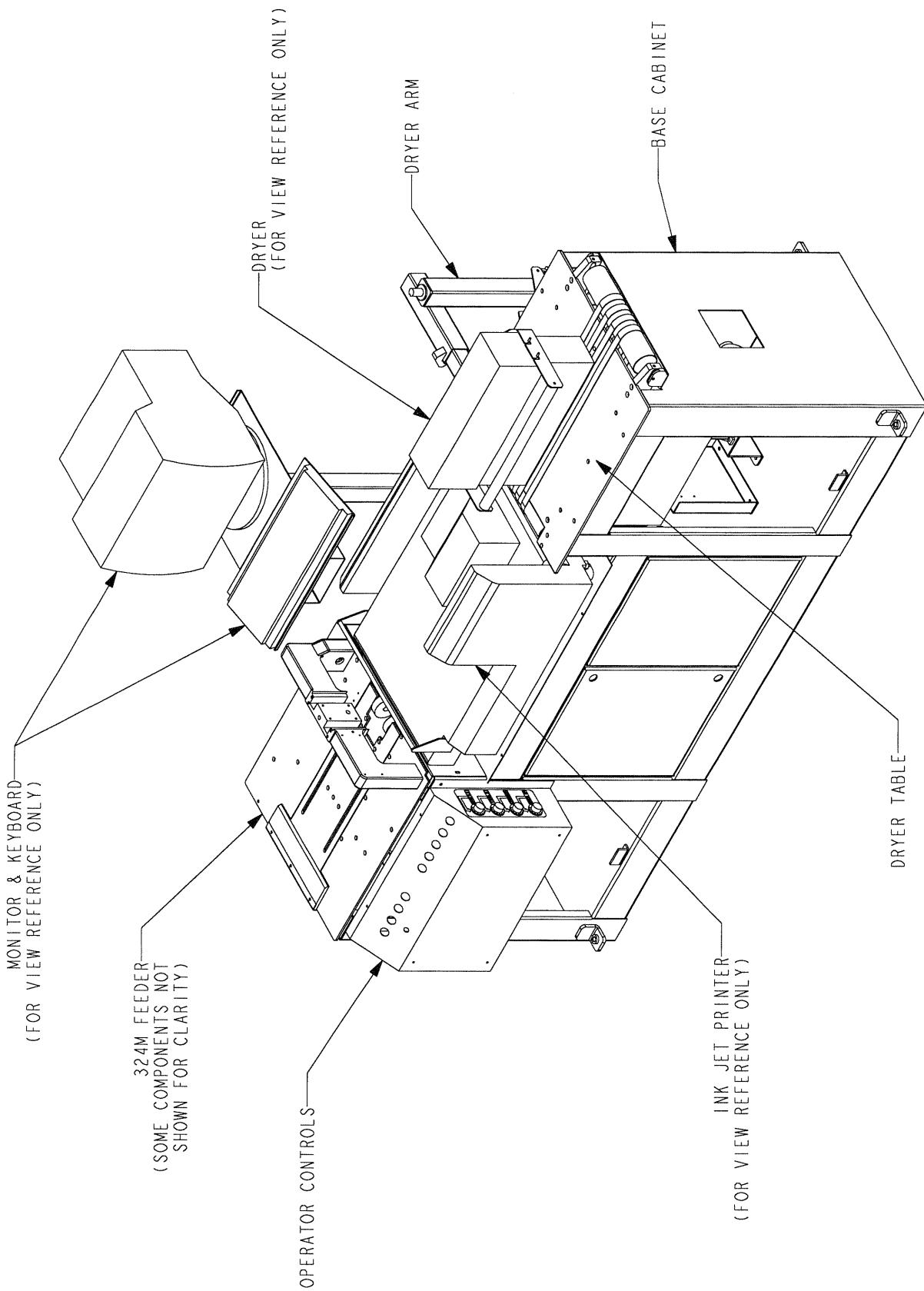
Feeder Switch: When this two-position switch is depressed the feeder portion of the machine will turn off. The rest of the machine past the feeder will continue to operate.

Stop Switch (red): Machine operation can be manually stopped by depressing the stop button on the operator panel or the button on the left panel of the conveyor.

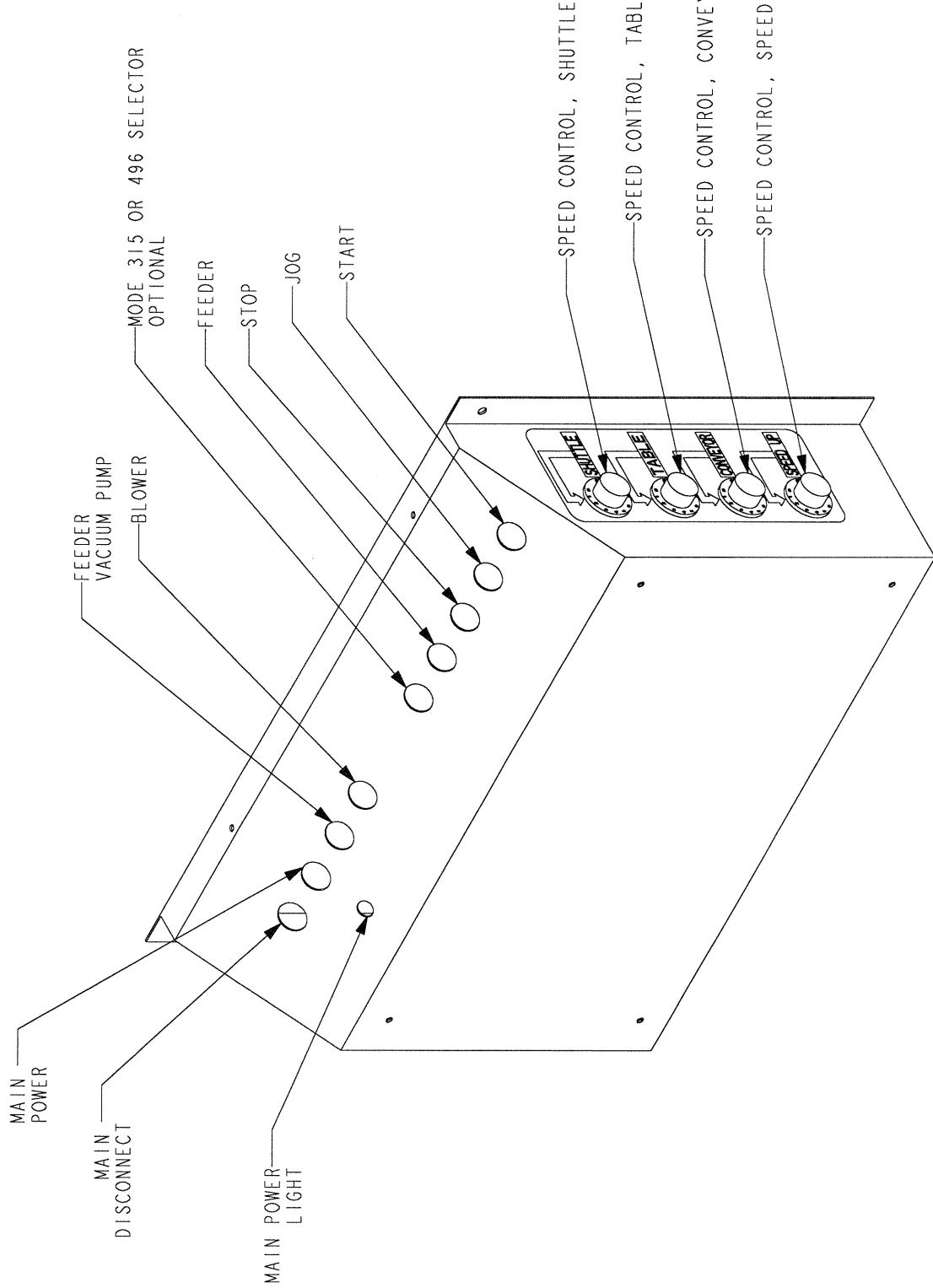
Jog Switch (black): The machine can be inched or jogged by depressing and releasing this switch. The machine will continue to cycle if this button is held depressed.

Start Switch (green): Continuous machine operation is achieved by depressing this switch momentarily and releasing.

Speed Control, Shuttle: Machine speed can be varied by turning the first knob. Turn knob clockwise to increase shuttle speed, counterclockwise to decrease.



KR315A MAJOR COMPONENTS
FIGURE 1.0



OPERATOR CONTROLS
FIGURE 2.0

Speed Control, Table Conveyor: The second knob controls the speed of the belts on the dryer table. This speed should be set slightly greater than the ink jet conveyor speed. Turn knob clockwise to increase belt speed, counterclockwise to decrease.

Speed Control, Conveyor: The third knob controls the speed of the belts on the shingle conveyor. When the main drive motor speed is set at a convenient range to continually replenish product in the feed hopper and for zip code sorting requirements, the conveyor speed should be adjusted for required product overlap. Turn knob clockwise to increase belt speed, counterclockwise to decrease.

Speed Control, Speed Up Conveyor: The forth knob controls the speed up of the belts on the shingle conveyor. Turn knob clockwise to increase belt speed, counterclockwise to decrease.

4.1.2 ELECTRICAL COMPONENT DESCRIPTION (FIG 3)

Photocell- Stack Detection: Detects the presence of a stack in the hopper area. If no stack is detected the feeder drive motor will stop. This sensor is mounted to the bottom of the left side guide.

Safety Features, Electrical: All devices are fully protected as follows:

- Main Drive Motor: The solid state component board mounted inside the electrical panel has a 12ABC input fuse and a 4AGC armature output fuse. The main drive motor will not operate with this fuse blown.
- Dryer Table Drive Motor: The conveyor drive board has a 12ABC and 2AGC fuse.
- Vacuum Pump Motor: Mounted on the inside of the electrical panel, are two 8MDL fuses.
- Shingle Conveyor Drive Motor: The conveyor drive board has a 12ABC and 4AGC fuse.
- Vacuum Blower Motor: Mounted on the inside of the electrical panel is a 3.2 MDL fuse.
- AC Outlet Boxes: Each box is fused at 15 amps.

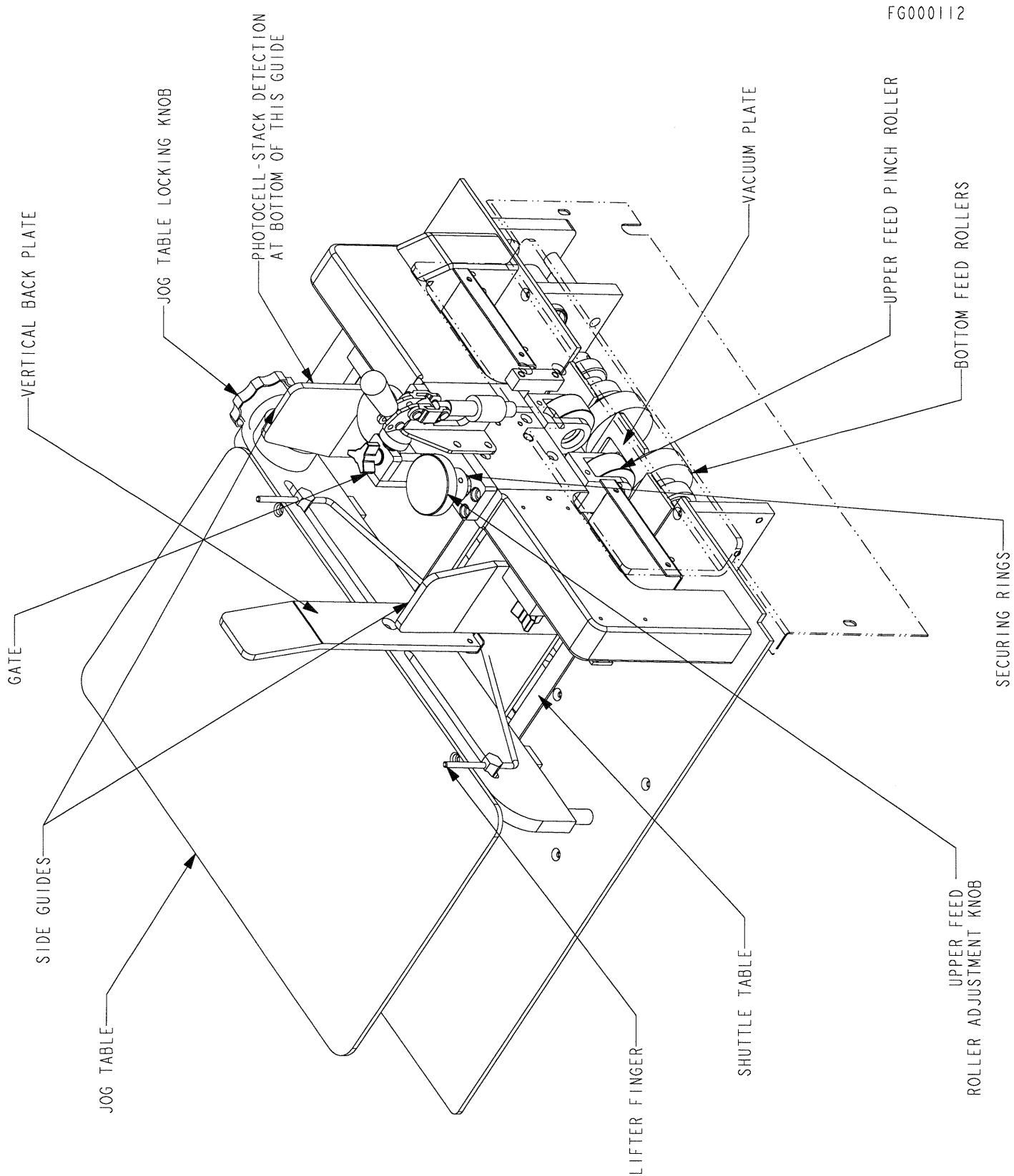
Plug Interfaces:

PL1: Conveyor speed up.

PL2: Signals when Astrojet is on to enable feeder and controls operation (on/off) of Astrojet conveyor belts.

Programmable Logic Controller: The 315A is controlled by an Allen-Bradley MicroLogix Programmable Logic Controller (PLC). This unit monitors devices and controls outputs based on these inputs. This unit does not require any maintenance .

FG000112



FEEDER MECHANICAL COMPONENTS
FIGURE 3.0

Conveyor Speed Up: The conveyor speed is triggered from an external signal, PL1. The amount of time for the speed up is set as follows:

Reset Timer Value: To reset speed up time to zero, first press and hold *Power On*, then press *Run*. Then release *Run*, then release *Power On*. The machine will not enter run mode.

Increase Timer Value: To increase speed up time by 0.1 second, press and hold *Power On*, then press *Jog*. The machine will not enter jog mode. Each jog press will increase the conveyor speed up time by 0.1 second. Finally, release *Jog*, then release *Power On*. Machine is back to normal mode and is ready to run.

4.2 MECHANICAL OPERATION

4.2.1 Mechanical Component Description & Set Up(FIG 3)

Vacuum Plate: The vacuum plate is located on the front edge of the shuttle. It's purpose is to pull the bottom piece from the product stack. Four vacuum plates are furnished with your machine so different types of product can be feed.

1. Deep concave: Used for light-weight material; material that will conform to the depression when vacuum is applied. (part# 503751-1)
2. Shallow concave - for medium weight material: e.g., self mailers, light newspapers, folded sheets pamphlets, etc. - material that will conform to the depression when vacuum is applied. (part# 503751-2)
3. Flat - for heavy material such as catalogs, booklets, magazines, etc.(part# 503751-3)
4. Convex- for feeding product open edge first. (part# 503751-4)

Select the proper vacuum plate using the above information as a guide. Humidity and or static in some mailing piece stocks may require interchanging the vacuum feed plates to achieve optimum feed operation. For greater vacuum control, a 10-32 tap can be run partially into each hole of the vacuum plate. 10-32 set screws can then be used as needed for controlling the vacuum. The vacuum plate is mounted to the feed shuttle by two allen cap screws. Before mounting, clean all foreign material from bottom of vacuum plate and shuttle mounting block. A light coating of grease on the bottom periphery of the vacuum plate is helpful to ensure a good seal.

Side Guides: The side guides are used to guide the product so it has the correct orientation from left to right. Loosen the thumb screws to move each side guide to its correct position (1/16" gap between product & guide) and retighten thumb screws. The product is normally

centered with the gate and upper feed rollers, however it can be offset as needed. The photocell that detects a low stack is mounted to the bottom of the left side guide.

Jogger Table: The jogger table has two purposes. The first purpose of the jogger table is to use the large flat plate to jog a stack of product for more reliable feeding. The second purpose is to set the position of the vertical back plate. This position is dependent upon product length. The distance between the gate and vertical back plate (which is located on the jogger table assembly) can be varied by loosening the locking knob and siding the jogger table assembly on its mounting shaft. The jogger table assembly should be positioned so there is a 1/16" gap between the product and vertical back plate with the product touching the gate.

Pusher Blocks: Two pusher block assemblies are provided to assist in feeding heavy material when vacuum alone will not suffice. To adjust, jog machine until feed table has reached its back position. Loosen the front screws and slide pusher block assemblies until pusher 'lip' is 1/4" from rear of mailing piece. By turning the rear pusher block allen screws counterclockwise, the front edge of the spring-loaded pusher 'lip' can be raised - adjust height of lip to approximately one-half the thickness of an individual mailing piece.

Lifter Fingers: Two lifter finger assemblies are provided to assist in feeding wide, limp material: e.g., tabloids, newspaper stock, etc.) more effectively. The lifter fingers give this type material more rigidity at the gate separation area. They are made from 1/4" round steel, and can be found mounted on either side of the back guide. To adjust, loosen retaining nuts, thereby permitting movement of the fingers laterally in their respective slots on the jogger plate, and up and down in the hex head bolt assemblies. Position each finger approximately 1/4 to 1/3" in from the edge of the mailing piece and raise to within 1/2 to 1" from feed table. **Warning:** Lifter fingers should always be at least 1/8" above shuttle table.

Gate: The gate is used to separate the product as the vacuum plate pulls the bottom piece from the stack. Loosen the round knob that holds the gate adjusting knob secure. To raise the gate turn the knob counterclockwise; clockwise lowers the gate. The gate is adjusted properly when only one piece can fit between the gate and vacuum plate. To correctly set the height of the gate follow these steps:

1. Move shuttle to max. back position.
2. With vacuum pump on, install 1 pc. of product in hopper.
3. Jog shuttle table forward 1/8"
4. Adjust gate height so only one piece will slide under gate.

5. Fine tune during running. If more than one piece is being feed, lower the gate.
If product is damaged during feeding, raise the gate.
6. Secure gate adjusting knob.

Upper Feeder Pinch Rollers: The height of these rollers is determined by product thickness. To adjust them, use an allen wrench to loosen the securing rings around each upper feed roller adjusting knob. Turning the knob clockwise lowers the feed roller; counter clockwise raises the roller. It is important the feed rollers apply the same amount of pressure otherwise the product will skew as it leaves the hopper. To correctly set the height of the feed rollers follow these steps:

1. Install one piece of product in hopper.
2. Move shuttle to max. forward position.
3. Adjust roller height so there is slight drag between rollers and product.
4. Fine tune upper rollers during running. If product skews increasing/decreasing roller pressure one side at a time until product runs straight.
5. Lock securing rings.

Vacuum Pump Regulator Adjuster: Different types of product require varying amounts of suction at the vacuum plate in order to feed properly. For example, a very thin, porous stock requires less vacuum than a heavy card stock. Too much vacuum at the vacuum plate will result in double feeds. A suction of 20-25" Hg. is a typical starting point. To determine the present setting, remove the plastic hose that connects the pump and the vacuum body. Cover the inlet with your finger. The gauge on the pump will display the amount of vacuum the pump is producing. To adjust the vacuum pump regulator follow this procedure:

1. Locate the vacuum inlet manifold. A gauge located on top of this manifold indicates the suction created by the pump in inches of mercury. A spring-loaded valve on the bottom of this manifold functions as a regulator.
2. To increase the suction, loosen the locknut and turn the nuts to decrease spring pressure.
3. To decrease the suction, loosen the locknut and turn the nuts to increase spring pressure.

