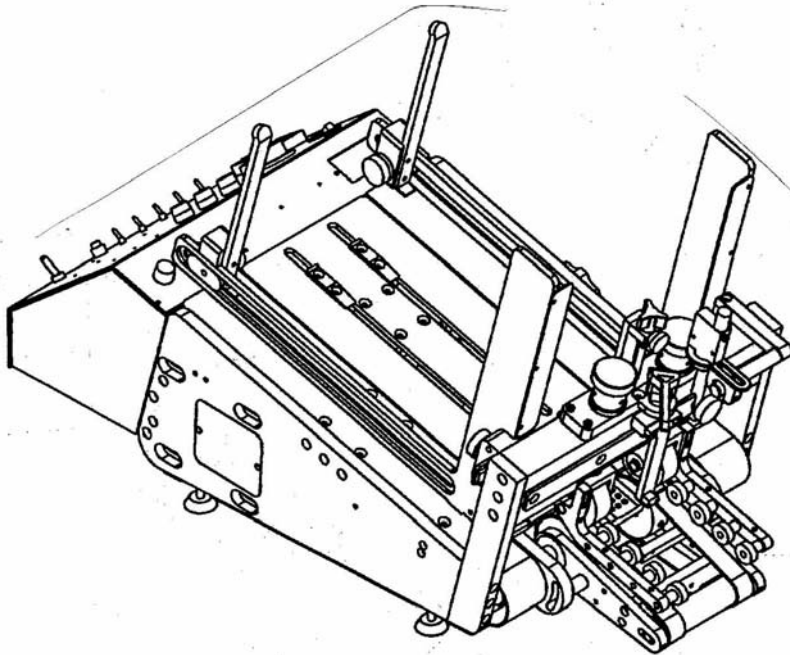


Kirk-Rudy, Inc.

Instructions & Parts Manual

KR496 Shuttle Feeder



Manufactured by Kirk-Rudy, Inc.

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.

10000-496 REV. 2 12/16/99

Manual

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NOTE: FIGURES AND DIAGRAMS ARE NOT INCLUDED IN PAGE NUMBERS.

1 Important Safety Instructions

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.

2 HANDWHEEL PROCEDURE



CAUTION

AVOID CLOCKWISE ROTATION OF HANDWHEEL. PREMATURE WEAR OR TOTAL FAILURE OF THE CLUTCH CAN OCCUR.

THE HANDWHEEL PROCEDURE MUST BE FOLLOWED TO RECEIVE OPTIMUM COMPONENT LIFE.

1. MAIN POWER SWITCH MUST BE IN THE “ON” POSITION.
2. MOTOR POWER SWITCH MUST BE IN THE “OFF” POSITION.
3. MODE SWITCH MUST BE IN THE “CONTINUOUS” POSITION.
4. INSERT HANDWHEEL INTO THE CLUTCH SHAFT ON THE LEFT HAND SIDE OF THE FEEDER.
5. ROTATE HANDWHEEL COUNTERCLOCKWISE ONLY (WITH PRODUCT FLOWING FROM RIGHT TO LEFT).

3 SPECIFICATIONS

A. OPTIONS

1. CONTINUOUS VARIABLE MOTOR SPEED OPTION
 - a. 11,700 product per hour maximum (4181)
 - b. 17,500 product per hour maximum (4180)
 - c. 35,000 product per hour maximum (4179)
2. FEED ON DEMAND OPTION
 - a. Feed from cam activated switch
 - b. Feed from retro beam by interrupting beam path
3. FEED ON DEMAND FROM PREDETERMINED COUNTER
 - a. Auto reset
 - b. Manual reset
 - c. External reset
4. MISSFEED AND/OR DOUBLE DETECTION
 - a. Indicator lights
 - (1) missfeed indicator light
 - (2) double detect indicator light
 - b. Optional stop for feeder and external equipment
 - (1) auto reset
 - (2) manual reset

B. SPECIFICATIONS

1. FEED CONTINUOUS
 - a. External switch for this option
2. FEED ON DEMAND
 - a. External switch for this option
 - b. External flush mounted receptacle for two-wire low voltage plug, external feed signal from cam switch
 - c. External flush mounted receptacle for three wire 115V plug, retro beam switch feed signal
 - d. External switch for motor stop
 - (1) stop motor for jams
 - (2) stop motor when timing clutch
3. FEED FROM PREDETERMINED COUNTER
 - a. Plug for PDC available on all 496 models
 - b. Option switch for PDC when installed or capable of set to "0" with auto reset
 - c. Auto reset select switch outside electrical door
 - d. External reset from other equipment
 - (1) external receptacle for reset signal
4. MISSFEED AND/OR DOUBLE DETECTION
 - a. Missfeed indicator light
 - b. Double detection indicator light
 - c. Optional stop feed and external equipment stop
 - d. Optional auto reset for light indicator
 - e. External switch for these options

4 496 FEEDER ORDER CHART

MAX PRODUCT WIDTH:

- ☐ 11 INCHES
- ☐ 14 INCHES (KIT REQ'D)
- ☐ 16 INCHES (KIT REQ'D)
- ☐ 18 INCHES (KIT REQ'D)
- ☐ OTHER: _____

MAX PRODUCT LENGTH:

- ☐ 9 INCHES
- ☐ 14 INCHES
- ☐ OTHER: _____

MOTOR TYPE/PIECES PER HOUR:

- ☐ 4181 – 11,700 PPH
- ☐ 4180 – 17,500 PPH
- ☐ 4179 – 35,000 PPH

CUSTOMER SUPPLIED SIGNALS:

- ☐ YES, SEND PRINTS
- ☐ NO

FEEDER FEED SIGNAL:

- ☐ SINGLE FEED
 - ☐ CAM SWITCH
 - ☐ BEAM SWITCH
- ☐ MULTI-FEED
 - ☐ PREDET. COUNTER
 - ☐ OTHER: _____

OPTIONS:

- ☐ MISSFEED DETECTION
 - ☐ LIGHT
 - ☐ HORN
 - ☐ STOP CIRCUIT
- ☐ DOUBLE DETECT
 - ☐ LIGHT
 - ☐ HORN
 - ☐ STOP CIRCUIT
- ☐ EXTERNAL SPEED CONTROL

POWER:

- ☐ 110 VAC/5 Amp/60 Hz
- ☐ 220 VAC/3 Amp/60 Hz

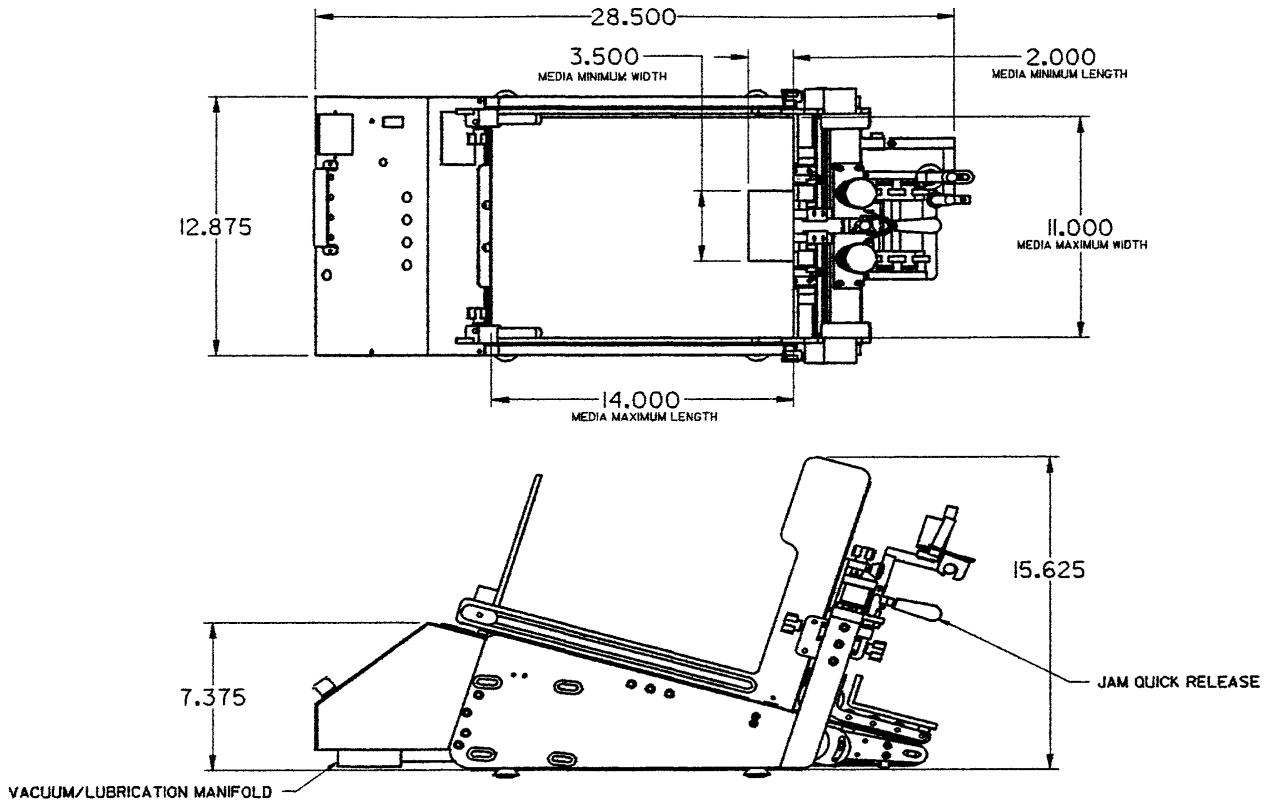
SPECIAL REQUIREMENTS:

SKETCH AREA:



KR 496 STANDALONE FEEDER

Kirk-Rudy, Inc. • 2700 Kennesaw Due West Road • Kennesaw, GA 30144-3532
Phone: (770) 427-4203 • Fax: (770) 427-4036



Features:

- ◆ Programmable logic controller
- ◆ Feed on demand
- ◆ Continuous feed
- ◆ Predetermined batch count
- ◆ Predetermined count stop
- ◆ Missfeed detection
- ◆ Double detection
- ◆ External stop
- ◆ Special Requests

Specifications:

- ◆ Power: 110 VAC
5 Amp
60 Hz
- ◆ Vacuum: 18" Hg , 2.5 CFM
- ◆ Motor Speeds:
(4181) – 11,700 PPH MAX
(4180) – 17,500 PPH MAX
(4179) – 35,000 PPH MAX
- ◆ Media Capacity:
Width: Minimum 3.50"
Maximum 11.00" *
Length: Minimum 2.00"
Maximum 14.00"
Thickness: Minimum .004"
Maximum .25"

*Width extension kits available for: 14" wide media, 16" wide media, 18" wide media

**Specifications subject to change without notification

6 PARTS LIST AND DIAGRAMS

6.1 Parts List

See following page for Parts List.

6.2 Diagrams

DRAWING #	DESCRIPTION
SP49600	Assy, 496 Standalone Feeder
537165-01	Assy, Bridge
536868-01	Assy, Outfeed Bearing RH
536869-01	Assy, Outfeed Bearing LH
538003-01	Assy, Beamswitch Bracket
537166-01	Assy, Frame
538040-01	Assy, Limit Clutch & Motor
538041-01	Assy, Clutch
538042-01	Assy, 496 Knob
537167-01	Assy, Tabletop
SP25751-A	Assy, Block One Way Roller
537168-01	Assy, Outfeed Belt
538001-01	Assy, Side Guide RH
538002-01	Assy, Side Guide LH
538011-01	Assy, Vacuum
500735-A	Assy, Vacuum Rod
538009-01	Assy, Vacuum Body
533180-01	Assy, Connecting Rod
538043-01	Assy, 496 Elect. Box
SP49662	Wlmt, 496 Electrical Box

496 PARTS MANUAL
ASSY, 496 STANDALONE FEEDER

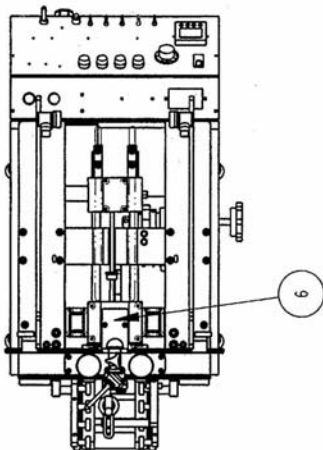
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PAGE 1

ITEM#	QTY	PART#	DESCRIPTION
1	4	100104	BUSHING, SL.500ID.625OD.750LG
2	1	100131	BUSHING, SL.250ID.375OD1.250LG
3	4	100147	BUSHING, SL.500ID.625OD1.250LG
4	2	101100	BEARING, ONEWAY .375
5	1	102112	KNOB, PURCHASED
6	1	102114	KNOB
7	1	102119	KNOB
8	5	102131	KNOB
9	1	102206	COLLAR .250
10	2	102225	COLLAR .250
11	4	102700	SPRING, COIL
12	2	102701	SPRING
13	8	103105	BEARING, FLAT .250 ID .750 OD
14	6	103106	BEARING, FLAT .375
15	2	103110	BEARING, FLAT .625
16	1	103500	BEARING - ROD END
17	2	103803	BEARING, HUB .500
18	2	103804	BEARING, HUB .625
19	1	104011	CLUTCH, WARNER 405-20-005
20	1	104047	LIMITER, TORQUE MORSE 465703
21	2	104100	SNAPRING, .375
22	2	104400	BOLT - HEX HEAD
23	1	190604	NIPPLE, VACUUM LINE
24	1	190606	FITTING - 90 DEG 1/4 NPT
25	4	190696	LEG, LEVELING 1.5 IN LG
26	1	190733	CLAMP, QUICK RELEASE
27	3	190861	ADAPTOR, STRAIGHT
28	1	200004	PDC, REDLION COUNTER C48CB
29	1	201055	SWITCH, PROXIMITY 103SR13A2
30	5	201069	SWITCH, TS500 SPDT
31	1	201118	SWITCH, TOGGLE 111-16-73 CARLINGTON
32	1	201132	SWITCH, LIGHTED
33	1	201156	SWITCH, PUSHBUTTON N.O. 4001 GRAYHILL
34	1	201512	RECEPTACLE, FLANGED TWIST 2 PIN
35	1	201528	RECEPTACLE, FLANGED TWIST 3 PIN
36	1	201533	PLUG, FLANGED TWIST 2 PIN
37	1	201537	RECEPTACLE, FLANGED TWIST 2 PIN
38	4	209006	HOLDER, PANEL MT FUSE HKP BUSSMAN
39	1	209016	KNOB, POT
40	1	500735	ROD - PUSH
41	2	500737	WASHER - BUMPER
42	1	500738	SPRING - VALVE
43	1	500739	BLOCK - PUSHER
44	1	500740	PLATE - VACUUM
45	1	500751	YOKE - FEEDER CRANK
46	2	500760	LIFTER- FEEDER PUSHER
47	2	500762	PLATE-FEEDER PUSHER BOTTOM
48	2	500771	CLIP-SIDE GUIDE
49	2	500775	PLATE-FEEDER PUSHER TOP
50	2	500807	NUT - LOCK
51	1	501629	CLAMP, GUIDE STRIP
52	1	502170	SHAFT, GATE ADJUSTING