4.2.2 Feeder Setup

The following steps are used to setup the feeder to run a given product. Perform these steps in the order they are listed. Refer to Mechanical Component Description (section 4.2.1) if detailed information is needed on how to perform each step.

1. Determine the correct vacuum plate to use and install it.
2. Adjust the vacuum pump regulator.
3. Jog product to be ran.
4. Set position of side guides. (1/16" gap)
5. Set position of jogger table assembly. (1/16" gap)
6. Set gate height.
7. Set height of upper feed rollers.
8. Determine if use of lifter fingers or pusher block is necessary.
9. Fine tune gate height, upper feed rollers and vacuum pump regulator as needed during test run to get reliable product feeding.

4.2.3 Dryer Arm Setup & Usage (FIG 4)



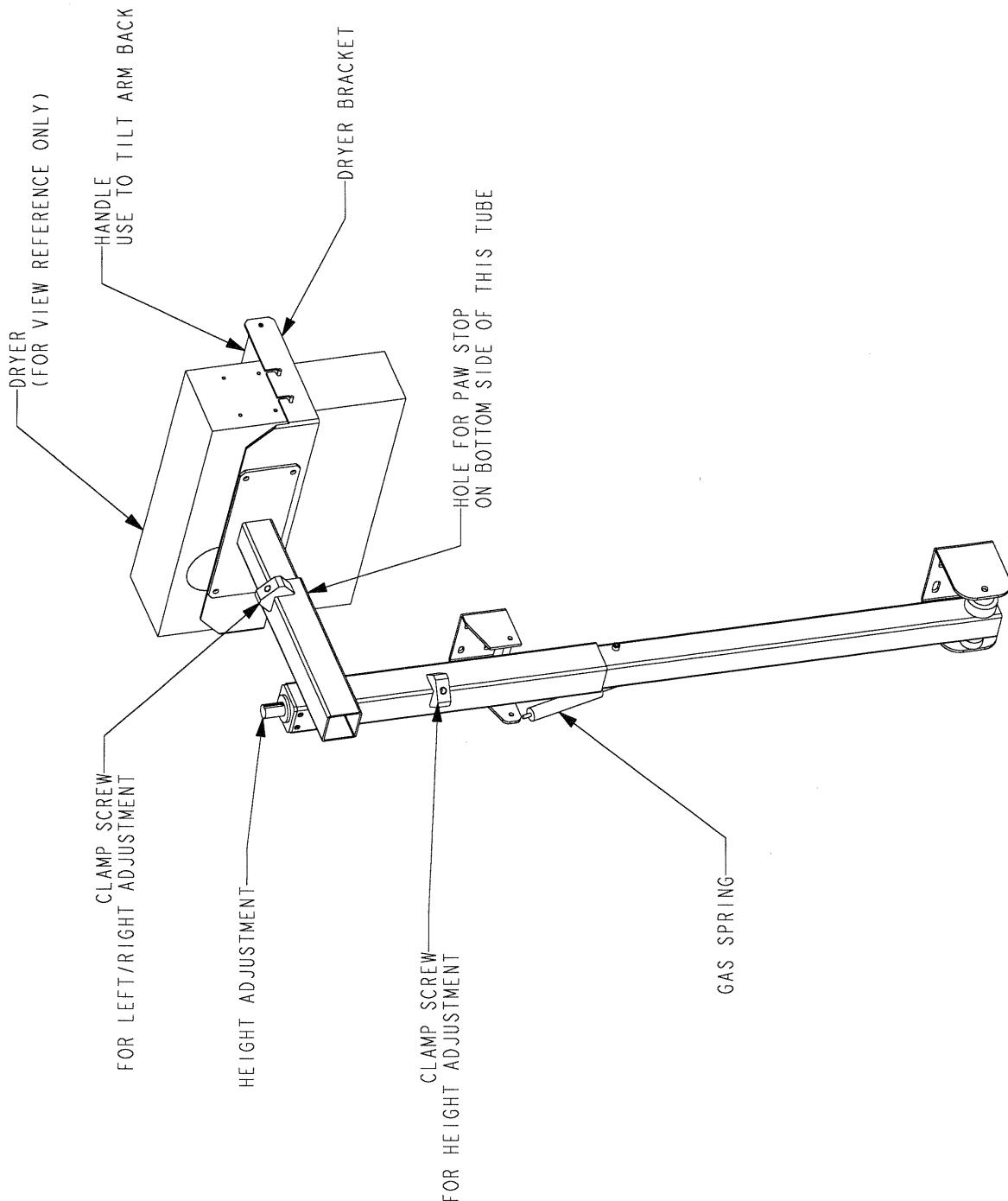
WARNING

**Read and follow all Safety Instructions in Section 1, Page 3 before proceeding.
Dryer surface maybe hot. Read and follow dryer manufactures manual before proceeding.**

Height Adjustment: The height of the dryer can be adjusted using the wheel on the top of the dryer Arm. First loosen the clamp screw on the vertical tube of the dryer arm. Next, turn the crank clockwise to move the dryer down or counter clockwise to move the dryer up. Retighten clamp screw when dryer is at desired height.

Left/Right Adjustment: The left/right position of the dryer can be adjusted by loosening the clamp screw on the horizontal tube, continue to hold the clamp screw handle and slide the dryer in and out. Retighten clamp screw when dryer is at desired location.

Clearing Jam Under Dryer: Use handle to push dryer arm back approximately 15 degrees. Dryer arm will remain back so jam can be cleared. **Note: On Research Dryers** (Dryer will automatically turn off in the back position.) Pull on handle to position the dryer back over the conveyor for normal operation.



DRYER ARM SET UP/USAGE
FIGURE 4.0

Horizontal Tube Removal: The inside horizontal tube has a paw stop to prevent the dryer from being pulled out too far. The spring loaded paw will automatically stop the tube at the end of its stroke. The spring loaded paw automatically resets when the tubing is pushed in the opposite direction. To remove the horizontal tube follow these steps:

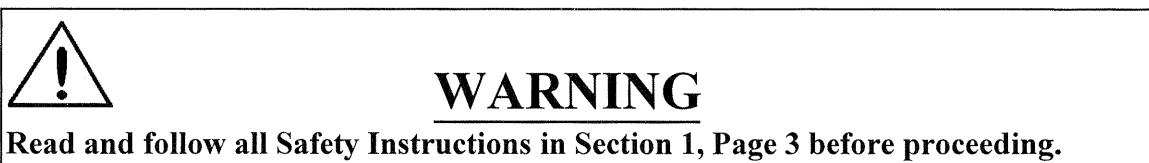
1. Remove dryer from dryer bracket.
2. Loosen horizontal clamp screw.
3. Slide tube out until the paw stops it.
4. Use allen wrench to push paw up and out of the hole located on the bottom of the larger horizontal tubing, at same time pull inside tubing out.

5 MAINTENANCE

5.1 LUBRICATION:

The operator should keep the 315A base clean and lubricated on a daily basis. The base has a central oiling system that only requires the operator to pull the pump lever on the oiler located inside the base cabinet. This should be done once every day of operation. The oil recommended is a 20 weight SAE machine oil.

5.2 DAILY FUNCTIONS OF OPERATOR



Daily Functions of Key Operator KR315A		
Item	Function	Remarks
Photocells & Reflective Tape	Remove dust, ink, glue and all other foreign materials .	Use clean soft rag.
Vacuum Pump Filters (Internal and external)	Remove dust	Use compressed air to remove contaminants.
Vacuum Pump Filter Jars	Clean jars thoroughly.	Use warm water and dry thoroughly. CAUTION: Improper replacement or cracked rims of jars can result in a loss of vacuum. Insure jar is installed correctly and have a proper seal.
Vacuum Pump Baffle	Remove dust	Soak the baffle in a solvent to remove contaminants.
Vacuum Blower for Dryer Table	Remove foreign material.	Open bottom hinged door on vacuum chamber and remove all foreign material.
Lubrication	Increase machine life.	See Section 5.1

Shuttle Feeder Vacuum System: Clean on a as needed basis. Cleaning intervals will vary depending on what type of product is being ran. Dust will collect underneath the grit plate and must be removed for proper feeding.

1. Remove grit plate on shuttle feeder.
2. Remove the two panhead screws which secure the spring steel valve.
3. Clean and re-assemble

5.3 MECHANICAL TIMING AND SET-UP

Bottom Feed Roller Setup

The bottom rollers are set at the factory. Should the bottom rollers need to be adjusted or replaced, take the following steps:

1. Remove feeder from machine.
 - a. Remove drive chain.
 - b. Remove the four bolts securing feeder frame plates to cross channels.
 - c. Lift feeder off of cross bars.
2. Adjust lower feed roller height. The lower feed roller assembly rotates up and down approximately 1/16". A cam located on the crankshaft provides this motion. When the lower feed rollers are set properly, they will rise above the shuttle table approximately 1/32" at the high point of the cycle. At the low point of the cycle, they have to be underneath the shuttle table.
 - a. Loosen spring-loaded arm on right side of feeder frame plate.
 - b. Rotate the feeder ccw such that the cam on the crankshaft lifts the cam follower to its high point.
 - c. Lift lower feed roller assembly such that the top of the feed rollers are approximately 1/32" above the shuttle table. At the same time, rotate arm slightly downward (15°) against the spring and tighten the clamp.
3. Mount feeder onto machine.
4. Turn on vacuum pump for the feeder.
5. Jog machine such that feeder shuttle table is in its most forward position, and the vacuum valve assembly cuts the section to the feeder plate.
6. Loosen the set screws which secure the lower feed roller cam to the to crankshaft.
7. Rotate cam ccw such that the lower feed roller assembly rotates up to its high point.
8. Secure cam to crankshaft.

Vacuum Body Timing Adjustment: The vacuum plate has vacuum for $\frac{1}{2}$ of a feed cycle. Vacuum starts when the shuttle table is in its rear position and then turns off when it is in its forward position. Control is accomplished by a push rod and spring valve assembly. These

are set at the factory and adjustment is not necessary, except for maintenance. Should the vacuum body need to be adjusted or replaced, take the following steps:

1. Remove the product from hopper and rotate the feeder until the shuttle table is in its most rear position
2. Locate the push rod underneath the shuttle table and loosen both collars.
3. Slide the push rod forward into the vacuum manifold until vacuum is present at the vacuum manifold plate.
4. Holding the push rod in place, slide the front collar back against the cross brace and tighten.
5. Advance the shuttle table to its most forward position.
6. Slide the push rod back until vacuum is no longer at the vacuum manifold plate.
7. Slide the rear collar up against the cross brace and tighten.

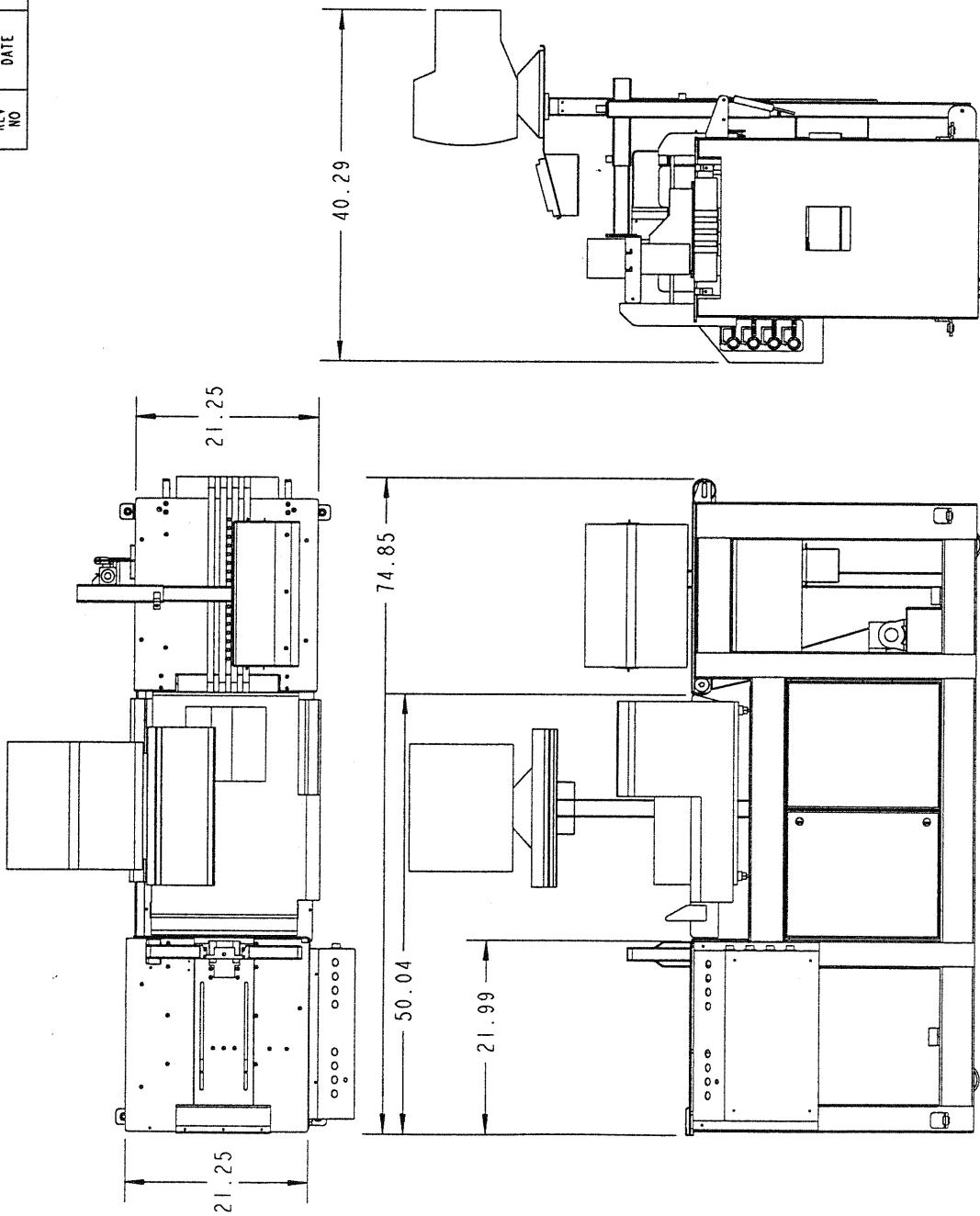
6 PARTS LISTS AND DIAGRAMS

Diagrams are shown in order as indicated below. Sub-assemblies are indented under the main assembly.

6.1 DIAGRAMS

DIAGRAM #	DESCRIPTION
SP62500	ASSY, 324M-ASTROJET-DRYER
SP62500	ASSY, 324M-ASTROJET-DRYER
532078-01	ASSY, DRYER CONVEYOR
532712-01	ASSY, OUTFD SAFETY COVER
532152-01	ASSY, OPERATOR INTERFACE
532155-01	ASSY, BEARING HOUSING
532073-01	ASSY, ASTROJET & ACC.
523692-01	ASSY, 324M
531405-02	EG ASSY, REAR BRIDGE
503712-A	ASSY, REAR BRIDGE
500764A	ASSY, LIFTER
532063-01	ASSY, BRIDGE AND ROLLERS
500726A-1	ASSY, SHAFT UNIVERSAL
532061-01	ASSY, FEED ROLLER
532062-01	ASSY, BRIDGE
532701-01	ASSY, BRIDGE SAFETY COVER
532457-01	ASSY, REAR SHUTTLE COVER
532688-01	EG ASSY, FRAME & ACC
503622-A	ASSY, GEAR HUB
532059-01	EG ASSY, LOWER FEED ROLLERS
500729-2A	ASSY, ARM CRADLE FEEDER
532694-01	EG ASSY, CAM LIFTER SHAFT
532695-01	EG ASSY, BRIDGE DRIVE
503531-A	ASSY, HUB
532696-01	EG ASSY, SHUTTLE CRANK SHAFT
503729-A	ASSY, HUB BEARING
532697-01	EG ASSY, CONNECTING ROD
532698-01	EG ASSY, DRIVE PLATE
532700-01	EG ASSY, IDLER, 25 SPKT
532699-01	ASSY, FRAME & T.T.
532689-01	EG ASSY, SHUTTLE TABLE
500735-A	ASSY, VACUUM ROD
503701-A	ASSY, BRACKET FEEDER
532690-01	ASSY, VACUUM PLATE
503750-A	ASSY, BODY-VACUUM VALVE
532693-01	ASSY, LIFTER FEEDER PUSHER
532734-01	ASSY, DRYER MOUNT
532736-01	ASSY, SCREW HOUSING
532738-01	WELD, TUBING DRYER STAND
532739-01	WELD, TUBING SLIDE
532744-01	WELD, TUBING IN/OUT ADJ.
532469-01	ASSY, PAW PIVOT
532466-01	ASSY, DRYER ARM PIVOT

REV NO	DATE	DESCRIPTION	ECN NO	BY
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1 SP62500

REQ'D WHERE USED

KIRK - RUDY INC.

KENNESAW, GEORGIA

ASSY, 324M-ASTROJET-DRYER

SP62500

PROPRIETARY AND CONFIDENTIAL

NO PORTION OF THIS DRAWING
MAY BE QUOTED OR REPRODUCED
IN ANY FORM WITHOUT THE
EXPRESS WRITTEN PERMISSION
OF KIRK-RUDY, INC.

KENNESAW, GA 30144 USA

TITLE:

DRAWING #

THIRD ANGLE PROJECTION



SHEET NO.