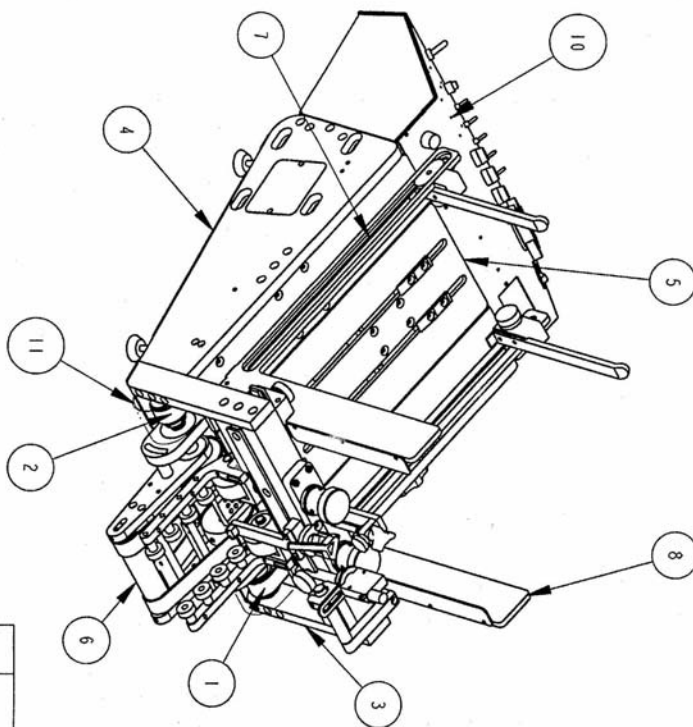
53	1	502232	BLOCK, GATE BLADE
54	1	502234	BLADE, GATE
55	2	502261	UPPER FEED ROLLER
56	1	508594	POST, OPENER / JUMBO
57	1	104047-1	SPRING, DISK MORSE 100503
58	1	104047-2	BUSHING MORSE 604007
59	2	106287-1	BELT, FLAT .75 X 14
60	1	108908-2	BELT, FLAT 240L075
61	1	108939-3	BELT, FLAT 300L075
62	1	200169-2	MOTOR, BODINE 4181
63	1	200323-1	STRAIN RELIEF
64	1	201505-1	PLUG, FLANGED TWIST 3 PIN
65	1	202261-5	BEAMSWITCH, RETROREFLECTIVE
66	1	202267-4	MODULE, BANNER CMSRA
67	1	202268-1	SENSOR, EMITTER BANNER LR300
68	1	202269-1	SENSOR, RECEIVER BANNER PR300
69	4	209006-2	CAP, FUSE
70	1	209204-3	LENS, RED LIGHT
71	1	209204-6	LENS, WHITE LIGHT
72	1	500735-A	ASSY, VACUUM ROD
73	2	500760-A	ASSY, LIFTER FEEDER PUSHER
74	4	500799-6	STUD, BRIDGE (LONG)
75	2	500809-1	THREADED SLEEVE, TOP ROLLERS
76	2	500812-2	KNOB, ROLLER ADJUSTMENT
77	2	501057-1	ROLLER
78	1	501374-3	RING, MAGNET MOUNT
79	1	502211-C	PLATE, VACUUM FEEDER DEEP
80	1	502229-1	LEVER, FEEDER CRANK
81	2	502233-1	GIB
82	2	502236-1	PLUNGER, FEED ROLLER
83	2	502272-1	SHAFT, UPPER FEED ROLLERS
84	1	532792-01	BRACKET, PROX SWITCH MNT
85	1	533180-01	ASSY, CONNECTING ROD
86	2	533194-01	ASSY, ONEWAY ROLLER
87	1	534209-03	BAR, SENSOR MOUNT
88	1	534210-02	BAR, SENSOR MOUNT UPPER
89	1	536868-01	ASSY, OUTFEED BEARING RH
90	1	536869-01	ASSY, OUTFEED BEARING LH
91	1	537165-01	ASSY, BRIDGE
92	1	537166-01	ASSY, FRAME
93	1	537167-01	ASSY, TABLETOP
94	1	537168-01	ASSY, OUTFEED BELT
95	1	538001-01	ASSY, SIDE GUIDE RH
96	1	538002-01	ASSY, SIDE GUIDE LH
97	1	538003-01	ASSY, BEAMSWITCH BRACKET
98	1	538009-01	ASSY, VACUUM BODY
99	1	538011-01	ASSY, VACUUM
100	1	538040-01	ASSY, LIMIT CLUTCH & MOTOR
101	1	538041-01	ASSY, CLUTCH
102	1	538042-01	ASSY, 496 KNOB
103	1	538043-01	ASSY, 496 ELECT. BOX
104	2	SP25751	BLOCK, ONE WAY ROLLER
105	1	SP45610	BRACKET, ROD END

106	2	SP45613	ROLLER, LOWER FEED
107	1	SP45639	SHAFT, CRANK ARM
108	2	SP45659	PLATE, ADJUSTING
109	1	SP49602	PLATE, LH FRAME
110	1	SP49604	BAR, BRIDGE SUPP
111	1	SP49606	BAR, SHUTTLE MOUNT
112	1	SP49607	TABLETOP, SHUTTLE
113	1	SP49608	TOP PLATE
114	4	SP49615	SPACER, MOTOR
115	1	SP49617	SPACER, CLUTCH
116	1	SP49618	SHAFT, ROLLER DRIVE
117	1	SP49619	SHAFT, SHUTTLE DRIVE
118	1	SP49620	SPACER
119	1	SP49623	PULLEY, 22L075 CLUTCH
120	2	SP49625	COVER
121	1	SP49627	BRACKET, MISFEED
122	2	SP49629	GUIDE, PAPER
123	1	SP49630	BLOCK, REAR SUPPORT
124	2	SP49631	BLOCK, TABLETOP SUPP
125	2	SP49633	SHAFT, SHUTTLE SUPP
126	1	SP49652	SHAFT, HANDSHAFT
127	1	SP49653	PIN, HANDWHEEL SHAFT
128	1	SP49655	BRACKET, WIRING MNT
129	2	SP49656	BRACKET, ELECT. BOX
130	1	SP49660	BRACKET, DOUBLE DETECTOR
131	1	SP49662	WLMT, 496 ELECTRICAL BOX
132	2	SP49667	PULLEY, 10L075
133	2	SP49670	ARM, OUTFEED BEARING
134	2	SP49671	BLOCK, SPRING SUPPORT
135	1	SP49672	PLATE, QUICK RELEASE
136	1	SP49674	BAR, SENSOR BRACKET
137	2	SP49675	BAR, TOP SLIDE
138	1	SP49676	RAIL, TOP SENSOR SUPPORT
139	2	SP49677	SPACER, ARM ADJ
140	8	SP49678	SPACER, OUTFEED BRG
141	1	SP49680	BLOCK, QUICK RELEASE
142	2	SP49681	YOKE
143	1	SP49688	PLATE, COVER
144	1	SP49689	KEY, LIMIT CLUTCH
145	1	SP49690	PULLEY, LIMIT CLUTCH
146	2	SP25751-1	SHAFT, ONE WAY
147	2	SP25751-A	ASSY, BLOCK ONE WAY ROLLER
148	1	SP45604-1	VACUUM BODY
149	1	SP45611-L	ARM, OUTFEED BELT LH
150	1	SP45611-R	ARM, OUTFEED BELT RH
151	1	SP45612-2	GUIDE, BELT
152	1	SP45614-1	ROLLER, TAKEUP OUTFEED
153	1	SP45631-1	SHAFT, OUTFEED TAKEUP
154	2	SP45636-1	BEARING BLOCK
155	1	SP45658-L	BLOCK, REAR SUPPORT
156	1	SP45658-R	BLOCK, REAR SUPPORT
157	1	SP45660-L	GUIDE, REAR
158	1	SP45660-R	GUIDE, REAR

ITEM QTY	PART #	DESCRIPTION
1	108908-2	BELT, FLAT 240L075
2	108939-3	BELT, FLAT 300L075
3	537165-01	ASSY, BRIDGE
4	537166-01	ASSY, FRAME
5	537167-01	ASSY, TABLETOP
6	537168-01	ASSY, OUTFEED BELT
7	538001-01	ASSY, SIDE GUIDE RH
8	538002-01	ASSY, SIDE GUIDE LH
9	538011-01	ASSY, VACUUM
10	538043-01	ASSY, 496 ELECT. BOX
11	2	SP49625 COVER

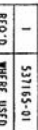


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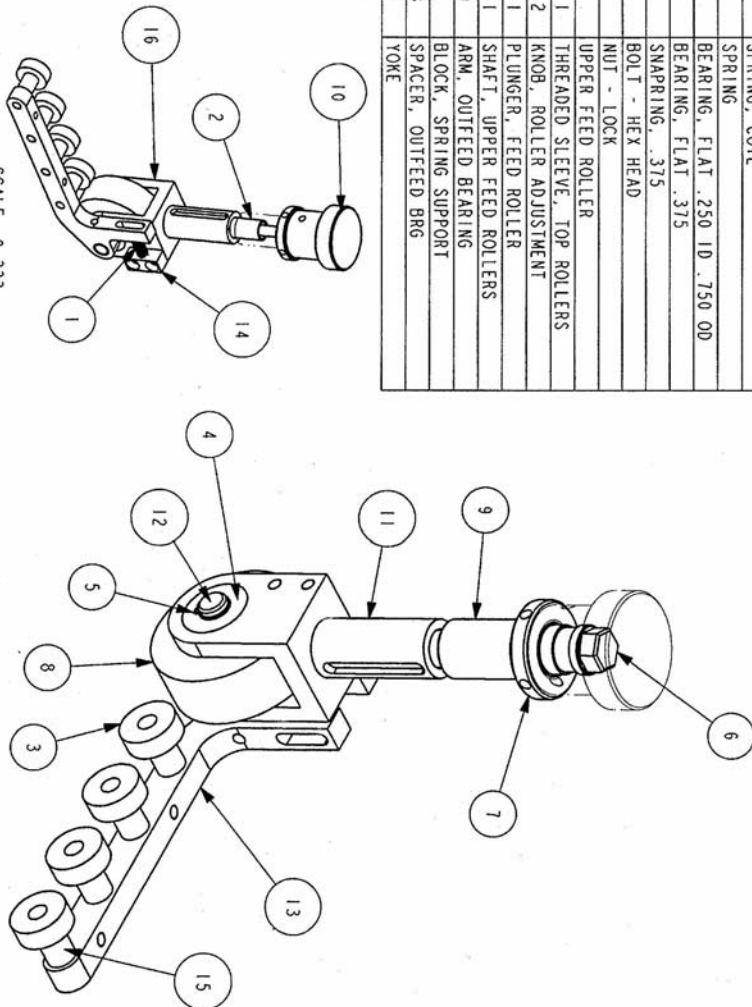


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CHECKED BY: 15-DEC-99	DATE: 15-DEC-99	.01 .005 .5	.01 .005 .5	KIRK - RUDY, INC. KENNESAW, GA 30144 USA		496	ASSY, 496 STANDALONE FEEDER	SP49600
FINISH: N/A	REMOVAL OF DIMENSIONS UNLESS OTHERWISE NOTED	DO NOT SCALE - WORK TO DIMENSIONS ONLY		N/A	10F1	496	ASSY, 496 STANDALONE FEEDER	SP49600

REV NO	DATE	DESCRIPTION	ECN NO	BY
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36868-01

ITEM QTY	PART #	DESCRIPTION
1	102700	SPRING, COIL
2	102701	SPRING
3	103105	BEARING, FLAT .250 ID .750 OD
4	103106	BEARING, FLAT .375
5	104100	SNAPRING, .375
6	104400	BOLT - HEX HEAD
7	500807	NUT - LOCK
8	502261	UPPER FEED ROLLER
9	500809-1	THREADED SLEEVE, TOP ROLLERS
10	500812-2	KNOB, ROLLER ADJUSTMENT
11	502236-1	PLUNGER, FEED ROLLER
12	502272-1	SHAFT, UPPER FEED ROLLERS
13	SP49670	ARM, OUTFEED BEARING
14	SP49671	BLOCK, SPRING SUPPORT
15	SP49678	SPACER, OUTFEED BRG
16	SP49681	YOKE

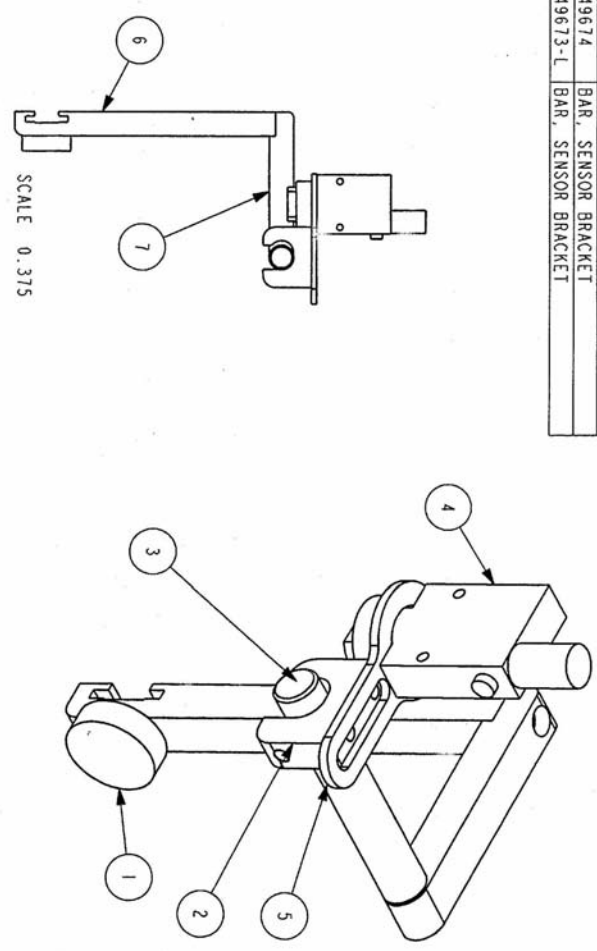


QUANTITY:	SCALE:	DIMENSIONAL TOLERANCES:	MATERIAL:	THIRD ANGLE PROJECTION:	PROPRIETARY AND CONFIDENTIAL:	REVISION:
AYB	0.625	UNLESS OTHERWISE NOTED	N/A		PROPRIETARY AND CONFIDENTIAL	1 537165-01
DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:
15-Oct-99	15-Oct-99	15-Oct-99	15-Oct-99	15-Oct-99	15-Oct-99	15-Oct-99
MAKER:	MAKER:	MAKER:	MAKER:	MAKER:	MAKER:	MAKER:
m	m	m	m	m	m	m
REMOVE ALL BURS AND	REMOVE ALL BURS AND	REMOVE ALL BURS AND	REMOVE ALL BURS AND	REMOVE ALL BURS AND	REMOVE ALL BURS AND	REMOVE ALL BURS AND
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ALL DIMENSIONS ARE	ALL DIMENSIONS ARE	ALL DIMENSIONS ARE	ALL DIMENSIONS ARE	ALL DIMENSIONS ARE	ALL DIMENSIONS ARE	ALL DIMENSIONS ARE
DO NOT SCALE - WORK	DO NOT SCALE - WORK	DO NOT SCALE - WORK	DO NOT SCALE - WORK	DO NOT SCALE - WORK	DO NOT SCALE - WORK	DO NOT SCALE - WORK
TO DIMENSIONS ONLY	TO DIMENSIONS ONLY	TO DIMENSIONS ONLY	TO DIMENSIONS ONLY	TO DIMENSIONS ONLY	TO DIMENSIONS ONLY	TO DIMENSIONS ONLY
FINISH:	FINISH:	FINISH:	FINISH:	FINISH:	FINISH:	FINISH:
N/A	N/A	N/A	N/A	N/A	N/A	N/A
SHEET NO:	SHEET NO:	SHEET NO:	SHEET NO:	SHEET NO:	SHEET NO:	SHEET NO:
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DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:
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ASSY, OUTFEED BEARING LH	ASSY, OUTFEED BEARING LH	ASSY, OUTFEED BEARING LH	ASSY, OUTFEED BEARING LH	ASSY, OUTFEED BEARING LH	ASSY, OUTFEED BEARING LH	ASSY, OUTFEED BEARING LH
536869-01	536869-01	536869-01	536869-01	536869-01	536869-01	536869-01

KIRK - RUDY, INC.
KENNESAW, GEORGIA

538003-01

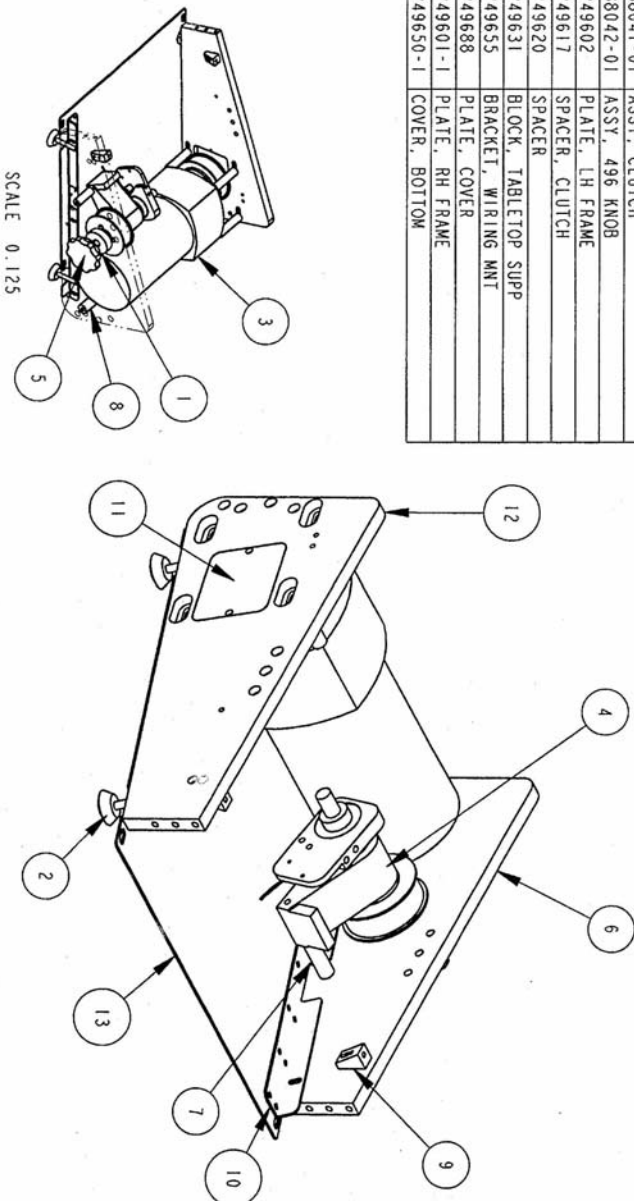
ITEM QTY	PART #	DESCRIPTION
1	102131	KNOB
2	501629	CLAMP, GUIDE STRIP
3	508394	POST, OPENER / JUMBO
4	202261-5	BEAMSWITCH, RETROREFLECTIVE
5	SP49627	BRACKET, M/SPEED
6	SP49674	BAR, SENSOR BRACKET
7	SP49673-L	BAR, SENSOR BRACKET