OF

2

SCALE



DRAWING 1

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ALL DIMENSIONS ARE
FINISHED DIMENSIONS

FINISH:

DO NOT SCALE - WORK
TO DIMENSIONS ONLY

FINISH:

NOTED

FINISH:

FINISH:

ALL DIMENSIONS ARE
FINISHED DIMENSIONS

FINISH:

DO NOT SCALE - WORK
TO DIMENSIONS ONLY

FINISH:

NOTED

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ALL DIMENSIONS ARE
FINISHED DIMENSIONS

FINISH:

DO NOT SCALE - WORK
TO DIMENSIONS ONLY

FINISH:

NOTED

FINISH:

FINISH:

ALL DIMENSIONS ARE
FINISHED DIMENSIONS

FINISH:

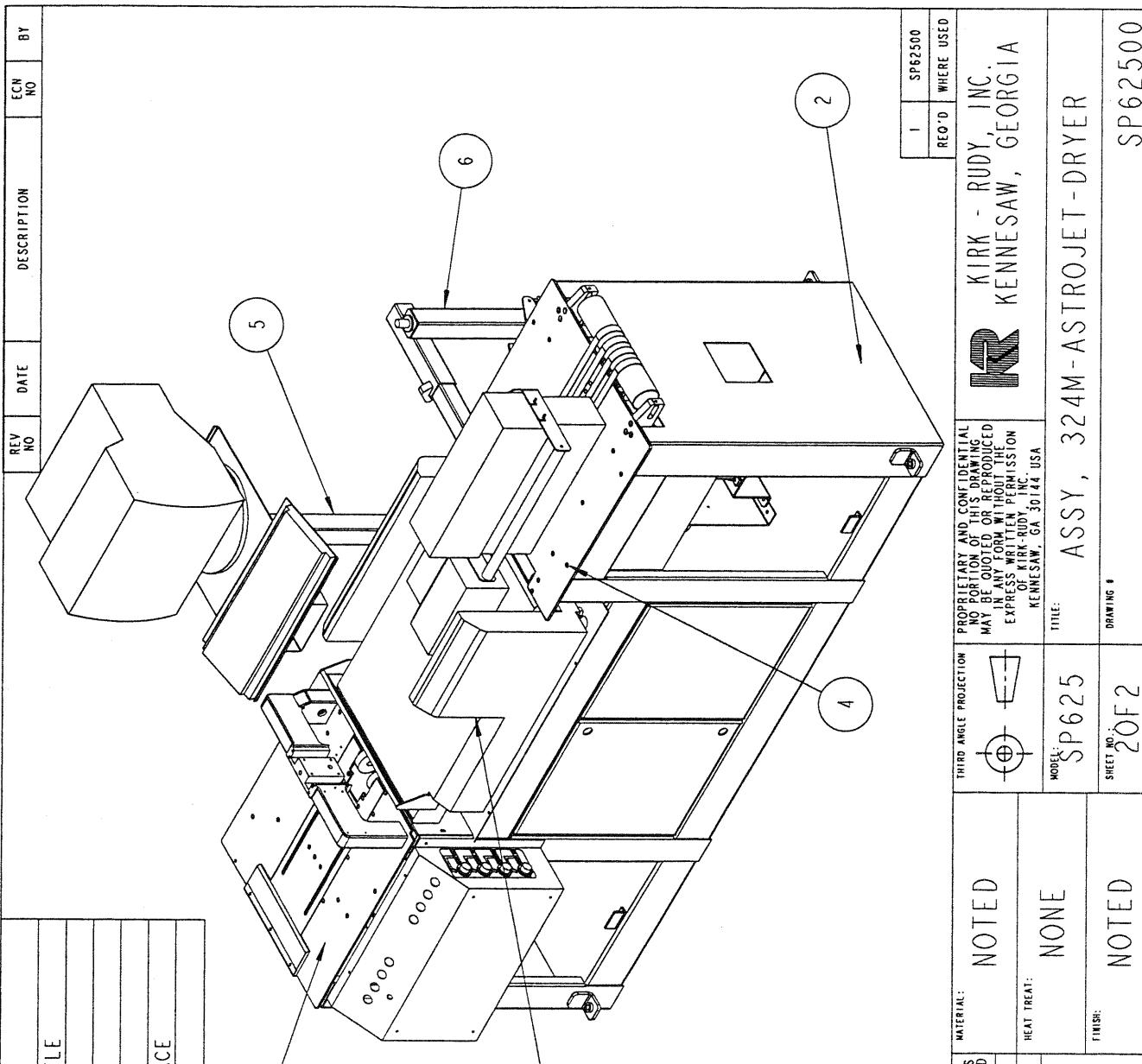
DO NOT SCALE - WORK
TO DIMENSIONS ONLY

FINISH:

NOTED

FINISH:

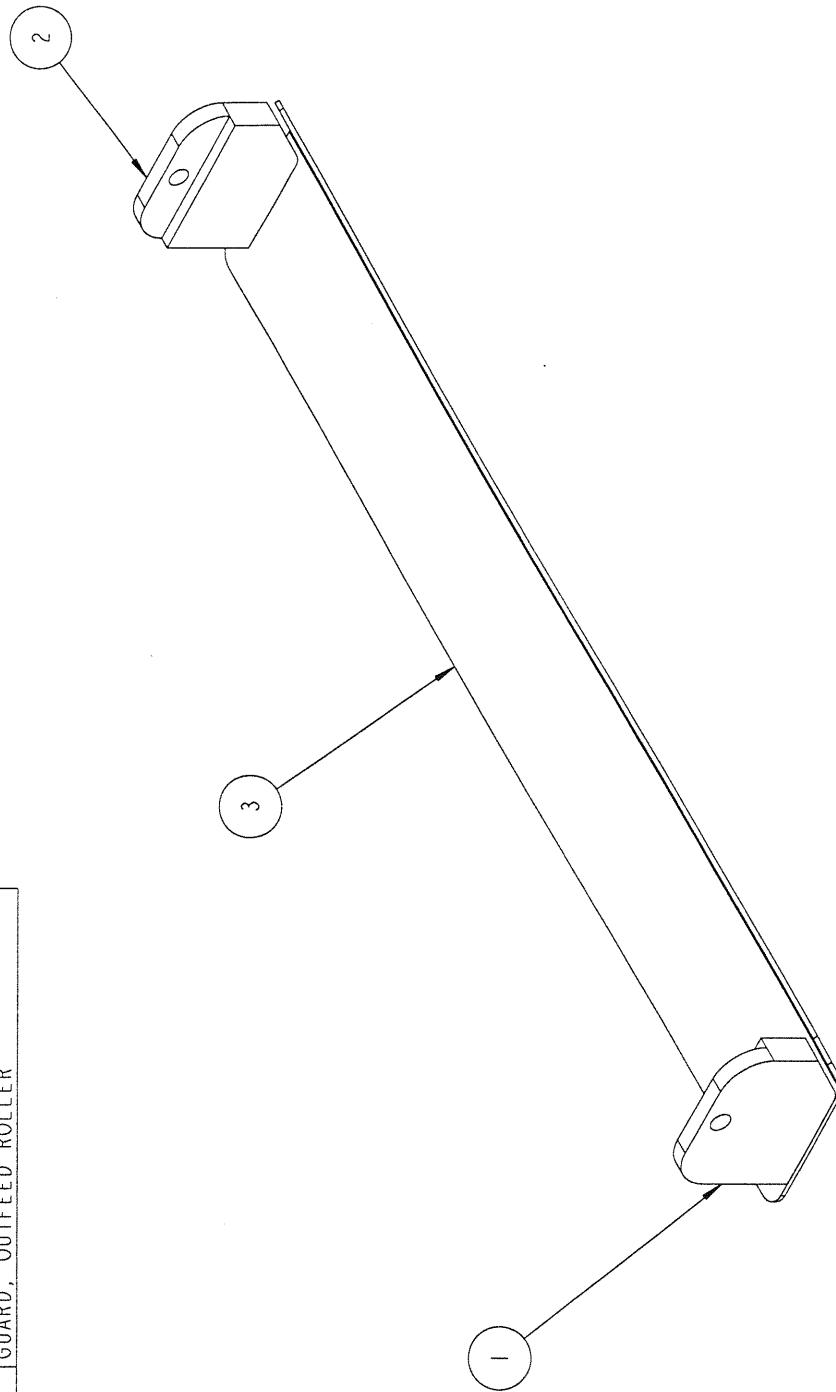
ITEM	QTY	PART #	DESCRIPTION
1	1	532056-01	ASSY, BRIDGE AND SHUTTLE
2	1	532060-01	ASSY, CABINET
3	1	532073-01	ASSY, ASTROJET & ACC.
4	1	532078-01	ASSY, DRYER CONVEYOR
5	1	532152-01	ASSY, OPERATOR INTERFACE
6	1	532734-01	ASSY, DRYER MOUNT



DRAWN BY:	SCALE	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED	MATERIAL:	NOTED	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO. 2000 DRAWING MADE OUT OF OR REPRODUCED IN ANY FORM OR PART THEREOF WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 304 USA	KIRK - RUDY, INC. KENNESAW, GEORGIA
T JG	0 . 075	.XX .XXX .005 .5	HEAT TREAT:	NONE		MODEL: SP625	TITLE: ASSY, 324M-ASTROJET-DRYER
CHECKED BY:	DATE		FINISH:			SHEET NO. 20F2	DRAWING #
TRACED BY:	MASTER	M	DO NOT SCALE - WORK TO DIMENSIONS ONLY				SP62500

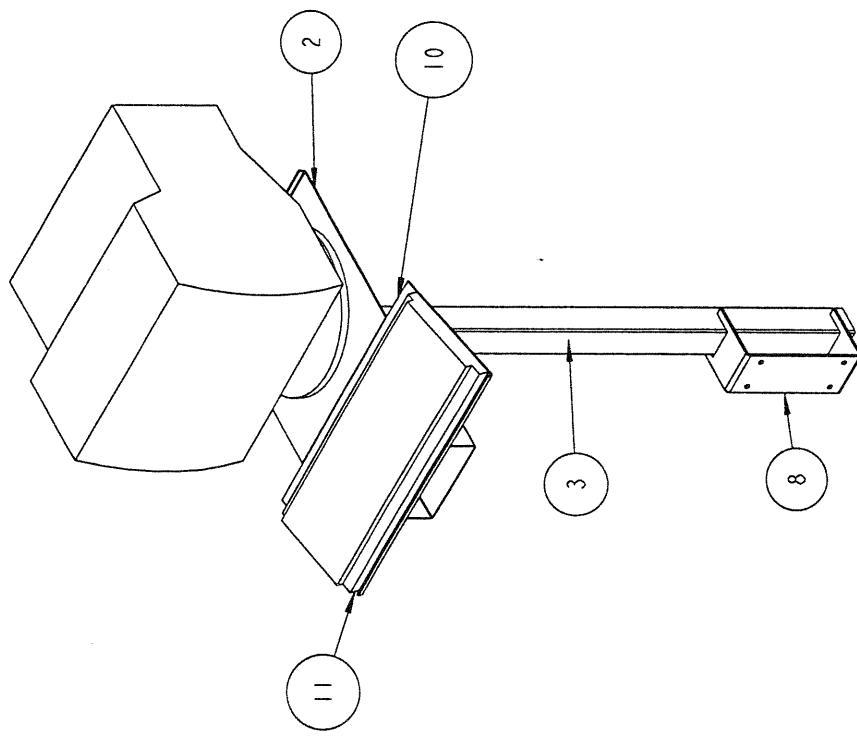
ITEM QTY	PART #	DESCRIPTION
1	530816-01	BRKT, RH OUTFD RLLR GRD
2	530817-01	BRKT, LH OUTFD ROLLR GRD
3	530818-01	GUARD, OUTFEED ROLLER

REV NO	DATE	DESCRIPTION	ECN NO	BY
I	532078-01			RECD WHERE USED

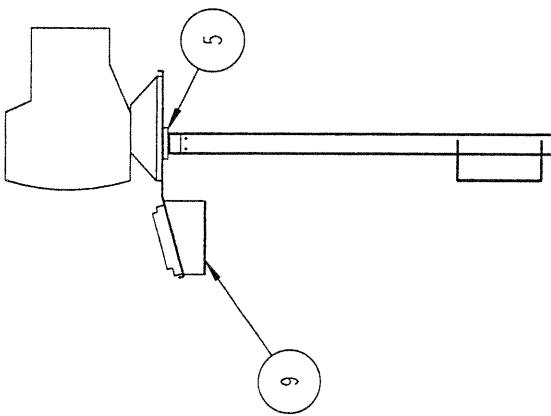


DRAWN BY: T JG	SCALE 0 . 500	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL: NOTED	THIRD ANGLE PROJECTION 	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA	
CHECKED BY:	DATE 6 - Feb - 98	.xx	.xxx	HEAT TREAT: NONE		KIRK - RUDY, INC. KENNESAW, GEORGIA	
TRACED BY:	MASTER	.01	.005	FINISH: NOTED		ASSY , OUTFD SAFETY COVER	DRAWING 1
	m	.5		REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED		532712-01	
				ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY			

ITEM	QTY	PART #	DESCRIPTION
1	2	100338	BUSHING, FLANGE 1.000
2	1	532128-01	TRAY, KEYBOARD
3	1	532153-01	TUBING, VERTICAL
4	1	532154-01	HOUSING, PIVOT
5	1	532155-01	ASSY, BEARING HOUSING
6	1	532156-01	SHAFT, PIVOT
7	1	532157-01	SPACER, PIVOT
8	1	532164-01	BRACKET, INTERFACE
9	1	532477-01	TRAY, ZIP DRIVE
10	1	532478-01	WELD, MONITOR TRAY
11	1	KEYBOARD	KEYBOARD
12	1	MONITOR	13 IN. MONITOR



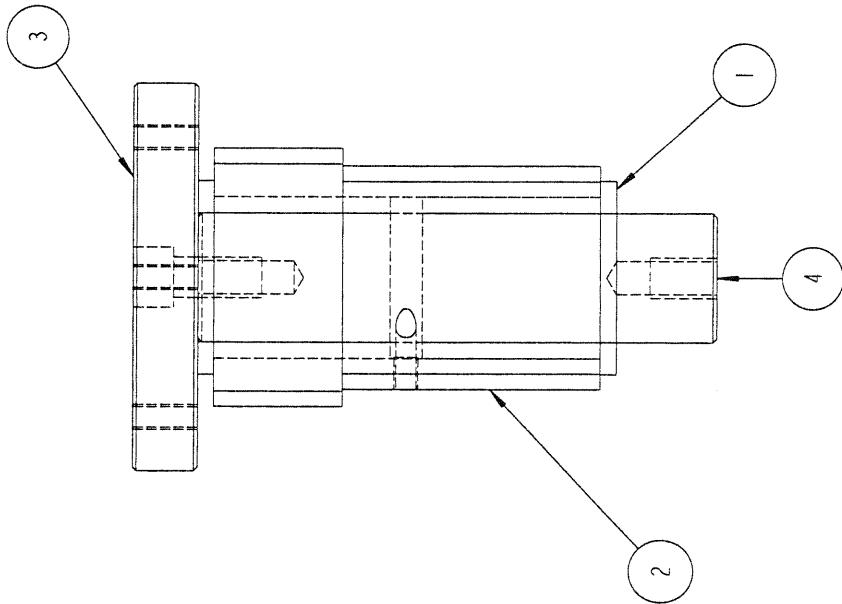
SCALE 0.060



DRAWN BY:	SCALE	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED	MATERIAL: NOTED	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN WHOLE OR IN PART, WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC., KENNESAW, GA 30144 USA	RECD WHERE USED
CHECKED BY:	DATE	.XX .XXX .01 .005 .5 ANG.	HEAT TREAT: NONE		KIRK - RUDY, INC. KENNESAW, GEORGIA	SP62500
TRACED BY:	MASTER	2 - Feb - 98	FINISH: NOTED		ASSY, OPERATOR INTERFACE	SP62500
		M	ALL DIMENSIONS ARE DO NOT SCALE - WORK TO DIMENSIONS ONLY		SHEET NO.: 1 OF 2	DRAWING #

532152-01

ITEM QTY	PART #	DESCRIPTION
1	1 00338	BUSHING, FLANGE 1.000
2	1 532154-01	HOUSING, PIVOT
3	1 532157-01	SPACER, PIVOT
4	1 532467-01	SHAFT, DRYER PIVOT

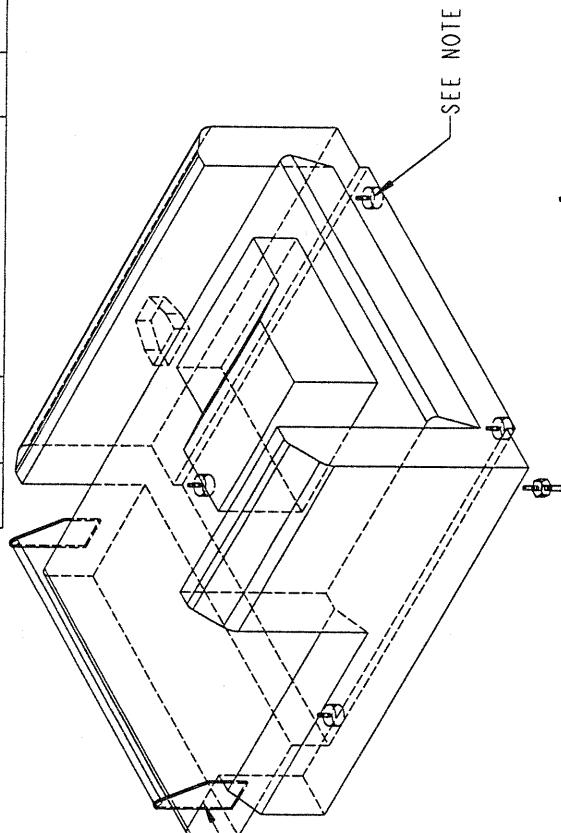


REV NO	DATE	DESCRIPTION	ECN NO	BY
1	14-MAY-98	REPLACES 532156-01 WITH 532467-01	6321	NY

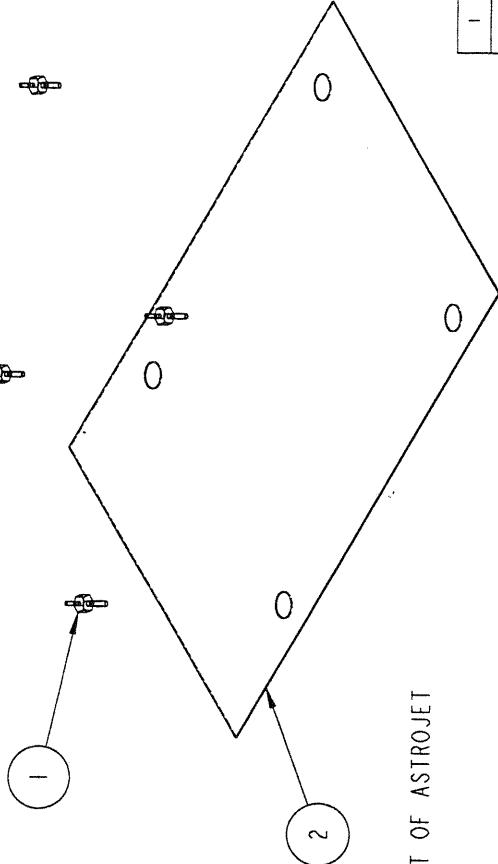
1	532152-01
REC'D	WHERE USED

THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL	
	NO PORTION OF THIS DRAWING MAY BE COPIED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA	
MODEL:	KRK	KIRK - RUDY, INC. KENNESAW, GEORGIA
DATE:	19-Nov-97	TITLE: ASSY, BEARING HOUSING
MASTER:	M	SHEET NO. 1 OF 1
TRACED BY:		DRAWING # 532155-01

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	4	532072-01 SPACER, HEX ASTROJET					
2	1	532116-01 PANEL, ASTROJET					
3	1	ASTROJET-I ASTROJET MODEL AJS-9500					



SEE NOTE



NOTE: 1. ASSEMBLY USING EXISTING ASTROJET RUBBER MOUNTS
 2. USE SPACERS BETWEEN PART #1 AND #2 TO SET HEIGHT OF ASTROJET

DRAWN BY:	T J G	SCALE	0 . 125	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL:	NOTED	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY INC. KENNESAW, GEORGIA
CHECKED BY:		DATE	24-Dec-97	.XX	.XXX	ANG.			
TRACED BY:		MASTER	M	.01	.005	.5	HEAT TREAT:	NONE	NOTE: SP 62500
				REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED			FINISH:	NOTED	SHEET NO: 10F1
				ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY					DRAWING # 532073-01

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	1	531405-02 EG ASSY, REAR BRIDGE					
2	1	532063-01 ASSY, BRIDGE AND ROLLERS					
3	1	532457-01 ASSY, REAR SHUTTLE COVER					
4	1	532688-01 EG ASSY, FRAME & ACC					
5	1	532689-01 EG ASSY, SHUTTLE TABLE					

1 324
REV'D WHERE USED

DRAWN BY: TJG	SCALE: 0 . 220	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED			MATERIAL: NOTED	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE COPIED OR REPRODUCED IN WHOLE OR IN PART EXCEPT WITH WRITTEN PERMISSION OF KIRK-RUDY INC. KENNESAW, GA 30442 USA
CHECKED BY:	DATE: 28-Jan-98	.xx	.xxx	.005	HEAT TREAT: NONE		
TRACED BY:	MASTER	.01	.005	.5	FINISH: REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED		
		M			NOTED	SHEET NO. 10 OF 1	DRAWING #
						ASSY , 324M	532692-01