SCALE 0.375

DRAWN BY: AYB		SCALE: 0.750		DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL: N/A		THIRD ANGLE PROJECTION		PROPERTY AND CONFIDENTIAL MAY 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	
CHECKED BY: 18-Oct-99		DATE: 18-Oct-99		REMOVE ALL DIMENSIONS UNLESS OTHERWISE NOTED		N/A		N/A		MODEL: 496		TITLE: ASSY, BEAMSWITCH BRACKET	
TACKLED BY: M		DO NOT SCALE - WORK TO DIMENSIONS ONLY		FINISH: N/A		SHEET NO: 1 OF 1		DRAWING NO: 538003-01		REV: 0		WHERE USED: 537155-01	

ITEM QTY	PART #	DESCRIPTION
1	103803	BEARING, HUB .500
2	190696	LEG, LEVELING 1.5 IN LG
3	538040-01	ASSY, LIMIT CLUTCH & MOTOR
4	538041-01	ASSY, CLUTCH
5	538042-01	ASSY, 496 KNOB
6	SP49602	PLATE, LH FRAME
7	SP49617	SPACER, CLUTCH
8	SP49620	SPACER
9	SP49631	BLOCK, TABLETOP SUPP
10	SP49655	BRACKET, WIRING MNT
11	SP49688	PLATE, COVER
12	SP49601-1	PLATE, RH FRAME
13	SP49650-1	COVER, BOTTOM



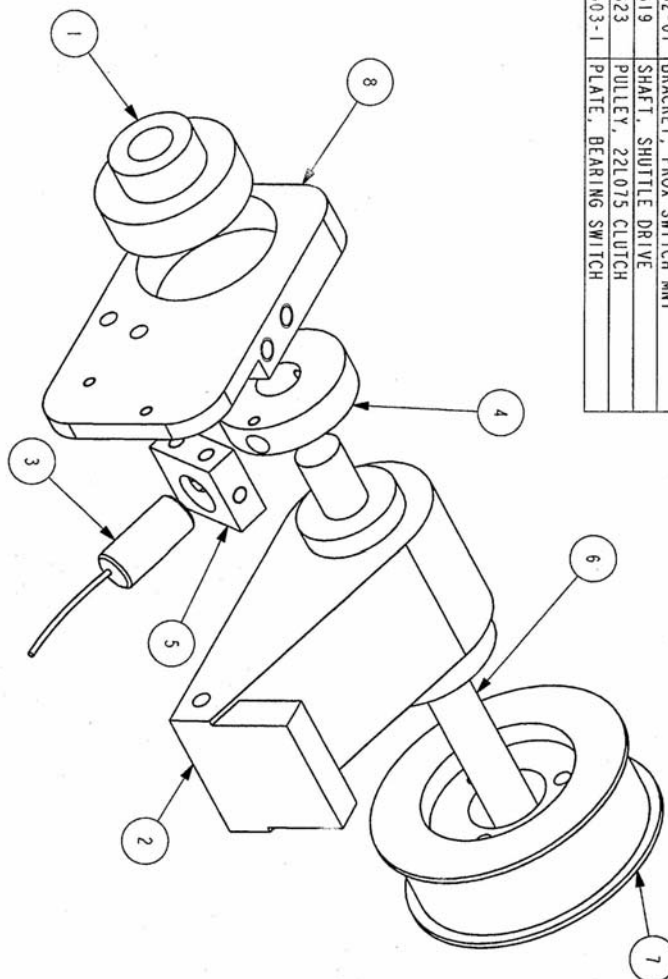
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AYB	0.250	.01	.005	.005	N/A	MODEL:	496	TITLE:	ASSY, FRAME
CHECKED BY:	DATE:	REMOVE ALL BURGERS AND SHARP EDGES UNLESS OTHERWISE NOTED		N/A		NO PROJECTION OF THIS DRAWING MAY BE MADE WITHOUT THE EXPRESS WRITTEN PERMISSION OF KENNESAW, GA 30144 USA		KIRK - RUDY, INC. KENNESAW, GEORGIA	
TRACED BY:	MASTER:	DO NOT SCALE - WORK TO DIMENSIONS, ONLY		N/A		SHEET NO. 1 OF 1		537166-01	

1	SP49600	WHERE USED
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DRAWING 1

538041-01

ITEM QTY	PART #	DESCRIPTION
1	103803	BEARING, HUB .500
2	104011	CLUTCH, WARNER 405-20-005
3	201055	SWITCH, PROXIMITY 103SR13A2
4	501374-3	RING, MAGNET MOUNT
5	532792-01	BRACKET, PROX SWITCH MNT
6	SP49619	SHAFT, SHUTTLE DRIVE
7	SP49623	PULLEY, 22L075 CLUTCH
8	SP49603-1	PLATE, BEARING SWITCH

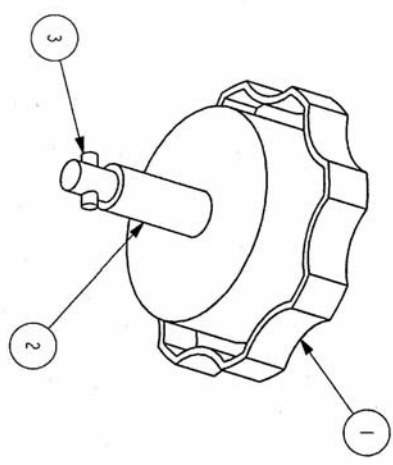


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CHECKED BY: 16-Dec-99		DATE		.01 .005 .5		N/A		496		TITLE: ASSY, CLUTCH		538041-01									
TACKLED BY: M		DO NOT SCALE - WORK TO DIMENSIONS ONLY		N/A		N/A		10F1		DRAWING 1											

1	537166-01
REV'D	WHERE USED

538042-01

ITEM/QTY	PART #	DESCRIPTION	REV NO	DATE	DESCRIPTION	ECN NO	BY
1	102112	KNOB, PURCHASED					
2	SP49652	SHAFT, HANDSHAFT					
3	SP49653	PIN, HANDWHEEL SHAFT					



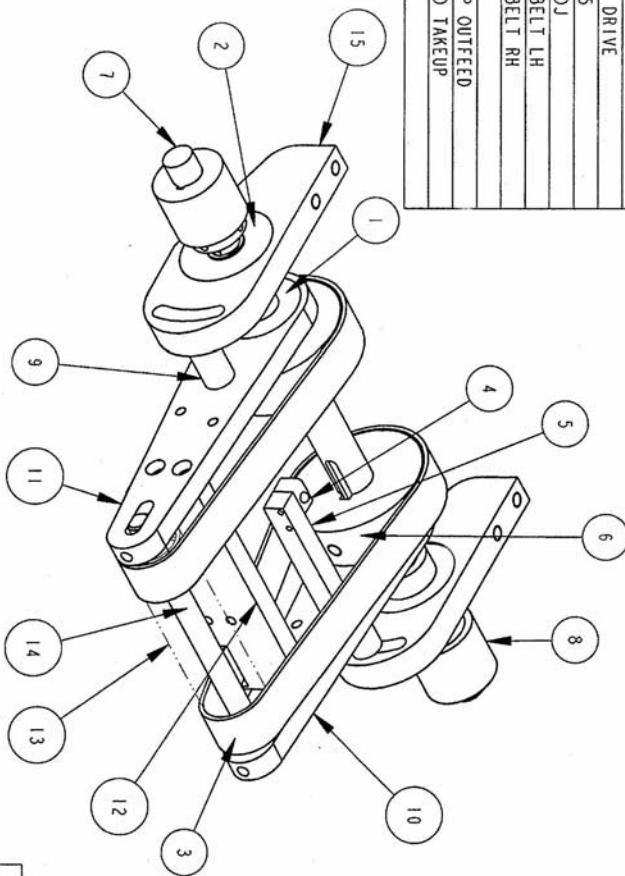
BRN BY:	SCALE	DIMENSIONAL TOLERANCES	MATERIAL:	THIRD ANGLE PROJECTION	PROPERTY AND CONFIDENTIAL	ECO D	WHERE USED
AYB	1.000	UNLESS OTHERWISE NOTED	N/A		IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF KIRK-0001, INC. KENNESAW, GA 30144 USA	1	537165-01
CHG'D BY:	DATE	.001 .002 .005	RELT TOL:	MODEL:	FIG:		
	16-Dec-99			496			
TRAC'D BY:	MASTER	REMOVE ALL BURS AND OTHER DEFECTS. ALL DIMENSIONS ARE FINISHED DIMENSIONS. DO NOT SCALE - WORK TO DIMENSIONS ONLY.	FINISH:	SHEET NO.	QUANTITY		
	M		N/A	10F1	ASSY, 496 KNOB		
					538042-01		

KIRK - RUDY, INC.
KENNESAW, GEORGIA

537168-01

537168-01

ITEM QTY	PART #	DESCRIPTION
1	2	103110 BEARING, FLAT .625
2	2	103804 BEARING, HUB .625
3	2	106287-1 BELT, FLAT .75 X 14
4	1	202268-1 SENSOR, EMITTER BANNER LR300
5	1	534209-03 BAR, SENSOR MOUNT
6	2	SP45613 ROLLER, LOWER FEED
7	1	SP45618 SHAFT, ROLLER DRIVE
8	2	SP45667 PULLEY, 10L075
9	2	SP45677 SPACER, ARM ADJ
10	1	SP45611-L ARM, OUTFEED BELT LH
11	1	SP45611-R ARM, OUTFEED BELT RH
12	1	SP45612-2 GUIDE, BELT
13	1	SP45614-1 ROLLER, TAKEUP OUTFEED
14	1	SP45631-1 SHAFT, OUTFEED TAKEUP
15	2	SP45636-1 BEARING BLOCK



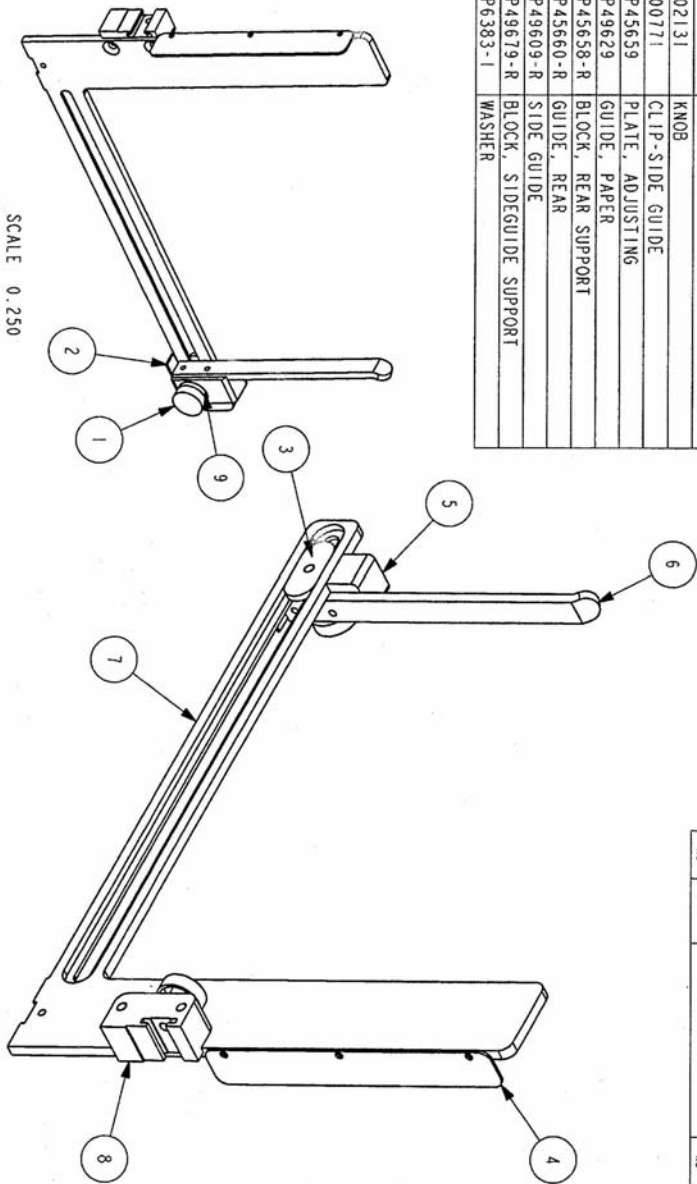
DESIGN BY:	SCALE:	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL:	THIRD ANGLE PROJECTION	PROPERTY AND CONFIDENTIALITY STATEMENT	KIRK - RUDY, INC. KENNESAW, GEORGIA
AYB	0.500	.01	.005	N/A	496	EXPRESS OF KIRK-RUDY, INC. KENNESAW, GA 30144 USA	
CHECKED BY:	DATE:	REMOVE ALL BORES AND SHAPE EDGES UNLESS OTHERWISE NOTED		FINISH:	MODEL:	TITLE:	ASSY, OUTFEED BELT
	16-DEC-99	ALL DIMENSIONS ARE FINISHED DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY		N/A	10F1	SHAWING 1	
TRAINED BY:	MASTER:						537168-01

1	SP45650
REC'D	WHERE USED

538001-01

538001-01

ITEM QTY	PART #	DESCRIPTION
1	102131	KNOB
2	1500771	CLIP-SIDE GUIDE
3	SP45659	PLATE, ADJUSTING
4	SP49629	GUIDE, PAPER
5	SP45658-R	BLOCK, REAR SUPPORT
6	SP45660-R	GUIDE, REAR
7	SP49609-R	SIDE GUIDE
8	SP49679-R	BLOCK, SIDEGUIDE SUPPORT
9	SP6383-1	WASHER



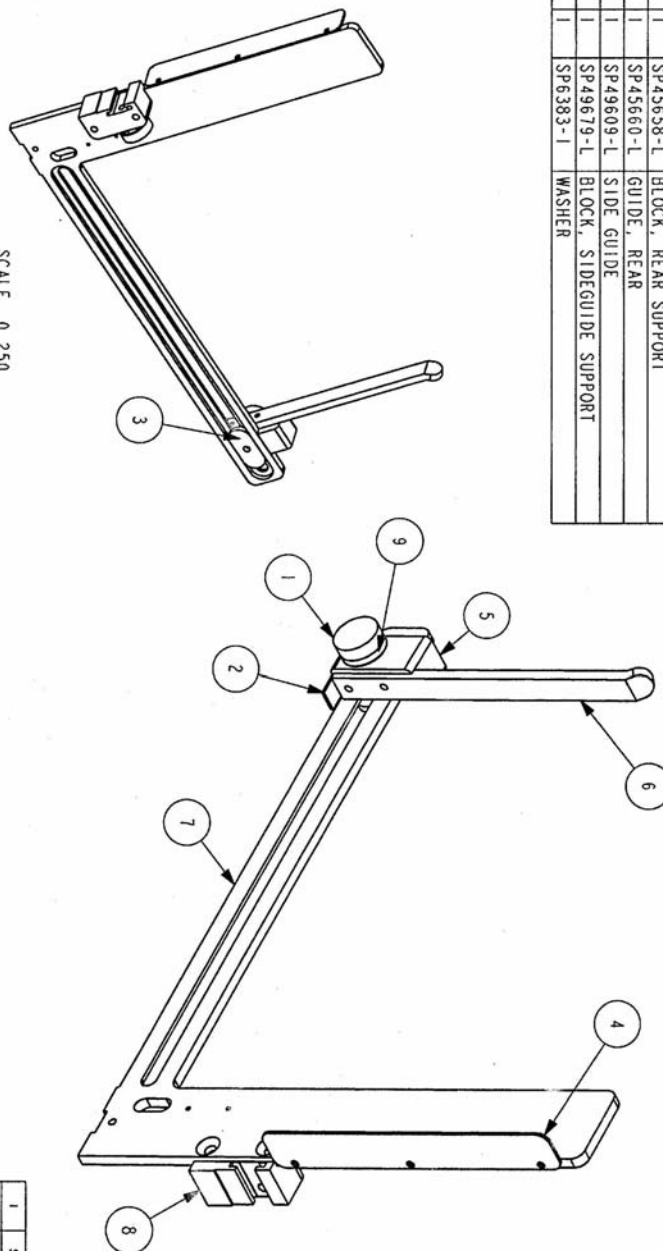
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AYB	0.375	UNLESS OTHERWISE NOTED	N/A	N/A	NO PORTION OF THIS DRAWING					
CHECKS BY:	DATE:	ALL DIMENSIONS ARE	DATE TESTED:	MODEL:	EXPRESS WRITTEN PERMISSION					
	18-Oct-99	SHARP EDGES UNLESS	N/A	496	RENEWAL, ON 01/14/01					
TRACED BY:	MASTER:	ALL DIMENSIONS ARE	FINISH:	DATE:	TITLE:					
	m	SHARP EDGES UNLESS	N/A	10/01	ASSY, SIDE GUIDE RH					
		NOTED								
		NO DIMENSIONS ARE								
		TO DIMENSIONS ONLY								