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	2	500832 BRACKET - REAR - GUIDE					
2	1	503799 SHAFT, REAR BRIDGE					
3	1	503712-A ASSY, REAR BRIDGE					

DRAWN BY: T JG SCALE: 0 .250 DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED

.xx	.xxx	ANG.
.01	.005	.5

HEAT TREAT: N/A

REMOVED ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED

ALL DIMENSIONS ARE FINISHED DIMENSIONS

DO NOT SCALE - WORK TO DIMENSIONS ONLY

CHECKED BY: DATE 29 - Jan - 98

TRACED BY: MASTER M

MATERIAL: N/A

THIRD ANGLE PROJECTION

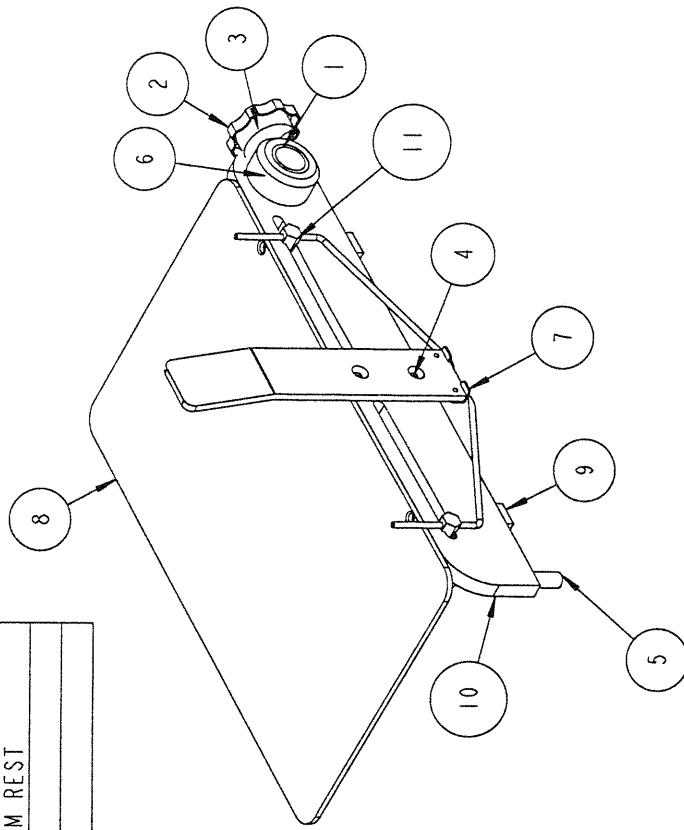
PROPRIETARY AND CONFIDENTIAL
NO PORTION OF THIS DRAWING
MAY BE COPIED OR REPRODUCED
IN ANY FORM OR MANNER WITHOUT THE
EXPRESS WRITTEN PERMISSION
OF KIRK-RUDY, INC.
KENNESAW, GA 3044 USA

KIRK - RUDY, INC.
KENNESAW, GEORGIA

MODEL: 324M TITLE: EG ASSY, REAR BRIDGE

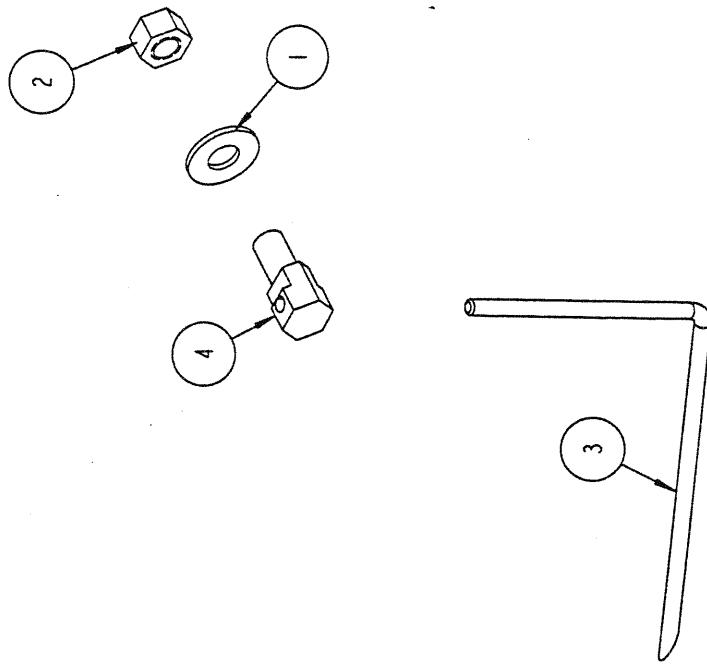
SHEET NO.: 1 OF 1 DRAWING # 531405-02

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	1 00109	BUSHING, SLEEVE 1.000					
2	1 02112	KNOB, PURCHASED					
3	1 105601	SHAFT, THREADED 5/16-18					
4	1 500715	PLATE - REAR CENTER GUIDE					
5	1 500765	SPACER - REAR BRIDGE					
6	1 500770	HUB - REAR GUIDE SHAFT					
7	2 500771	CLIP - REAR GUIDE CNTR PLATE					
8	1 500845	TABLE-JOGGER					
9	2 500847	BRACE, COMPUTER FORM REST					
10	1 503712	BRIDGE, REAR GUIDE					
11	2 500764A	ASSY, LIFTER					



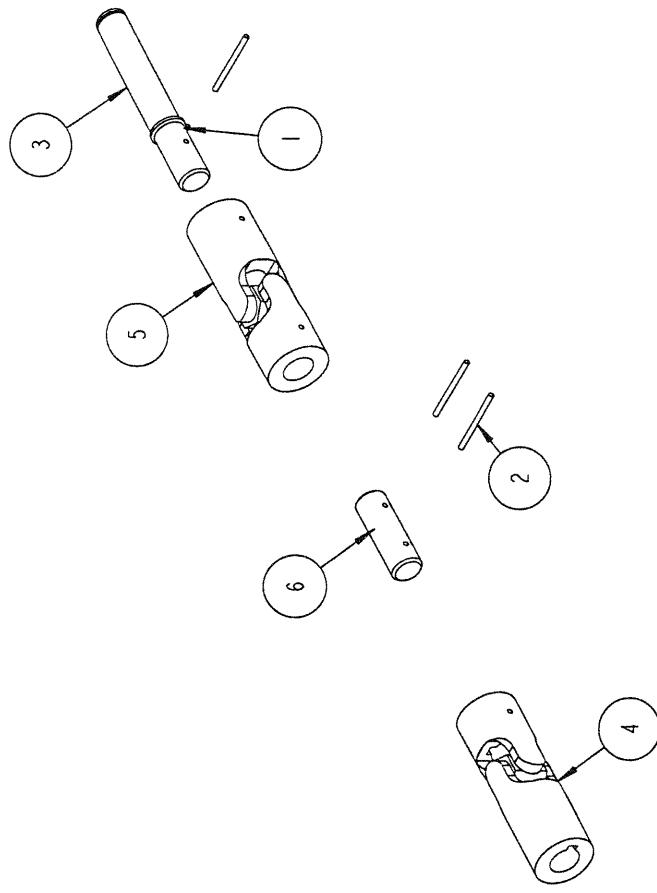
1	324M
REQ'D	WHERE USED
<p style="text-align: center;">KIRK - RUDY INC. KENNEBUNK, GEORGIA</p>	
<p>PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY INC. KENNEBUNK, ME 04044 USA</p>	
TITLE: ASSY, REAR BRIDGE E	
MODEL: 324M	
SHEET NO: 1 OF 1	DRAWING #: 503712-A

ITEM	QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	1	100601	THRUST WASHER					
2	1	106702	NUT, 3/8-16					
3	1	500764	LIFTER - REAR BRIDGE					
4	1	500766	SCREW - MACHINE REAR GUIDE					



RECD	WHERE USED
 KIRK - RUDY, INC.  KENNESAW, GEORGIA	
PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA	
THRD ANGLE PROJECTION	THRD ANGLE PROJECTION
	
DATE	MODEL:
23-JUL-97	215
SCALE	SHEET NO.
N.J.G	OF 1
DRAWN BY: N.J.G	
DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED	
.01	.005
.005	.005
.005	
ANG.	
HEAT TREAT:	
N/A	
REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED	
ALL DIMENSIONS ARE FINISHED DIMENSIONS	
DO NOT SCALE - WORK TO DIMENSIONS ONLY	
MASTER M	

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	104100	SNAPRING, .375					
2	105200	PIN, ROLL .063X.875					
3	500830	SHAFT - UNIVERSAL DRIVE					
4	100800_2	UNIVERSAL					
5	100800_3	UNIVERSAL					
6	500803_3	SHAFT, UNIVERSAL					



I	324M						
RECD	WHERE USED						
<p style="text-align: center;">KR KIRK - RUDY, INC. KENNESAW, GEORGIA</p>							
<p>PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA</p>							
TITLE:							
DRAUGHTING #							
500726A-1							
<p>MATERIAL: NOTED THIRD ANGLE PROJECTION</p>							
<p>DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED</p>							
<table border="1"> <tr> <td>.XX</td> <td>.XXX</td> <td>ANG.</td> </tr> <tr> <td>.01</td> <td>.005</td> <td>.5</td> </tr> </table>		.XX	.XXX	ANG.	.01	.005	.5
.XX	.XXX	ANG.					
.01	.005	.5					
<p>HEAT TREAT: NONE</p>							
<p>REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED</p>							
<p>ALL DIMENSIONS ARE FINISHED DIMENSIONS</p>							
<p>DO NOT SCALE - WORK TO DIMENSIONS ONLY</p>							
DRAWN BY: NJG	SCALE: 0 .500						
CHECKED BY: 28-Jan-98	DATE: 28-Jan-98						
TRACED BY: MASTER	FINISH: NOTED						
SHEET NO.: 1 OF 1	DRAUGHTING #						

ITEM QTY	PART #	DESCRIPTION
1	1	500726A-1 ASSY, SHAFT UNIVERSAL
2	1	532061-01 ASSY, FEED ROLLER
3	1	532062-01 ASSY, BRIDGE
4	1	532701-01 ASSY, BRIDGE SAFETY COVER

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	1	532692-01					
2							REF'D WHERE USED

DRAWN BY: T JG	SCALE: 0 . 200	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL: N / A	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA	
CHECKED BY:	DATE: 28 - Jan - 98	.XX	.XXX	ANG. .01	.005	.5	HEAT TREAT:
TRACED BY:	MASTER	REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED		FINISH:		N / A	MODEL: 324M
		ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY		SHEET NO. 1 OF 1		DRAWING #	ASSY, BRIDGE AND ROLLERS
							532063-01

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	1 02211	COLLAR .375					
2	2 102701	SPRING					
3	4 103106	BEARING, FLAT .375					
4	2 104400	BOLT - HEX HEAD					
5	1 190600	SPIDER - ROLLER DRIVE					
6	1 190685	LEVER - QUICK RELEASE					
7	1 500744	SHAFT, TOP ROLLER					
8	2 5000807	NUT - LOCK					
9	1 5000808	PLATE, TOP BRIDGE					
10	2 500809	SLEEVE - THREADED					
11	2 500812	KNOB, ROLLER ADJUSTMENT					
12	1 503655	SHAFT, TOP ROLLER DR					
13	2 503777	FORK ASSY (TOP ROLLER)					
14	2 500745A	UPPER FEED ROLLER ASY					
15	1 500795-1	PLATE - BACK					
16	1 500799-5	BLOCK, CLAMP SUPPORT					
17	1 500799-2	BLOCK - CONNECTOR					
18	1 500799-3	CLAMP - MOUNTING PLATE					

1 532061-01
REQ'D WHERE USED

DRAWN BY:	N JG	SCALE	0 .250	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL:	NOTED	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA
CHECKED BY:		DATE	28-Jan-98	.01	.005	ANG.			KIRK - RUDY, INC. KENNESAW, GEORGIA
TRACED BY:		MASTER	M	REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED		HEAT TREAT:	NONE	MODEL: 324M	TITLE:
				ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY		FINISH:	NOTED	SHEET NO. 1 OF 1	DRAWING #

ASSY, FEED ROLLER
532061-01

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	2	100409			WASHER, THRUST		
2	1	101768			GEAR		
3	1	102119			KNOB		
4	1	102225			COLLAR .250		
5	2	103106			BEARING, FLAT .375		
6	1	500730			PLATE, GATE FEEDER		
7	2	500755			CLAMP - SIDE GUIDE		
8	2	500790			ASSY, KNOB		
9	2	500805			PLATE - HOLD DOWN		
10	1	500806			PLATE - GATE END		
11	1	500810			SHAFT - SCREW ADJ		
12	1	503604			BRIDGE - FEEDER		
13	2	503786			RAIL - SIDEGUIDE		
14	1	102131A			KNOB ASSY		
15	1	500788-17L			PLATE, SIDEGUIDE		
16	1	500788R			PLATE - RH SIDEGUIDE		
17	2	530786-1			RAIL - SIDE GUIDE		

DRAWN BY: NJG SCALE: 0 .250 DIMENSIONAL TOLERANCES MATERIAL: NOTED THIRD ANGLE PROJECTION
CHECKED BY: DATE: 28-Jan-98 REMOVE ALL BURRS AND HEAT TREAT: NONE PROPRIETARY AND CONFIDENTIAL
ALL DIMENSIONS ARE FINISH: NOTED SHEET NO. 1 OF 1 DRAWING NO. 1
MASTER M ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY

RECD D WHERE USED

I 324M

KIRK - RUDY, INC.
KENNESAW, GEORGIA

ASSY, BRIDGE

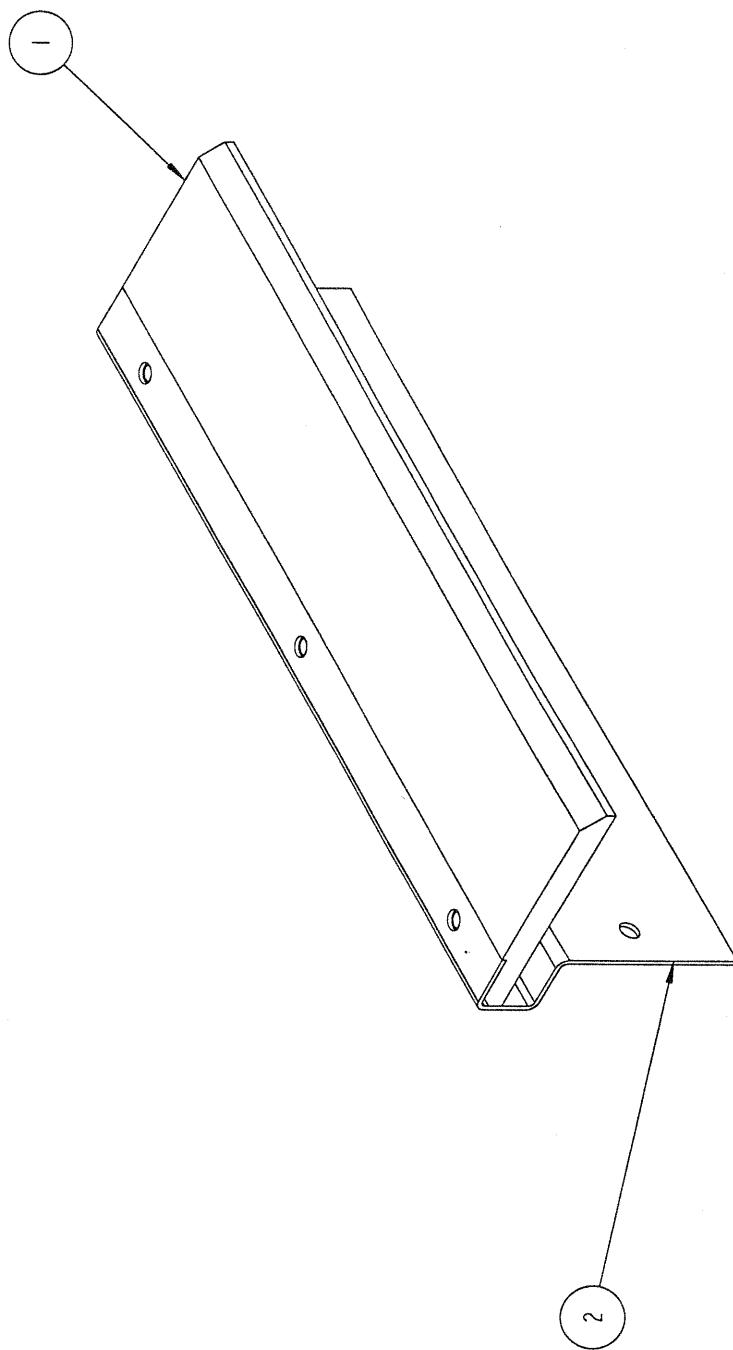
532062-01

ITEM QTY	PART #	DESCRIPTION
1 2	530177-02	GUARD, BRIDGE UNIVERSAL
2 1	SP25757	GUARD, FEED ROLLER
3 1	SP25758-1	BRACKET, SAFETY COVER

REV NO	DATE	DESCRIPTION	ECN NO	BY
1	532063-01			
RECD	WHERE USED			

DRAWN BY: T JG	SCALE 0 . 375	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL: NOTED	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PART OF THIS DRAWING MAY BE COPIED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA	
CHECKED BY: 29 - Jan - 98	DATE xx	.01	.065	HEAT TREAT: NONE	MODEL: 324	TITLE: ASSY, BRIDGE SAFETY COVER	KIRK - RUDY, INC. KENNESAW, GEORGIA
TRACED BY: MASTER	FINISH: M	REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED		NOTED	SHEET NO. 1 OF 1	DRAWING # 532701-01	

ITEM QTY	PART #	DESCRIPTION
1	530123-02	GUARD, SHUTTLE TABLE
2	530124-02	GUARD, BRKT SHUTTLE TABLE



DRAWN BY:	T JG	SCALE	0 . 500	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED	MATERIAL: NOTED	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL MAY BE OBTAINED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA
CHECKED BY:		DATE	29 - Jan - 98	.01 .005 .5	ANG.	HEAT TREAT: NONE	KIRK - RUDY, INC. KENNESAW, GEORGIA
TRACED BY:	MASTER	MASTER	m	REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE. WORK TO DIMENSIONS ONLY	FINISH: NOTED	SHEET NO.: 324 OF 1	TITLE: ASSY, REAR SHUTTLE COVER DRAWING #: 532457-01

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	102345	SHIM, .375X.625X.125					
2	106030-1	V-BELT, 1/2 X 32 IN.					
3	110021-3	CHAIN, NO. 25					
4	503622-A	ASSY, GEAR HUB					
5	532059-01	EG ASSY, LOWER FEED ROLLERS					
6	532694-01	EG ASSY, CAM LIFTER SHAFT					
7	532695-01	EG ASSY, BRIDGE DRIVE					
8	532696-01	EG ASSY, SHUTTLE CRANK SHAFT					
9	532697-01	EG ASSY, CONNECTING ROD					
10	532698-01	EG ASSY, DRIVE PLATE					
11	532699-01	ASSY, FRAME & T.T.					

I 532692-01
REQ'D WHERE USED

DRAWN BY: T JG SCALE 0 .180 DIMENSIONAL TOLERANCES MATERIAL: N/A UNLESS OTHERWISE NOTED

DATE	.01	.005	.5	HEAT TREAT:	N/A
28 - Jan - 98				REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED	

CHECKED BY: TRACED BY: DRAWING #

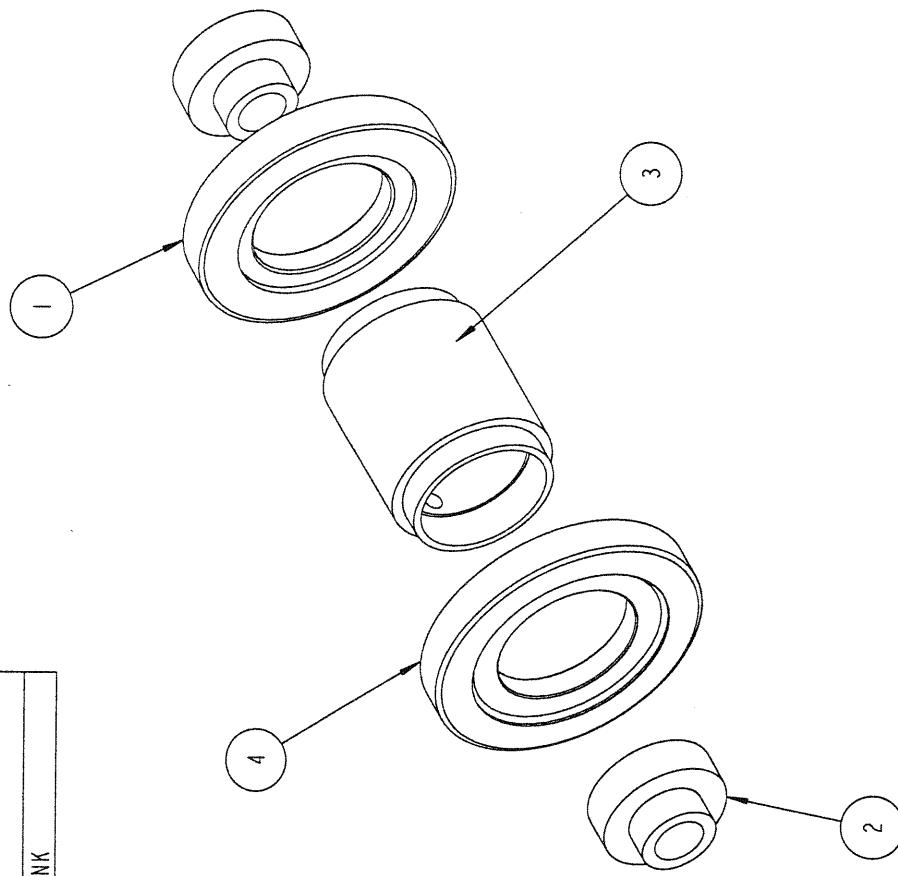
MASTER	M	FINISH:	N/A
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KIRK - RUDY, INC.
KENNESAW, GEORGIA
30144 USA

EG ASSY, FRAME & ACC

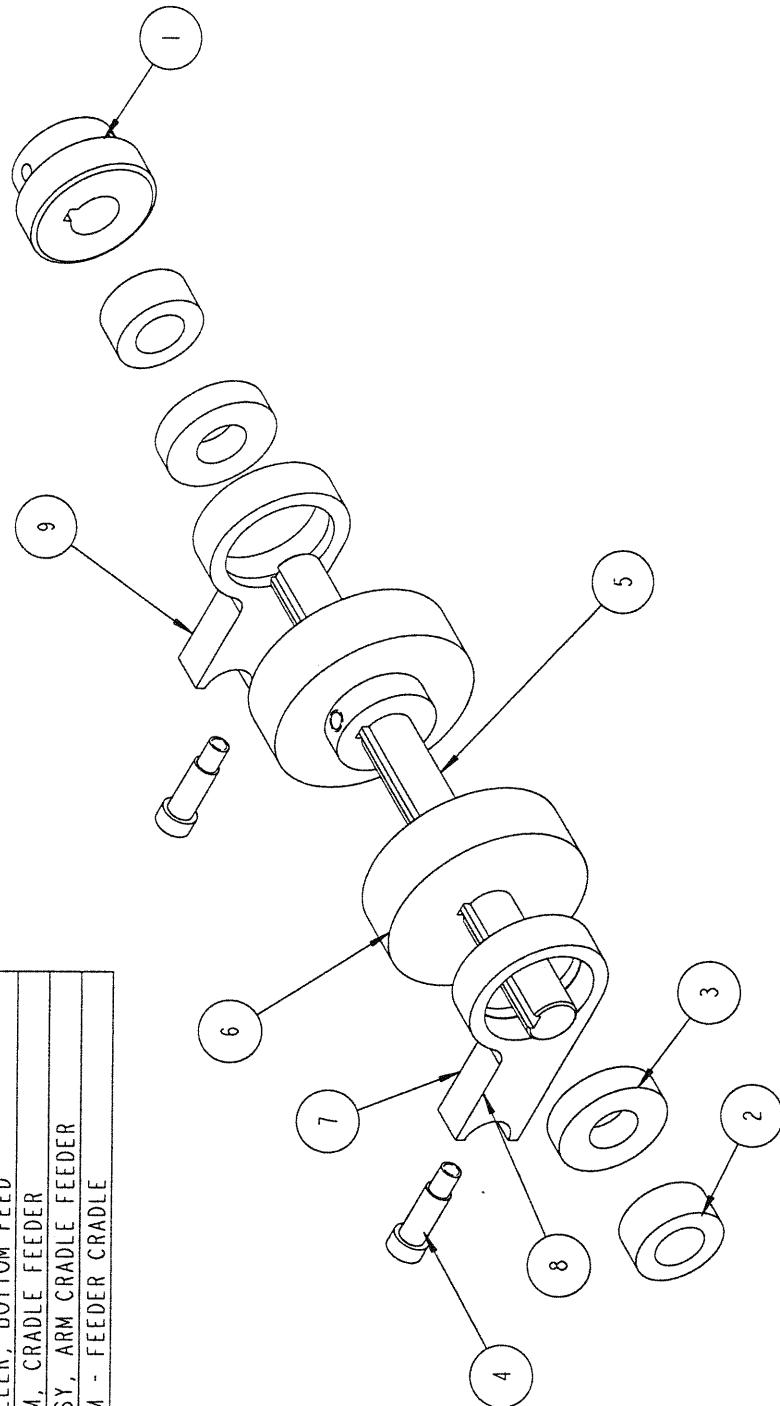
532688-01

ITEM	QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	1	102452	GEAR, FEED ROLLER DRIVE					
2	2	103804	BEARING, HUB .625					
3	3	503622	HUB, GEAR					
4	1	503623	GEAR, 1652 1.7495B NK					



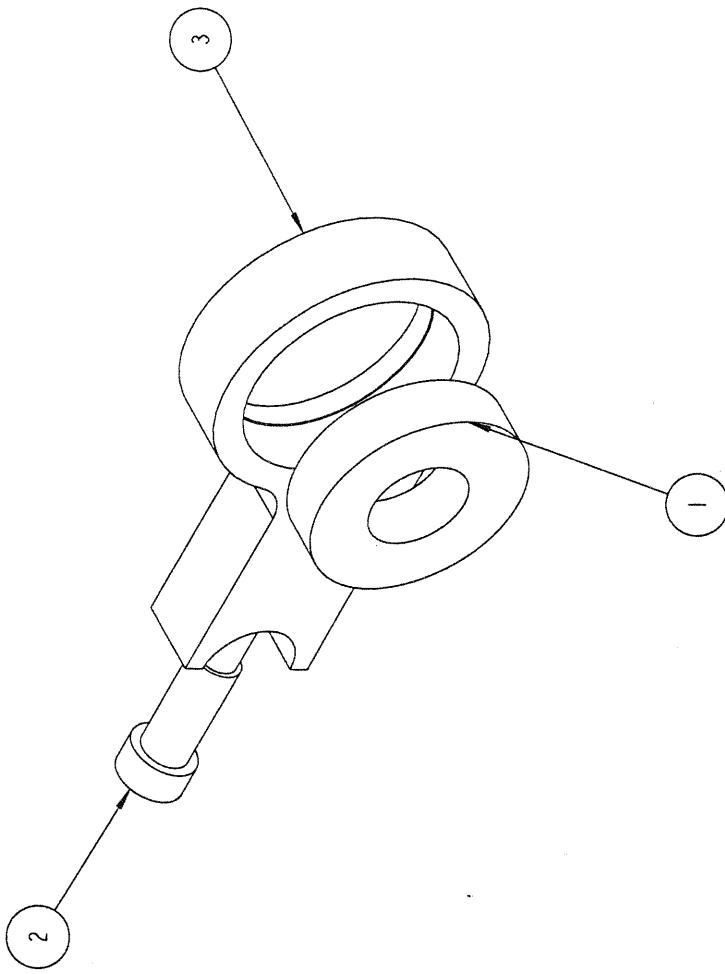
PRINTED BY:	SCALE	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED			MATERIAL:	NOTED		THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNEBUNK, GEORGIA		REO'D	WHERE USED
T JG	0 . 500	.XX	XXX	ANG.					KIRK - RUDY, INC.	KENNEBUNK, GEORGIA		
CHECKED BY:	DATE	.01	.005	5	HEAT TREAT:	NONE		MODEL:	324		TITLE:	ASSY, GEAR HUB
	21-Jan-98	REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED			FINISH:	NOTED		SHEET NO.	10F		DRAWING #	503622-A
TRACED BY:	MASTER	ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY										
	m											

ITEM QTY	PART #	DESCRIPTION
1	101957	GEAR, 1624 .625B .188K
2	102203	COLLAR .625
3	2 103110	BEARING, FLAT .625
4	2 107104	BOLT, SHOULDER 5/16X3/4
5	1 500748	SHAFT - FEEDER ROLLER
6	2 503656	ROLLER, BOTTOM FEED
7	1 500729-2	ARM, CRADLE FEEDER
8	1 500729-2A	ASSY, ARM CRADLE FEEDER
9	1 500729-2L	ARM - FEEDER CRADLE



DRAWN BY:	SCALE	DATE	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED	MATERIAL:	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA
T JG	0 .500	.xx .xxx	.01 .005 .5	N / A		KIRK - RUDY, INC. KENNESAW, GEORGIA
CHECDED BY:		21 - Jan - 98		HEAT TREAT:		
TRACE BY:	MASTER		REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY	N / A	SHEET NO: 10F 1	TITLE: EG ASSY, LOWER FEED ROLLERS DRAWING #: 532059-01

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	103110	BEARING, FLAT .625					
2	107104	BOLT, SHOULDER 5/16X3/4					
3	500729-2	ARM, CRADLE FEEDER					



1	532059-01		
REV'D	WHERE USED		
<p style="text-align: center;">KIRK - RUDY, INC.  KENNE SAW, GEORGIA</p>			
PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE OPIOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNE SAW, GA 30144 USA			
TITLE: ASSY, ARM CRADLE FEEDER			
DRAWN BY: TJG	SCALE: 1 .000		
DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED			
.xx	.xxx	ANG.	
.01	.005	.5	
HEAT TREAT:		NONE	
REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED		FINISH: ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY	
CHECKED BY: 21-Jan-98	DATE	MODEL: 324	
TRACED BY: M	MASTER	SHEET NO. 10F 1	DRAWING # 500729-2A

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	4	SHIM, .625X1.000X.125					
2	1	03405 CAM FOLLOWER					
3	1	503626-1 LEVER, CAM					
4	1	503629-2 SHAFT, SPRING LEVEL					
5	1	SP25711 LEVER, SPRING					

DRAWN BY: T J G SCALE: 0 . 375 DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED

DATE: 23 - Jan - 98	.01	.005	.5
ANG.	XXX		

HEAT TREAT: NONE REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED

FINISH: ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY

PROPRIETARY AND CONFIDENTIAL
THIS DRAWING MAY NOT BE COPIED OR REPRODUCED
IN ANY FORM WITHOUT THE
EXPRESS WRITTEN PERMISSION
OF KIRK-RUDY, INC.
KENNESAW, GA 30144 USA

KIRK - RUDY, INC.
KENNESAW, GEORGIA

RECD:	1	532688-01
WHERE USED:		

MODEL: 324 TITLE: EG ASSY, CAM LIFTER SHAFT

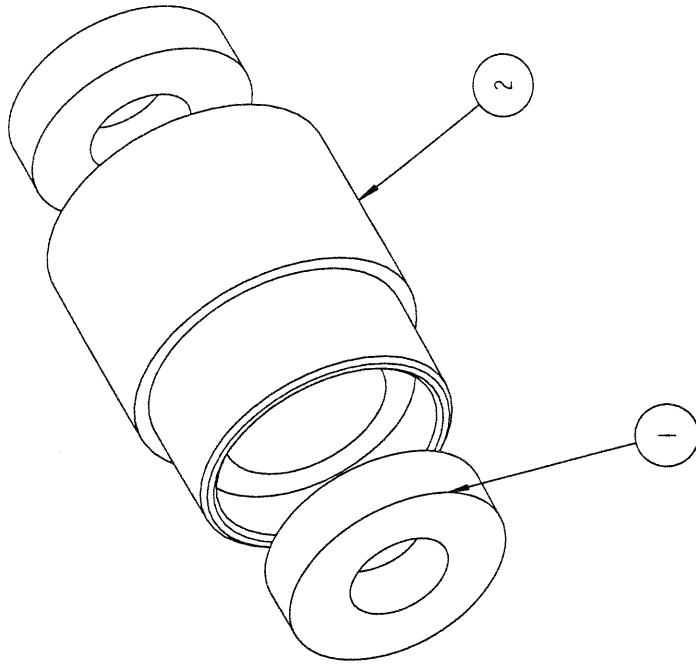
SHEET NO. 1 OF 1 DRAWING # 532694-01

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	101957	GEAR, 1624 .625B .188K					
2	102320	SHIM, .625X1.000X.062					
3	102560	SHIM, .625X1.000X.025					
4	102561	SHIM, .625X1.000X.005					
5	102671	SHIM, .625X1.000X.031					
6	110100	SPRKT, 25B20 .5000B .188K					
7	101785-1	GEAR, 2055 .625B .188K					
8	503531-A	ASSY, HUB					
9	SP25707-1	SHAFT, BRIDGE DRIVE					

1 532688-01
REQ'D WHERE USED

DRAWN BY: T JG	SCALE 0 .750	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL: NOTED	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE COPIED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA	
CHECKED BY:	DATE 22 - Jan - 98	.01	.005	ANG. .5	HEAT TREAT: NONE		
TRACED BY:	MASTER M	REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED		FINISH: NOTED	SHEET NO. 10F 1	TITLE: EG ASSY, BRIDGE DRIVE DRAWING # 532695-01	

ITEM QTY	PART #	DESCRIPTION
1	2	103110 BEARING, FLAT .625
2	1	503531 HUB, GEAR BEARING



REV NO	DATE	DESCRIPTION	ECN NO	BY

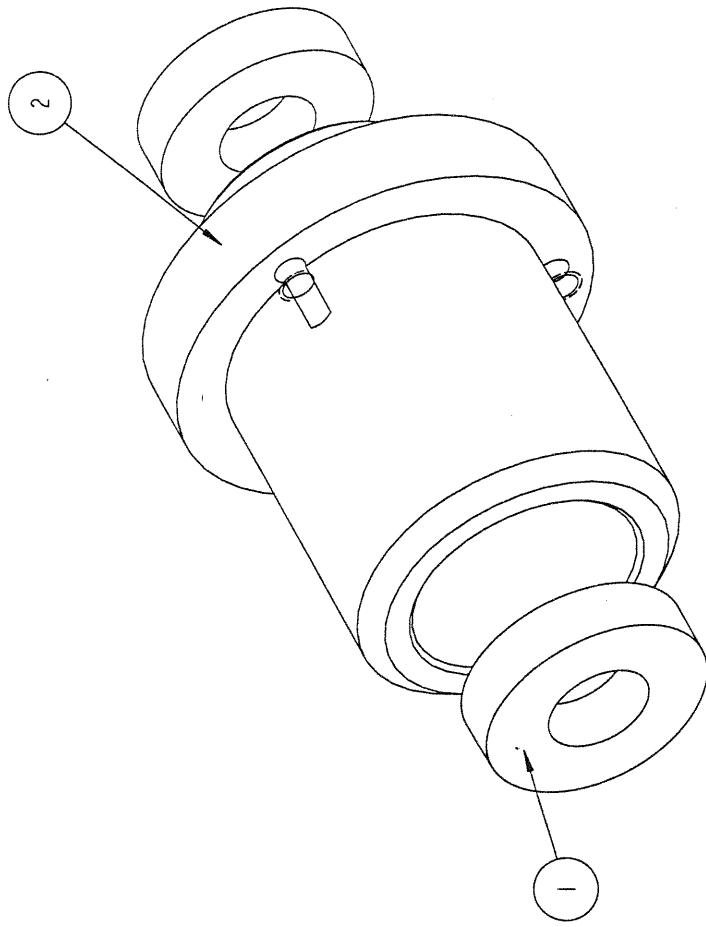
I	532695-01
REQ'D	WHERE USED
KIRK - RUDY, INC.	KENNE SAW, GEORGIA
PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE COPIED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC., KENNE SAW, GA 3044 USA	
THIRD ANGLE PROJECTION	
MATERIAL:	NOTED
DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED	
.XX .XXX ANG.	
.01 .005 .5	
HEAT TREAT:	
REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED	NONE
FINISH:	
ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY	NOTED
MODEL: 324	TITLE: ASSY, HUB
SHEET NO 1 OF 1	DRAWING #

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	102320	SHIM, .625X1.000X.062					
2	102345	SHIM, .375X.625X.125					
3	102560	SHIM, .625X1.000X.025					
4	102657	SHIM, .625X1.000X.125					
5	105026	PULLEY - V					
6	110140	SPRKT, 25B54 .625B .188K					
7	500750	CRANK - FEEDER SLIDE					
8	503625-1	CAM, FEED ROLLER					
9	503729-A	ASSY, HUB BEARING					
10	SP16209-3	SHAFT, CRANK					

1 532688-01
REQ'D WHERE USED

DRAWN BY: T JG	SCALE 0 , 375	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED			THIRD ANGLE PROJECTION		PROPRIETARY AND CONFIDENTIAL
CHECKED BY:	DATE 23 - Jan - 98	.01	.005	.5	HEAT TREAT: NONE	NO PORTION OF THIS DRAWING MAY BE COPIED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA	
TRACED BY:	MASTER	REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED			FINISH: NOTED	MODEL: 324	TITLE: EG ASSY, SHUTTLE CRANK SHAFT
		ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY			SHEET NO. 1 OF 1	DRAWING #	532696-01