KIRK - RUDY, INC.
KENNESAW, GEORGIA

1	SP49600
REV D	WHERE USED

ITEM QTY	PART #	DESCRIPTION
1	2	1021.31
1	500771	KNOB
2		CLIP-SIDE GUIDE
3	SP45659	PLATE, ADJUSTING
4	SP49629	GUIDE, PAPER
5	SP45658-L	BLOCK, REAR SUPPORT
6	SP45660-L	BLOCK, REAR
7	SP49609-L	GUIDE, REAR
8	SP49679-L	SIDE GUIDE
9	SP4383-1	BLOCK, SIDEGUIDE SUPPORT
		WASHER

REV NO	DATE	DESCRIPTION	ECON NO	BY
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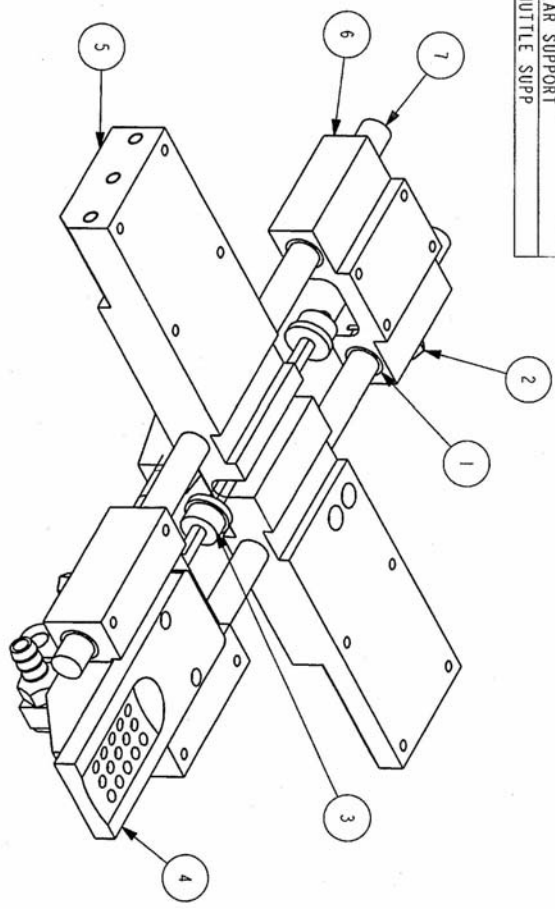


GRADE BY:	SCALE	DIMENSIONAL TOLERANCES	MATERIAL:	THIRD ANGLE PROJECTION	 KIRK - RUDY, INC. KENNESAW, GEORGIA
AYB	0.375	UNLESS OTHERWISE NOTED	N/A	 	
CHECKED BY:	DATE	.01 .03 .05 .5 XX XX XX AM	N/A REEL THICK:	MODEL:	TITLE:
	18-Oct-99	RADIUS ALL ROUNDS AND SQUARE EDGES UNLESS OTHERWISE NOTED FIT IN SURF DIMENSIONS DO NOT SCALE - WORK TO DIMENSIONS ONLY	N/A	496	ASSY, SIDE GUIDE LH
DRAWN BY:	MAILED		N/A	SHEET NO. 1 OF 1	538002-01

538011-01

ITEM QTY	PART #	DESCRIPTION
1	4	BUSHING, SL. 5001D. 6250D. 750L6
2	1	ADAPTOR, STRAIGHT
3	1	500735-A ASSY, VACUUM ROD
4	1	538009-01 ASSY, VACUUM BODY
5	1	SP49606 BAR, SHUTTLE MOUNT
6	1	SP49630 BLOCK, REAR SUPPORT
7	2	SP49633 SHAFT, SHUTTLE SUPP

REV NO	DATE	DESCRIPTION	ECN NO	BY
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DATE BY: AYB	SCALE: 0.500	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL: N/A		THIRD ANGLE PROJECTION		PROPERTY AND CONFIDENTIALITY NOTICE: NO PORTION OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM WITHOUT THE EXPRESS WRITTEN PERMISSION OF KIRK - RUDY, INC. KENNESAW, GA 30144 USA		KIRK - RUDY, INC. KENNESAW, GEORGIA	
CHECKED BY:	DATE: 09-Nov-99	.01	.005	.5	HEAT TREAT:	WORK: 496	TITLE: ASSY, VACUUM	538011-01			
THICK BY:	DATE: M	REMOVE ALL BURRS AND SHARP EDGES UNLESS OTHERWISE NOTED		FINISH: N/A		SHEET NO: 1 OF 1		DRAWING #			

1	SP49600
REC'D	WHERE USED

DRAWING #				500735-A			
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1	2	102225					
2	1	500735					
3	2	500737					

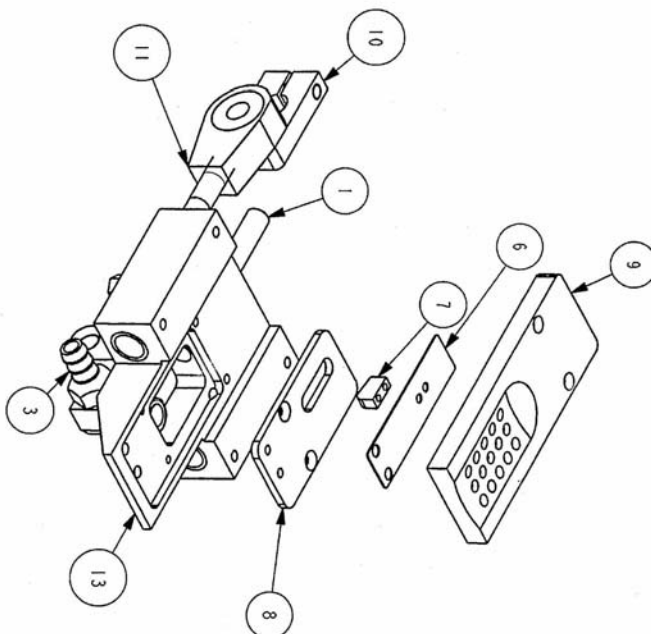
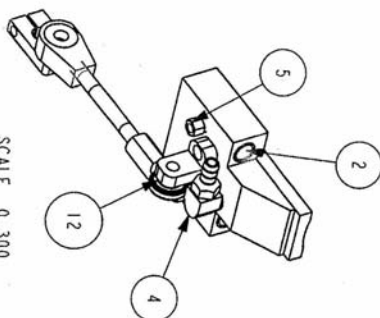
DRAWN BY: TUG CHECKED BY: DATE: 19-Jan-98 TRACKED BY: MASTER <i>m</i>	SCALE: 1.000 DATE: 19-Jan-98	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED .01 .005 .03 .125 .005 .03 .01 .005 .03 .125 .005 .03	MATERIAL: NOTED HEAT TREAT: NONE FINISH: NOTED	THIRD ANGLE PROJECTION MODEL: 324 SHEET NO: 1 OF 1	PROPRIETARY AND CONFIDENTIAL NO PORTION OF THIS DRAWING MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT EXPRESS WRITTEN PERMISSION OF KIRK - RUDY, INC. KENNESAW, GA 30144 USA	KIRK - RUDY, INC. KENNESAW, GEORGIA	ASSY, VACUUM ROD 500735-A
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1	532689-01
REV'D	WHERE USED

538009-01

538009-01

ITEM QTY	PART #	DESCRIPTION
1	100131	BUSHING, SL. 2501D. 3750D1. 250LG
2	4	100147 BUSHING, SL. 5001D. 6250D1. 250LG
3	1	190604 NIPPLE, VACUUM LINE
4	1	190606 FITTING - 90 DEG 1/4 NPT
5	2	190861 ADAPTOR, STRAIGHT
6	1	500738 SPRING - VALVE
7	1	500739 BLOCK - PUSHER
8	1	500740 PLATE - VACUUM
9	1	502211-C PLATE, VACUUM FEEDER DEEP
10	1	502229-1 LEVER, FEEDER CRANK
11	1	533180-01 ASSY, CONNECTING ROD
12	1	SP45610 BRACKET, ROD END
13	1	SP45604-1 VACUUM BODY