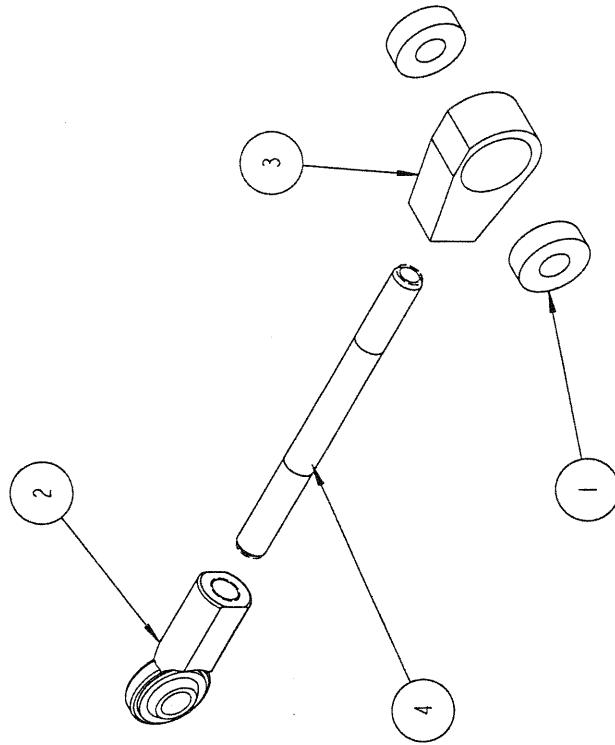
ITEM QTY	PART #	DESCRIPTION
1	103110	BEARING, FLAT .625
2	503729	HUB, BEARING



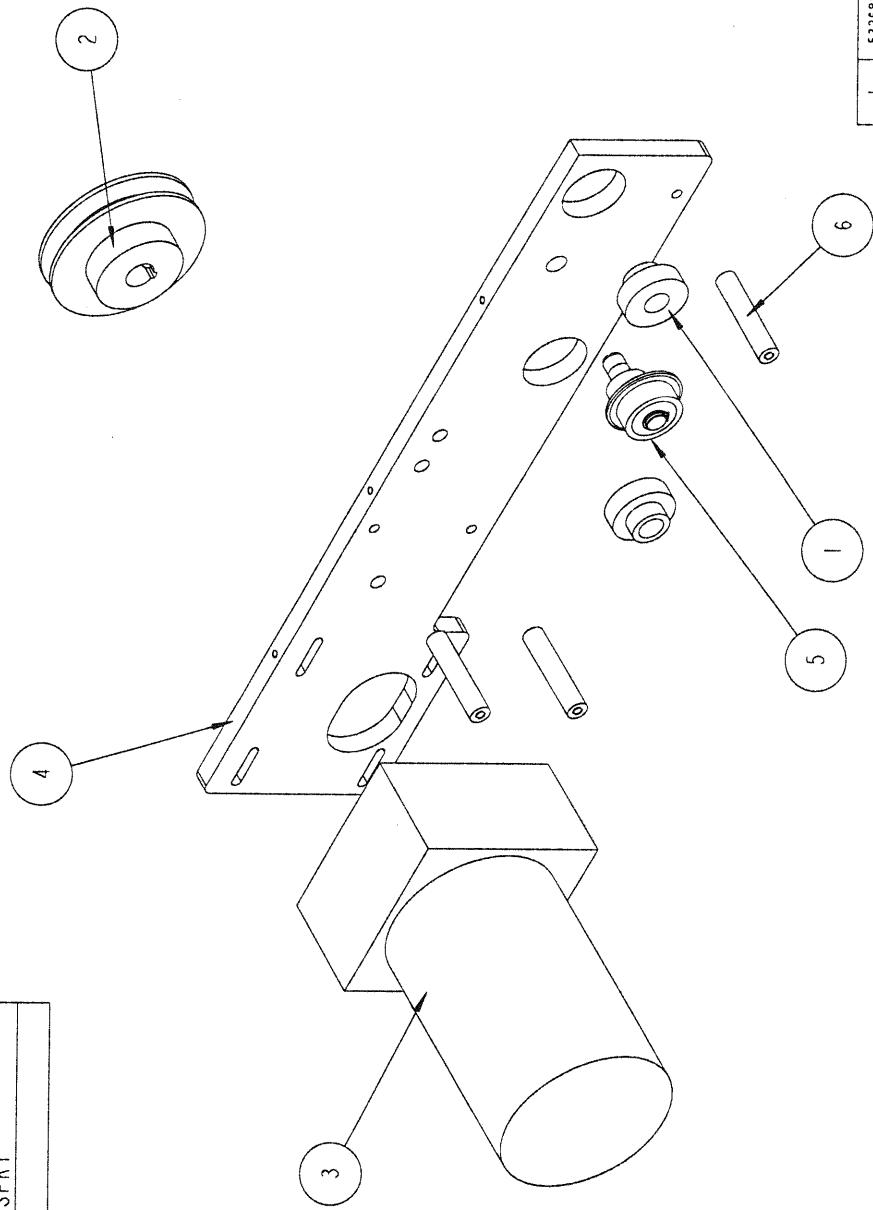
ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	2	103110 BEARING, FLAT .625					
2	1	503729 HUB, BEARING					

DRAWN BY: T JG	SCALE 1 .000	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL: NOTED	THIRD ANGLE PROJECTION - - -	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA	
CHECKED BY:	DATE 20 - Jan - 98	.XX	.XXX	HEAT TREAT: NONE	MODEL: 324	TIME: 10:00	
TRACED BY:	MASTER	.01	.005	FINISH: REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED	SHEET NO. 0F1	DRAWING # 503729-A	
ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY							

ITEM QTY	PART #	DESCRIPTION
1	2 103106	BEARING, FLAT .375
2	1 103500	BEARING - ROD END
3	1 500751	YOLKE - FEEDER CRANK
4	1 503671	ROD, FEEDER SLIDE



1	532688-01		
REQ'D	WHERE USED		
KIRK - RUDY, INC.			
KENNE SAW, GEORGIA			
PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNE SAW, GA 30144 USA			
DRAWN BY: T JG	SCALE: 0 .500	MATERIAL: NOTED	THIRD ANGLE PROJECTION
CHECKED BY:	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED .00 .005 .005 .01 .005 .005	HEAT TREAT: NONE	
TRACED BY:	DATE: 29 - Jan - 98	FINISH: REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY	MODEL: 324
		SHEET NO: 1 OF 1	TITLE: EG ASSY, CONNECTING ROD
			DRAWING #: 532697-01



ITEM	QTY	PART #	DESCRIPTION
1	2	103804	BEARING, HUB .625
2	1	105000-1	V-PULLEY
3	1	200169-2	MOTOR
4	1	527805-1	SIDE PLATE
5	1	532700-01	EG ASSY, IDLER, 25 SPKT
6	3	SP16207	STUD

REV NO	DATE	DESCRIPTION	ECN NO	BY
1	20 APR 98	ADDED 10500-1 TO PATTERN TABLE ASSY UPDATED TO MATCH	6321	MF

1	532698-01
RECD	WHERE USED
KRK	KIRK - RUDY, INC.
KRK	KENNESAW, GEORGIA
324	TITLE: EG ASSY, DRIVE PLATE
10F1	SHEET NO:
	DRAWING #

PROPRIETARY AND CONFIDENTIAL
NO PORTION OF THIS DRAWING
MAY BE DUPLICATED
IN ANY FORM
WITHOUT EXPRESS WRITTEN PERMISSION
OF KIRK RUDY INC.
KENNESAW, GA 30144 USA

THIRD ANGLE PROJECTION

MATERIAL: NOTED

DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED

.01	.005	.5
.XX	.XXX	ANG.

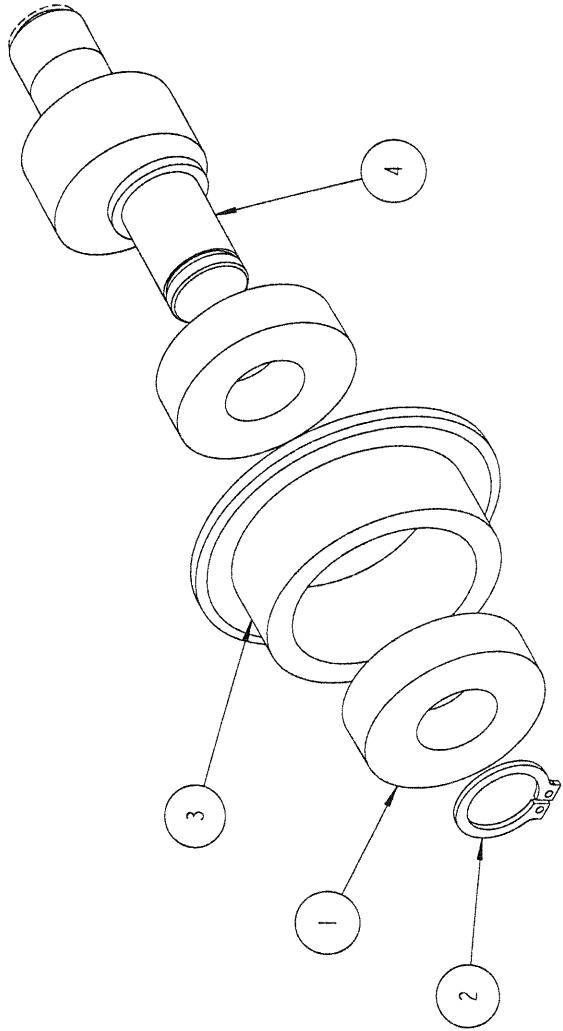
HEAT TREAT: NOTED

FINISH: REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED

ALL DIMENSIONS ARE IN INCHES

DO NOT SCALE - WORK TO DIMENSIONS ONLY

ITEM QTY	PART #	DESCRIPTION
1	2 103108	BEARING, FLAT .500
2	1 104106	SNAPRING, .500
3	1 110108	SPRKT, 25B22 1.125B NK
4	1 500983-5	STUD, IDLER SPROCKET



REV NO	DATE	DESCRIPTION	ECN NO	BY
1	02-OCT-98	CHANGED SPROCKET FROM PART# 110157 TO 110108	6379	MY
2	29-MAR-99	CHANGED STUD FROM .2 TO .5 REMOVED SHIMS	6458	MY

I	532698-01
REQ'D	WHERE USED

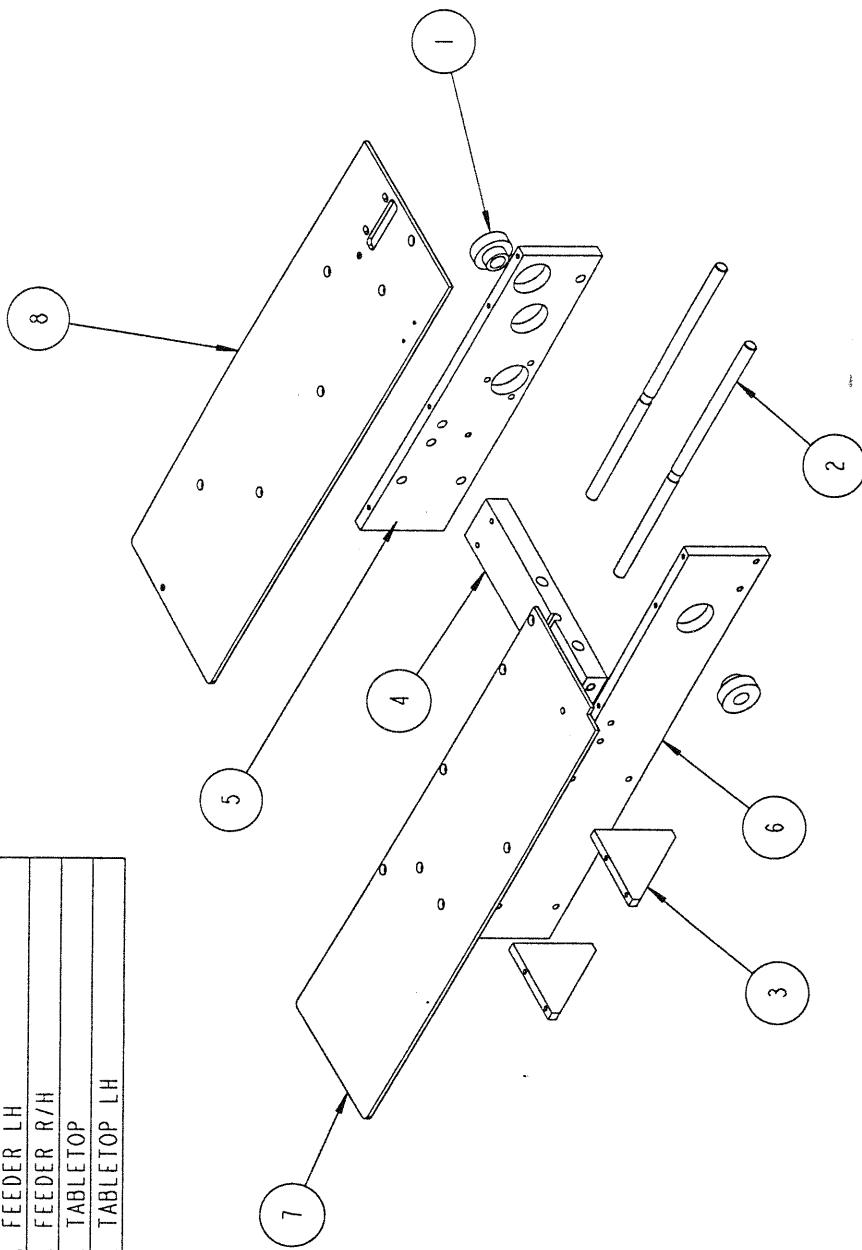
KIRK - RUDY, INC.
KENNESAW, GEORGIA



KENNESAW, GA 30144 USA

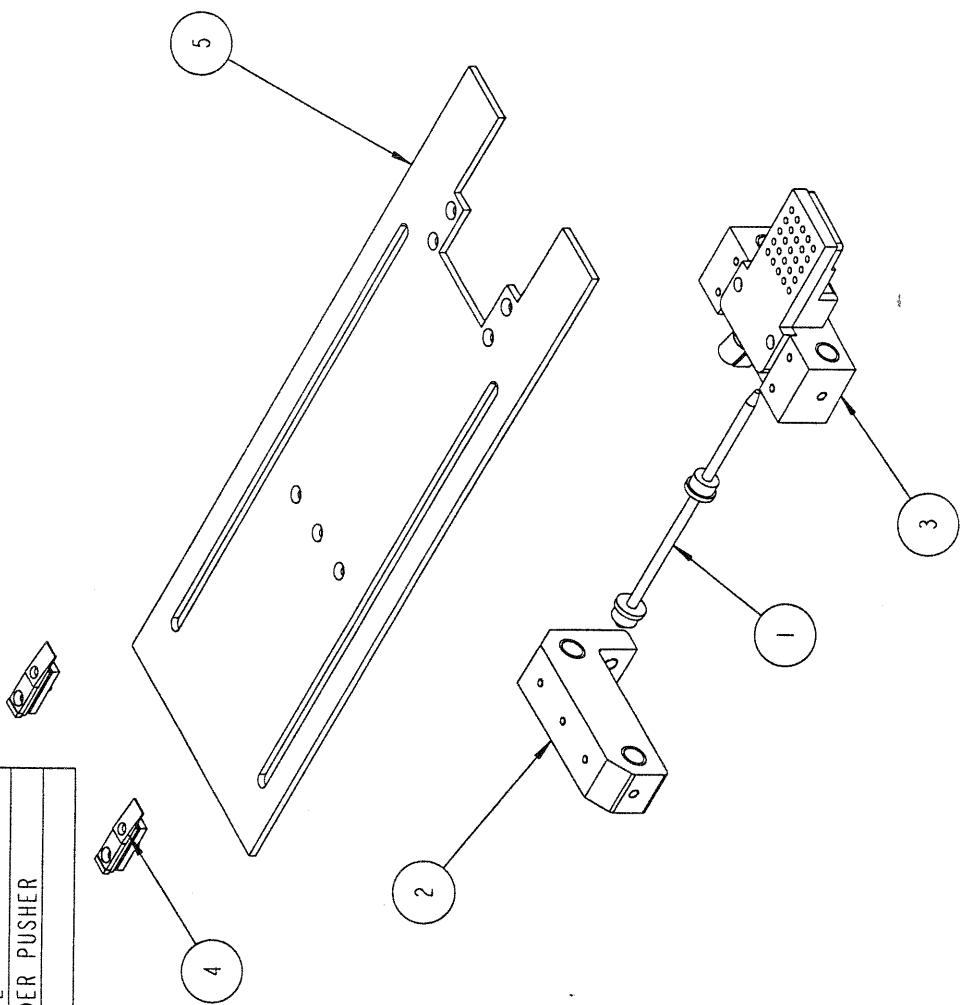
DRAWN BY:	SCALE	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED			MATERIAL:	NOTED	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE COPIED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK RUDY, INC. KENNESAW, GA 30144 USA
CHECKED BY:	DATE	.XX	.XXX	ANG.				
	26-Jan-98	.01	.005	.5	HEAT TREAT:	NOTED		
TRACED BY:	MASTER	REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED			FINISH:	NOTED		
	M	ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY			SHEET NO:	1 OF 1	TITLE:	EG ASSY, IDLER, 25 SPKT
								532700-01

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	2	103804 BEARING, HUB .625					
2	2	5036624 SHAFT, FEEDER					
3	2	503669 BRACKET, TOP PLATE RH					
4	1	503752 BRACKET, FEEDER SUPPORT					
5	1	SP25702 PLATE, FEEDER LH					
6	1	SP25701-1 PLATE, FEEDER R/H					
7	1	SP25712-1 PLATE, TABLETOP					
8	1	SP25713-6 PLATE, TABLETOP LH					

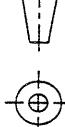


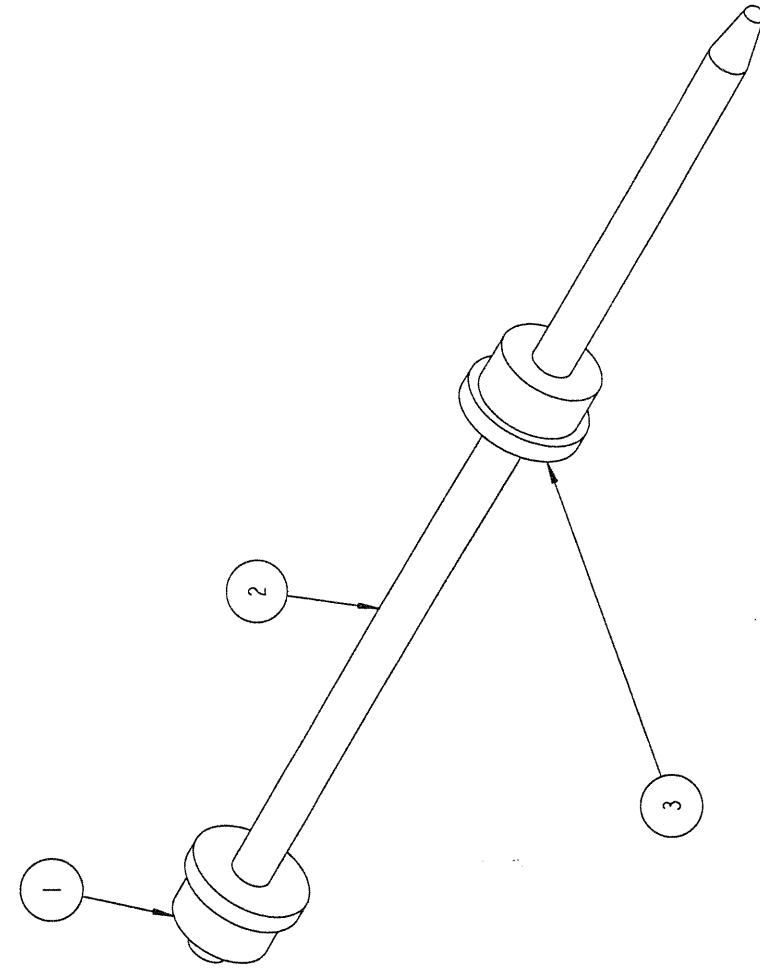
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CHECKED BY:	DATE	.xx .xx .xx	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED	.01 .005 .5	ANG.	
TRACED BY:	MASTER	29 - Jan - 98	REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED	N / A	FINISH:	324M
			ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY	N / A	SHEET NO.	1 OF 1
					DRAWING #	ASSY, FRAME & T.T.
						532699-01

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	1	500735-A ASSY, VACUUM ROD					
2	1	503701-A ASSY, BRACKET FEEDER					
3	1	532690-01 ASSY, VACUUM PLATE					
4	2	532693-01 ASSY, LIFTER FEEDER PUSHER					
5	1	SPI2050-2 FEEDER PLATE					



1	532692-01
RECD	WHERE USED
 KIRK - RUDY, INC. KENNEBUNK, GEORGIA	
TITLE: EG ASSY, SHUTTLE TABLE	
SHEET NO. 1 OF 1	DRAWING # 532689-01

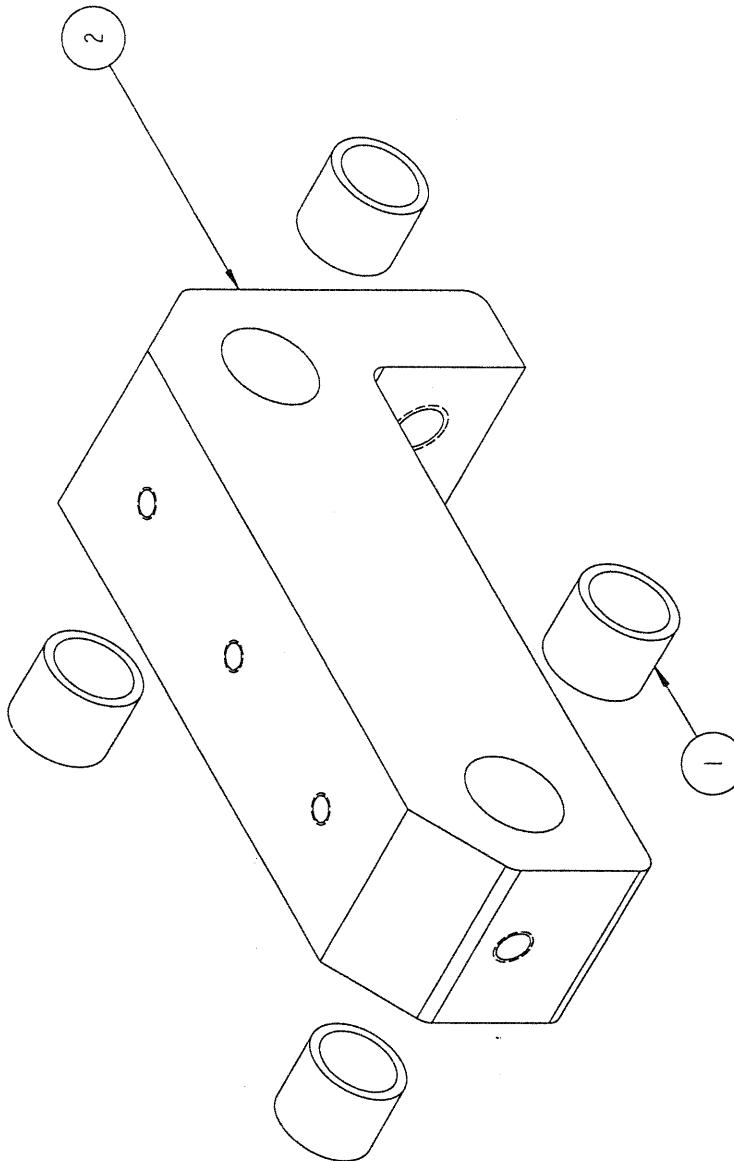
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CHECKED BY:	DATE 28-Jan-98	HEAT TREAT: NONE	MODEL: 324M	TITLE: EG ASSY, SHUTTLE TABLE	
TRACED BY:	MASTER M	FINISH: ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY	SHEET NO. 1 OF 1	DRAWING # 532689-01	



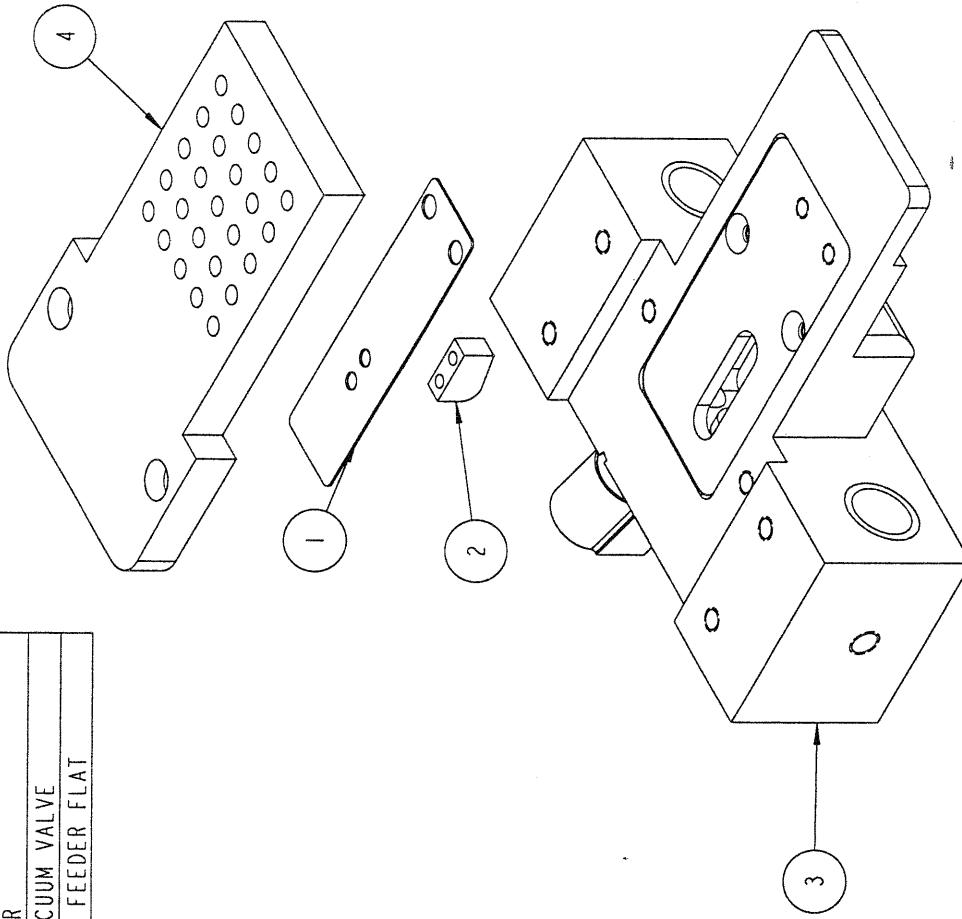
ITEM	QTY	PART #	DESCRIPTION
1	2	102225	COLLAR .250
2	1	500735	ROD - PUSH
3	2	500737	WASHER - BUMPER

REV NO	DATE	DESCRIPTION	ECN NO	BY						
I 532689-01 REF'D WHERE USED										
<p>DRAWN BY: T JG SCALE: 1 .000 DIMENSIONAL TOLERANCES MATERIAL: NOTED</p> <p>UNLESS OTHERWISE NOTED</p> <table border="1"> <tr> <td>.XX</td> <td>XXX</td> <td>ANG.</td> </tr> <tr> <td>.01</td> <td>.005</td> <td>.5</td> </tr> </table> <p>HEAT TREAT: NONE</p> <p>NOTE: REMOVE ALL RUGGS AND SHARP EDGES UNLESS OTHERWISE NOTED</p> <p>FINISH: ALL DIMENSIONS ARE FINISHED DIMENSIONS</p> <p>NOTE: DO NOT SCALE - WORK TO DIMENSIONS ONLY</p>					.XX	XXX	ANG.	.01	.005	.5
.XX	XXX	ANG.								
.01	.005	.5								
CHECKED BY:	DATE 19-Jan-98	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA							
TRACED BY:	MASTER M	NOTE: 324	NOTE: 324	NOTE: 324						
		SHEET NO. 1 OF 1	DRAWING #	ASSY, VACUUM ROD						
				500735-A						

ITEM	QTY	PART #	DESCRIPTION
1	4	190639	BUSHING, TEFLON .500
2	1	503701	BRACKET, FEEDER

REV NO	DATE	DESCRIPTION	ECN NO	BY						
I 532689-01 REQ'D WHERE USED										
 <p>DRAWN BY: T JG SCALE: 1 .000 DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>.xx</td> <td>.xxx</td> <td>ANG.</td> </tr> <tr> <td>.01</td> <td>.005</td> <td>.5</td> </tr> </table> <p>CHECKED BY: DATE 20 - Jan - 98 MATERIAL: NOTED HEAT TREAT: NONE</p> <p>TRACED BY: MASTER FINISH: REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED</p> <p>ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY</p> <p>NOTE: 324 SHEET NO: 1 OF 1 DRAWING # 503701-A</p>					.xx	.xxx	ANG.	.01	.005	.5
.xx	.xxx	ANG.								
.01	.005	.5								
<p>KIRK - RUDY, INC. KENNESAW, GEORGIA</p> <p>© KIRK-RUDY INC. 30144 USA</p>										

ITEM QTY	PART #	DESCRIPTION
1	500738	SPRING - VALVE
2	500739	BLOCK - PUSHER
3	503750-A	ASSY, BODY-VACUUM VALVE
4	503751-1	PLATE, VACUUM FEEDER FLAT



DRAWN BY:	SCALE	DATE	REVISION	ECN NO	BY
T J G	0 . 750	19 - Jan - 98	00		
DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		NOTED		532690-01 WHERE USED	
	.01	.005	.5	PROPRIETARY AND CONFIDENTIAL NO PART OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK RUDY INC. KENNESAW, GA 30444 USA	
CHECKED BY:	MASTER	FINISH:	NOTE D	ASSY, VACUUM PLATE	
TRACED BY:	M	NOTE D	SHEET NO. 10F 1	DRAWING # 532690-01	

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	10031	BUSHING, SLEEVE .250					
2	190604	NIPPLE, VACUUM LINE					
3	190606	FITTING - 90 DEG 1/4 NPT					
4	190639	BUSHING, TEFILON .500					
5	500740	PLATE - VACUUM					
6	503750	BODY VACUUM VALVE					

DRAWN BY: TJG SCALE: 0 .750 DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED

.XX	XXX	ANG.
.01	.005	.5

NOTED MATERIAL: HEAT TREAT: NONE

REMOVED ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED

FINISH: MODEL: 324

ALL DIMENSIONS ARE FINISHED DIMENSIONS
DO NOT SCALE - WORK TO DIMENSIONS ONLY

CHECKED BY: 19 - Jan - 98

TRACED BY: MASTER M

ASSY, BODY - VACUUM VALVE

503750-A

1 532690-01
REV D WHERE USED

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	102700	SPRING, COIL					
2	500762	PLATE-FEEDER PUSHER BOTTOM					
3	500775	PLATE-FEEDER PUSHER TOP					
4	SPI6292	LIFTER- FEEDER PUSHER					

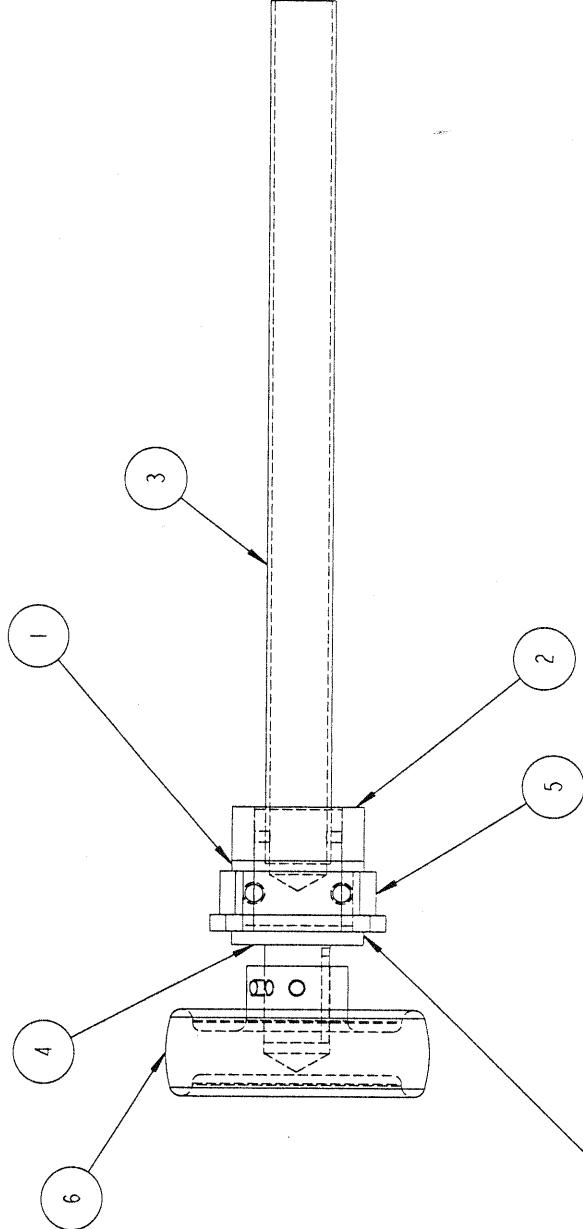
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T JG		2 . 000		.01 .005 .5		HEAT TREAT: NONE		MODEL: 324		TITLE: ASSY, LIFTER FEEDER PUSHER	
CHECKED BY:		DATE: 19 - Jan - 98		REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED		FINISH: NOTED		SHEET NO. 1 OF 1		DRAWING # 532693-01	
TRACED BY:		MASTER M		ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY							

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	FCN NO	BY
1	532129-01	BLOCK, LOCK DOWN					
2	532452-01	BRACKET, GAS SHOCK					
3	532453-01	GAS SHOCK LINKAGE					
4	532464-01	SHAFT, DRYER HANDLE					
5	532466-01	ASSY, DRYER ARM PIVOT					
6	532468-01	SHAFT, DRYER STOP					
7	532736-01	ASSY, SCREW HOUSING					
8	532738-01	WELD, TUBING DRYER STAND					
9	532739-01	WELD, TUBING SLIDE					
10	532741-01	TUBING, BASE					
11	532744-01	WELD, TUBING IN/OUT ADJ.					
12	533189-01	BRACKET, DRYER MOUNT					
13	1	GASSHOCK GAS SPRING GAS-152					
14	1	RES4540-2 DRYER, RES. 4540-10					

NOTE : DRYER BRACKET AND HANDLE SHOWN ARE FOR RESEARCH DRYER 4540 10
FOR 4540-05 DRYER USE BRACKET (532456-02) AND HANDLE (532464-02)

DRAWN BY: T JG	SCALE 0 . 1 1 0	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL: NOTED	THIRD ANGLE PROJECTION		PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA
CHECKED BY:	DATE 31 - Mar - 98	.01	.003	ANG. .5	HEAT TREAT: NONE	SHEET NO. 10F2	TITLE: ASSY, DRYER MOUNT
TRACED BY:	MASTER <i>m</i>	REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED		FINISH: ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY	NOTED	DRAWING #: 532734-01	

ITEM	QTY	PART #	DESCRIPTION
1	1	100326	BUSHING, FLANGE 1.000
2	1	102217	COLLAR 1.000
3	1	503734	THREADED ROD, 3/4-10
4	1	503736	HUB
5	1	532737-01	BLOCK, ROD MOUNT
6	1	533006-01	HANDWHEEL, W/ KR LOGO



DRAWN BY:	SCALE	DATE	REVISION NO.	DESCRIPTION	ECN NO.	BY
T JG	0 . 500	20 - Feb - 98		REPLACED 532737-01 WITH 503734	6349	MY
CHECKED BY:						
TRACED BY:	MASTER					

PROPRIETARY AND CONFIDENTIAL	NO PORTION OF THIS DRAWING
NO PORTION OF THIS DRAWING	MAY BE QUOTED OR REPRODUCED
IN ANY FORM	WITHOUT THE
EXPRESS WRITTEN PERMISSION	OF KIRK-RUDY INC.
KENNESAW, GA 3044 USA	

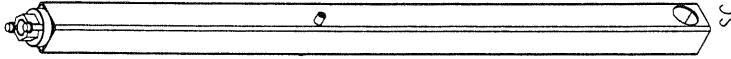
ASSY, SCREW HOUSING

532736-01

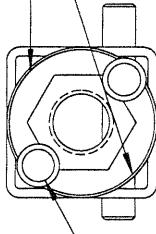
ASSY, SCREW HOUSING

532736-01

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	532472-01	SHAFT, GAS SPRING MOUNT					
2	532713-01	ASSY, NUT HOLDER					
3	532740-01	TUBING, BASE					



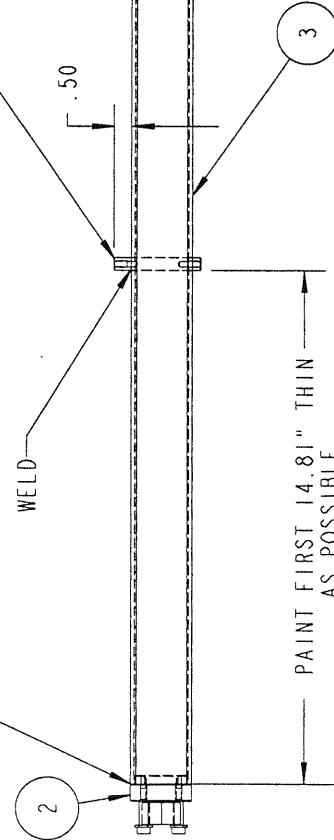
WELD HERE



WELD THREADED BLOCK SO-TAPPED HOLES ARE IN THE CORNERS OF THE TUBING

TOP VIEW
SCALE 0.500

—WELD AND GRIND FLUSH WITH TUBING
SEE TOP VIEW NOTES



PAINT FIRST 14.81" THIN — AS POSSIBLE

3700

SCAI F 0 125

1	532734-01
REQ'D	WHERE USED

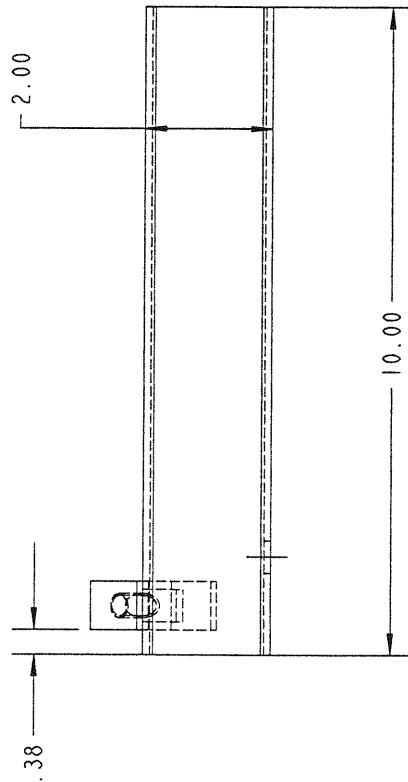
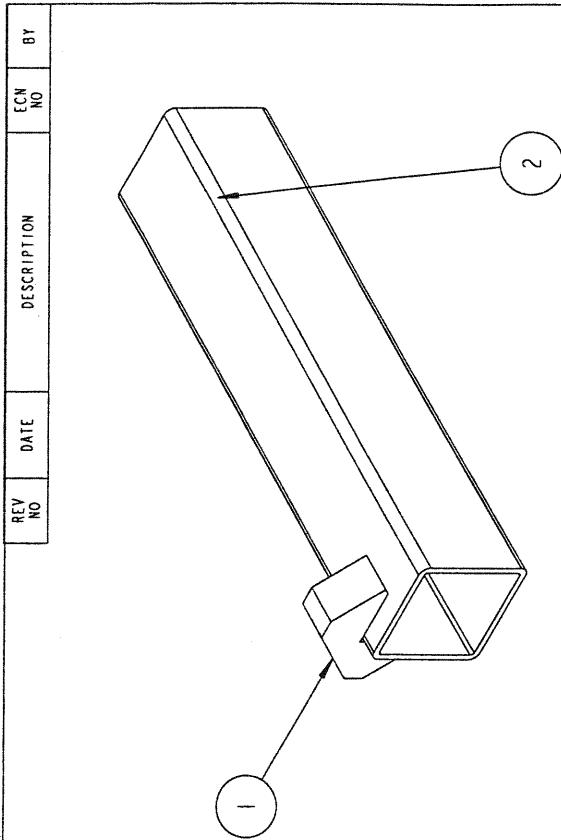
D Y , I N C .
G E O R G I A

— AND

532738-01

DRAWN BY:	T J G	SCALE	0 . 200	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED			MATERIAL: NOTED	THIRD ANGLE PROJECTION			PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK RIDGE INC. Kennesaw, GA 30144 USA	
CHECKED BY:		DATE	20 - Feb - 98	.005	.005	ANG.	HEAT TREAT: NONE				MODEL: SP 62500	TITLE: W E L D , T
TRACED BY:		MASTER		REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED			FINISH: PAINT				SHEET NO.: 10F	DRAWING #

ITEM	QTY	PART #	DESCRIPTION
1	1	532129-01	BLOCK, LOCK DOWN
2	1	532735-01	TUBING, CROSS OVER



ITEM	REV NO	DATE	DESCRIPTION	ECN NO	BY
1					
2					

I	532734-01	RECD WHERE USED
KIRK - RUDY, INC.	KIRK - RUDY, INC.	
KENNEBUNK, GEORGIA	KENNEBUNK, GEORGIA	
KENNEBUNK, GA 30444 USA		
PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE COPIED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY, INC. KENNEBUNK, GA 30444 USA	THIRD ANGLE PROJECTION	
DRAWN BY: T JG	SCALE 0 . 375	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED
CHECKED BY: 2 - Feb - 98	DATE .01 .005 .5	MATERIAL: NOTED ANG.
TRACED BY: M	MASTER	HEAT TREAT: NONE
		REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED
		ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY
		FINISH: PAINT
		SHEET NO: 1 OF 1
		DRAWING # 532739-01

ITEM QTY	PART #	DESCRIPTION
1	1	532165-01 PLATE, DRYER MOUNT
2	1	532469-01 ASSY, PAW PIVOT
3	1	532742-01 TUBING, CROSSOVER SLIDE

REV NO	DATE	DESCRIPTION	ECN NO	BY

SCALE 0.250

CENTER PLATE WITH TUBING AND WELD

DRAWN BY: T JG	SCALE 0 .320	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		
CHECKED BY:	DATE 2 - Feb - 98	.XX	.XXX	ANG.
TRACED BY:	MASTER	.01	.005	.5
HEAT TREAT:				
NONE				
FINISH:				
BL OXIDE				

PROPRIETARY AND CONFIDENTIAL
NO PORTION OF THIS DRAWING
MAY BE QUOTED OR REPRODUCED
IN ANY FORM WITHOUT THE
EXPRESS WRITTEN PERMISSION
OF KIRK RUDY INC.
KENNESAW, GA 30144 USA

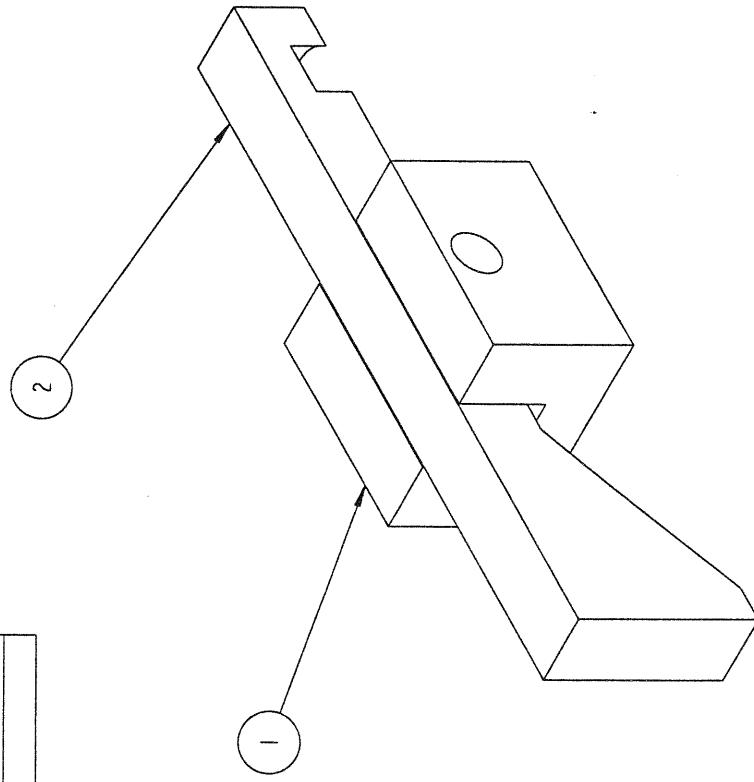
TITLE:
WELD, TUBING IN/OUT ADJ.

1	532734-01
REQ'D	WHERE USED

SHEET NO.
1 OF 1

DRAWING #
532744-01

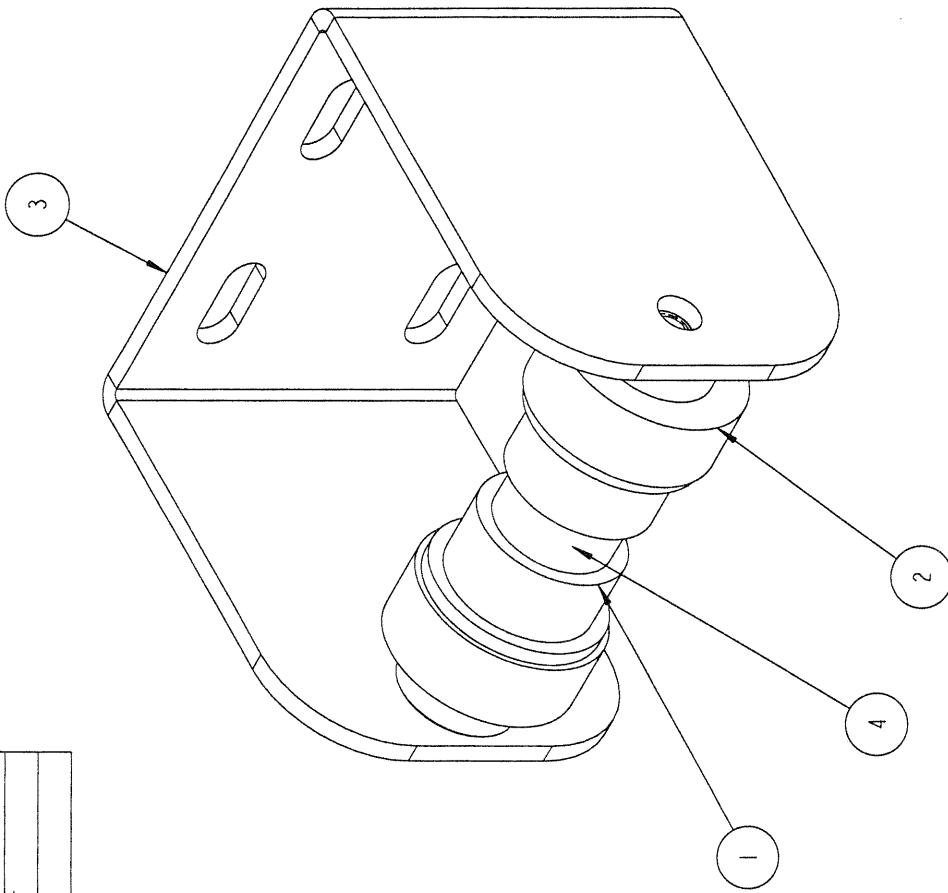
ITEM QTY	PART #	DESCRIPTION
1	533470-01	BLOCK, PAW PIVOT
2	533471-01	LEVER, PAW



REV NO DATE DESCRIPTION ECN NO BY

DRAWN BY:	T JG	SCALE:	2 . 0 0 0	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED	MATERIAL: NOTED	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO POSITION OR DRAWING MAY BE COPIED OR REPRODUCED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY INC. KENNESAW, GA 30144 USA	KIRK - RUDY, INC. KENNESAW, GEORGIA
CHECKED BY:		DATE:	8 - Jan - 98	.005 .5	HEAT TREAT: NONE			
TRACED BY:		MASTER	M	ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY	FINISH: NOTED	SHEET NO.: 10F1	DRAWING #: ASSY, PAW PIVOT	
RECD WHERE USED	I	532744-01					532469-01	

ITEM QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1 2	100326	BUSHING, FLANGE 1.000					
2 2	102212	COLLAR 1.000					
3 1	532465-01	BRACKET, DRYER ARM PIVOT					
4 1	532467-01	SHAFT, DRYER PIVOT					



DRAWN BY: T JG	SCALE 0 . 750	DIMENSIONAL TOLERANCES .005 .005 .005	MATERIAL NOTED	NOTED	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE QUOTED OR REPRODUCED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK-RUDY INC. KENNESAW, GA 30044 USA	KIRK - RUDY, INC. KENNESAW, GEORGIA
CHECKED BY:	DATE 20 - Feb - 98	.01 .005 .005	HEAT TREAT: NONE	FINISH: NONE	MOD: SP 62500	TITLE: ASSY, DRYER ARM PIVOT	REQ'D WHERE USED 1 532734-01
TRACED BY:	MASTER <i>M</i>	ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY	SHEET NO. 1 OF 1	DRAWING # 532466-01			

7 ELECTRICAL SCHEMATICS AND PARTS

7.1 WIRING DIAGRAMS LIST (SHEETS SUPPLIED SEPARATELY)

200-177-00-110

7.2 PARTS LIST

KR P/N	Qty.	Manufacturer	Man P/N	Description 1	Description 2
202 426-2	3	Penta Power	KBMM-225D	Board, Motor, DC	For 90 Vdc Motor
202 430	1	Allen-Bradley	1761-L16BWA	PLC, MicroLogix	
200 129	1	Dayton	4C942	Blower	
209 163	2			DIN Channel	Length is application specific
209 247	8			Holder, Fuse	UK10
202 442	1	Omron	S82S-0724	Power Supply	24 Vdc/0.3 Amp, DIN Rail Mount
202 276	7	Allen-Bradley	700-HF32Z24	Relay	24 Vdc, Small Ice Cube Style
202 277	8	Allen-Bradley	700-HN116	Socket	For 700-HF32Z24
200 124	1	Gast	0823-V152Q-G274X	Vacuum, Little Gast Vacuum	220 Vac, Single Phase
202 275	1	Allen-Bradley	700-NX89	Relay	12 Vdc, Small
201 130	7			Contact, N/O	
201 131	1			Contact, N/C	
204 318	4			Kit, Potentiometer	5k Ohm
209 016	4			Knob, Potentiometer	For 204 318
209 237	2			Terminal, Ground	
209 238	2			Terminal, End Stop	
209 235	3			Terminal, Block, Large	UK35
209 234	9			Terminal, Block, Medium	UK16
209 203-1	1	Sylvania	30152/SGL/SKT	Socket	
209 204-6	1	Sylvania		Lens, White	
209 205-2	1	Sylvania		Lamp, 24 Vdc	
200 170-1	1	Bodine	4141TY1148	Motor, DC	1/8 HP
201 160-4	1	Metric	33-38072-X13	Inlet	
201 161-4	1	Metric	33-33072-X13	Connector	
208 503	1	Sunon	SP100A	Fan	
200 017	1	Cutler-Hammer	13104RQD03	Beamswitch, Retroreflective	15-30Vdc, 20-264Vac 50/60 Hz
200 169-2	1	Bodine	4180	Motor, DC	1/4 HP
200496	2	DigiKey (AMP)	A1357-ND	Plug, male	
200497	2	DigiKey (AMP)	A1330-ND	Clamp, Plastic	
200498	6	DigiKey (AMP)	A1320-ND	Pins	
200 169-2	1	Bodine	4180	Motor, DC	1/4 HP

7.3 PLC OUTPUTS

Output #	Function
O/0	Blower
VAC/VDC	120 Vac
O/1	Stop Output
VAC/VDC	Stop Input

O/2 VAC/VDC	Conveyor Speed Up
O/3 VAC/VDC	Power Latch DC Common
O/4 O/5 VAC/VDC	Shuttle Enable Table/Conveyor Enable End of Stop Circuit

7.4 PLC INPUTS

Input #	Function
I/0	Power On
I/1	Power Off
I/2	Jog
I/3	Run
Common	Terminal 1
I/4	Low Hopper Beamswitch
I/5	Feeder Stop
I/6	End of Stop Circuit
I/7	Astrojet Conveyor Speed Up
I/8	Blower
I/9	
Common	Terminal 1

7.5 RELAY LIST

Relay #	Voltage	Function
K1	24Vac	Run Latch
K2	24Vac	Conveyor
K3	24Vac	Pump
K4	24Vac	24 Vdc Pow. Supply
K5	24Vac	Power Latch
K6	24Vac	Speed Up
K7	24Vac	Astro Run Enable
K8	24Vac	Receptacle Enable
K9	24Vac	Shuttle Table
K10	24Vac	Time Delay Speed Up, TRM W
K11	24Vac	Blower
K12	24Vac	Feeder Stop/Table Delay
K13	24Vac	Astro Jet stop to 315a

315A Technical Description

Power:

- **315A:** 220/120 Vac, 30 Amp, Single Phase
- **220 Vac:** Obtained from two 220 Vac phases
- **120 Vac:** Obtained from one 220 Vac and the neutral
- **24 Vdc:** Obtained from the MicroLogix PLC and an Omron DC supply
 - MicroLogix: 24 Vdc @ 200 mA
 - Omron DC: 24 Vdc @ 300 mA

MicroLogix PLC I/O:

- Power Latch (O/3): Power On (I/0) turns on O/3, Power Off (I/1) turns off O/3
- PLC Stop (O/1): Off for Low Hopper (I/4), or Stop Circuit (I/6).
- Shuttle Enable (O/4): On for jog (I/2) or run (I/3) pressed, Shuttle (O/4) off on I/5 pressed, 315 stopped on release (O/5 off)
- Blower (O/0): Output off/on for input (I/8) off/on
- 315 Motion Enable (O/5): O/5 on for jog (I/2) on, or latched for run (I/3) pressed
- Conveyor Speed Up (O/2): Conveyor SU (I/7) at 0 Vdc causes O/2 on for user set time

Astrojet Interface:

- Conveyor Speed Up: NPN transistor in Astrojet turns on, changes I/7 from 24 to 0 Vdc
- Astrojet Stop Input (K13): Astrojet turns K13 on when it enables motion, closing stop circuit
- Astrojet Enable (K7): When 315A jogs or runs, K7 turns on, enabling Astrojet motion.

Dryer Interface:

- Contact Closure: K2 closes on motion to enable dryer (10 amp maximum)
- Voltage Supplied: +24 Vdc on motion to enable dryer (25 mA maximum)

Plug Interfaces:

<u>Plug #</u>	<u>Description</u>	<u>Voltages Present</u>	<u>Plug Type</u>
Astrojet Plugs:			
PL1:	Astrojet Conveyor Speed Up	DC Common	4 Pin
PL2:	Astrojet & 315 Enable	1-2: Contact, 3-4: 12 Vdc	4 Pin

Dryer Plugs:

Dryer Enable: Contact Closure	Open Relay Contact	Male 2 Pin Twist
Dryer Enable: +24 Vdc	DC Voltage Supplied	Female 3 Pin T.

Power Supply Plugs:

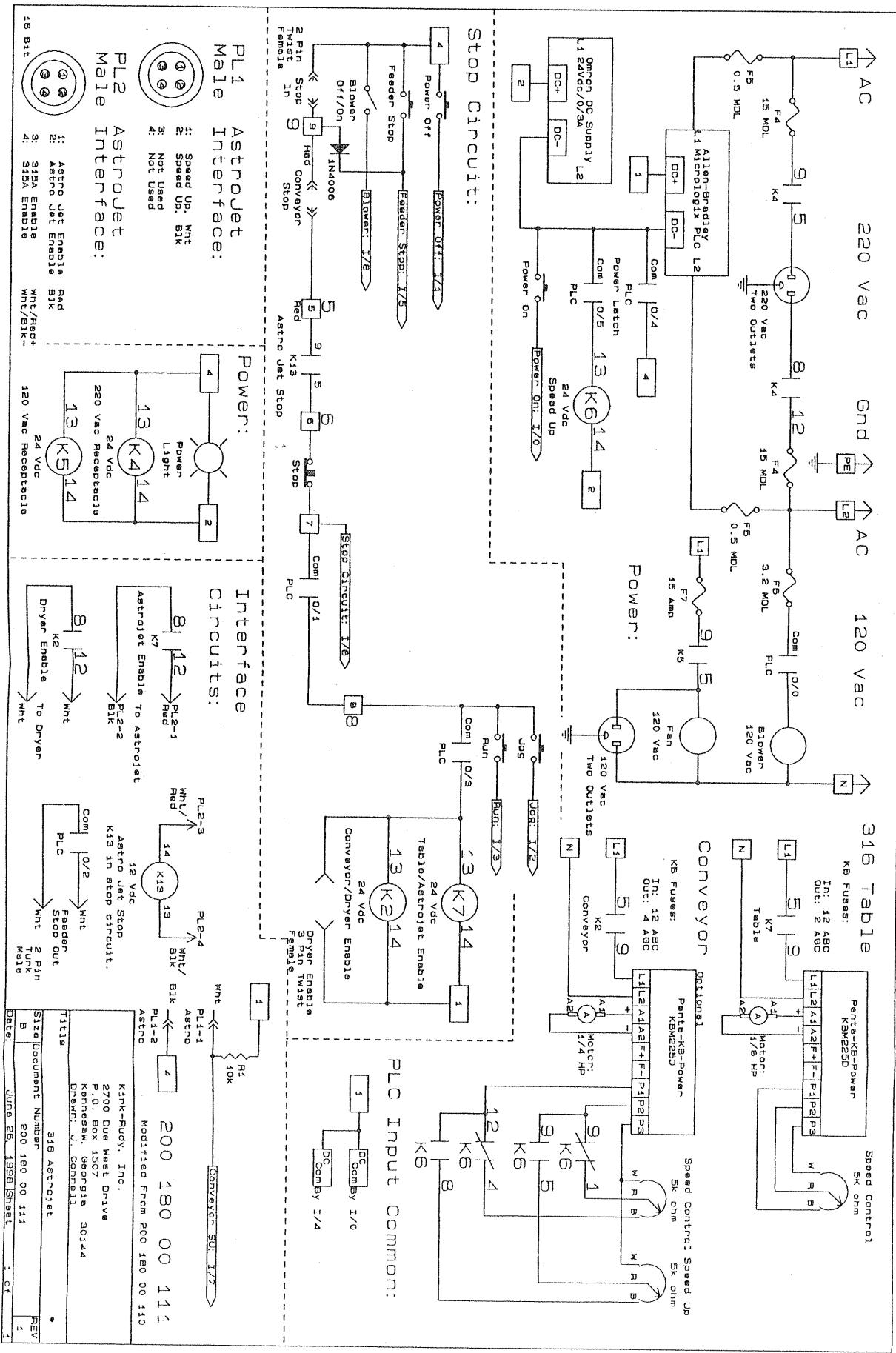
220 Vac/1 Phase/30 Amp	315 Power Input
120 Vac, 15 Amperes	120 Vac Output
220 Vac, 15 Amperes	220 Vac Output

Stop Plug:

Conveyor Stop: Contact Closure	24 Vdc	Female 2 Pin Turck
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Conveyor Plug:

Conveyor Motor	Variable Motor Voltage	Female 3 Pin Turck
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8 APPENDIX

(THIS PAGE LEFT BLANK FOR FUTURE REFERENCES)

9 NOTES

10 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 MERCHANTABILITY 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.

USE ONLY GENUINE KIRK-RUDY REPLACEMENT PARTS

For Service or Replacement Parts Please Call:
Kirk-Rudy @ 770-427-4203

Kirk-Rudy, Inc.
125 Lorraine Pkwy
Woodstock, GA 30188
www.kirkrudy.com