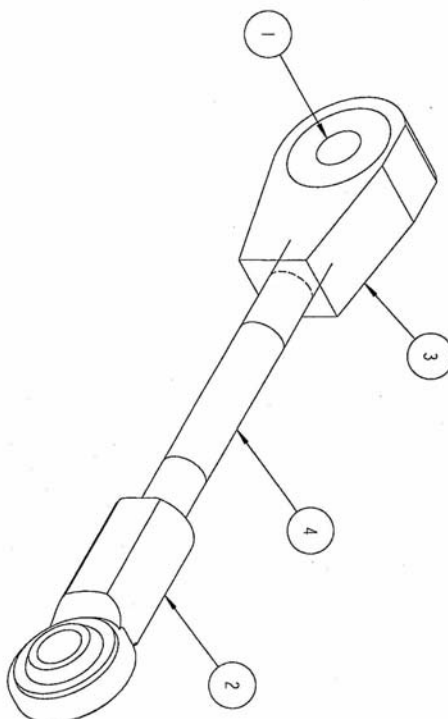
1	53116-01
REC'D	WHICH USED

DRAWN BY: AYB	SCALE: 0.500	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED .01 .005 .5	MATERIAL: N/A	THIRD ANGLE PROJECTION 	PROPRIETARY AND CONFIDENTIAL THIS DRAWING IS THE PROPERTY OF KIRK - RUDY, INC. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF KIRK - RUDY, INC. KENNESAW, GA 30147 USA	MODEL: 496	SHEET NO.: 10F1	DRAWING 8 ASSY, VACUUM BODY
CHECKED BY: 01-Nov-99	DATE: 01-Nov-99	REMOVED ALL DIMENSIONS AND FINISHED DIMENSIONS ARE DO NOT SCALE - WORK TO DIMENSIONS ONLY	FINISH: N/A	FINISH: N/A	KIRK - RUDY, INC. KENNESAW, GEORGIA	TITLE: ASSY, VACUUM BODY	538009-01	

ITEM QTY	PART #	DESCRIPTION
1	103106	BEARING, FLAT .375
2	103500	BEARING - ROD END
3	500751	YOKE - FEEDER CRANK
4	SP45639	SHAFT, CRANK ARM

REV NO	DATE	DESCRIPTION	ECN NO	BY
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DRAWING # 533180-01

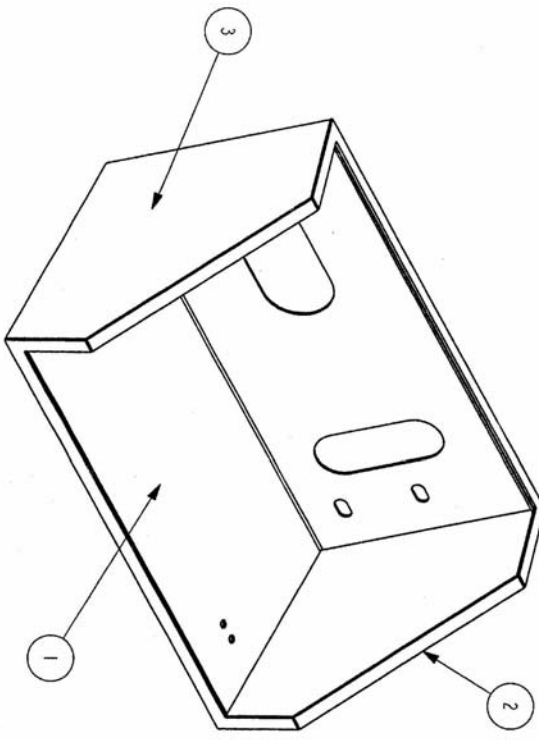


DRAW BY: T J G		SCALE: 1.000	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL: NOTED		THIRD ANGLE PROJECTION		PROPERTY AND CONFIDENTIALITY NOTICE: THIS DRAWING IS THE PROPERTY OF KIRK - RUDY, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF KIRK - RUDY, INC. KENNESAW, GA 30144 USA		REC'D: WHILE USED	
CHECKED BY:	DATE: 11-Mar-98		.12	.25	.5	RELT TOLER: NONE	MOVL: 486	INTL: ASSY, CONNECTING ROD	KIRK - RUDY, INC. KENNESAW, GEORGIA			
TACED BY:	MASTER: M		REMOVE ALL BURS AND SHARP EDGES UNLESS OTHERWISE NOTED			FINISH: NOTED	SHEET NO. 1 OF 1	DRAWING # 533180-01				
			DO NOT SCALE - WORK TO DIMENSIONS ONLY									

ITEM QTY	PART #	DESCRIPTION
1	535020-02	BOX, ELECT. FRAME
2	538044-01	PANEL, EDGE
3	SP49662-3	PANEL, SIDE

REV NO	DATE	DESCRIPTION	ECN NO	BY
1	15-DEC-99	REORAN IN PRO/E	6421	ATB

DRAWING 1
SP49662



DATE BY:	SCALE	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		MATERIAL:	THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL THIS DRAWING IS THE PROPERTY OF KIRK - RUDY, INC. IT IS TO BE USED IN THE MANUFACTURE OF THE ITEM SPECIFIED HEREON ONLY. KIRK - RUDY, INC. KIRKSAW, GA 30144 USA	1	538043-01
A KEY	0.333	.25	.125	N/A		 KIRK - RUDY, INC. KIRKSAW, GEORGIA	REC'D	WHERE USED
DATE BY:	DATE	.125	.062	N/A			1	538043-01
23-MAR-95	23-MAR-95	.125	.062	N/A			1	538043-01
DATE BY:	SCALE	DO NOT SCALE - WORK TO DIMENSIONS ONLY		FINISH	SHEET NO.	TITLE	SP49662	
MATERIAL	W			N/A	10F1	WLMT, 496 ELECTRICAL BOX		

7 ELECTRICAL SCHEMATICS AND PARTS

7.1 Electrical Component Descriptions

External Plug Inputs, Left to Right:

External Feed: An external signal will trigger a demand feed. External device can be either a 24 Vdc beamswitch or a cam switch. Contact closure will cause the demand feed.

Stop Input: Stops the 496 when lead machine stops. The 496 resumes running when the machine is removed. Note that a contact closure **stops** the 496, and the 496 resumes operation on a contact opening.

PDC Reset: Contact closure will reset the count on the Predetermined Counter (PDC).

Stop Output: The 496 stops the lead machine for an error condition. This contact will be closed for a run condition and open for a stop condition.

Switch Inputs:

The mode of operation will determine how many pieces and what trigger is required to initialize the feeding. The switch direction is left to right.

Continuous/Demand Mode: In continuous mode, the 496 will run continuously, stopping only for a stop signal or if an error is detected. In demand mode, a trigger is required and then one piece will feed out. Set the switch to enable the desired mode.

PDC Mode: In PDC mode, the 496 will feed out the number of pieces entered in the PDC. Once that value is reached, either an internal or external reset will initialize the PDC and another group of pieces will feed out. If the PDC mode is not desired, set this switch to the “OFF” position.

The 496 monitors feeding to assure you of the highest possible quality control. If missfeed or double detection is not desired (for example, during set-up), error detection can be bypassed.

Mode Selection: To set a feed mode, set the switches to:

<u>Mode</u>	<u>PDC Switch</u>	<u>Continuous/Demand</u>
PDC	On	Continuous
Continuous	Off	Continuous
Demand	Off	Demand

Missfeed Bypass: Missfeed monitors proper feeding. Placing the switch in the “BYPASS” position disables this feature. The missfeed detect lamp is red. If the error detect is disabled, the lamp will still indicate an error.

Double Detect Bypass: Double detect monitors multiple product feeding. Placing the switch in the “BYPASS” position disables this feature. The GAIN input sets the

double detect sensitivity. The double detect lamp is yellow. If the error detect is disabled, the lamp will still indicate an error.

Other Controls:

Reset: Pressing this button clears any corrected error conditions and enables feeding. The error conditions that require a reset are missfeed, double or no product detect.

Fuses:

See the accompanying schematic for fuse information.

Monitoring Devices:

Double Detector: An emitter below the belts puts out a light that is seen by the detector located above the belts. The double detector amplifier (yellow colored) is panel mounted in the control box. The GAIN input sets the double detect sensitivity. For other double detect settings, please see the accompanying schematic.

Beamswitch: This beamswitch monitors proper feeding and increments the PDC count. For other PDC information, please see the accompanying document.

No Product Beamswitch: Detects a low hopper. The hopper has to be refilled and the reset button pressed before feeding will be enabled.

Error Lamps:

There are two error lamps on the 496. The Double Detect (labeled D. Det.) lamp will turn on when a double detect occurs. The Missfeed lamp will turn on when a missfeed occurs. If either of these error conditions occur and the respective bypass is on, the light will turn on indicating an error. However, the 496 will continue to run. In addition to displaying missfeed and double errors, the lamps will also display low hopper and interlock errors. To summarize the error lights:

<i>Light</i>	<i>Continuous</i>	<i>Flashing</i>
Missfeed	Missfeed	Interlock
Double	Double	Low Hopper

When the 496 is powered up, a lamp test will be performed. The lamps will alternately flash for one second, beginning with the double detect. During this test, each lamp will flash three times.

Power Up Test:

When the 496 is powered up and the lamp test is complete, the missfeed lamp will continue to flash, indicating that the reset button must be pressed to reset the machine and enable feeding.

7.2 Wiring Diagrams

200 150 03 1x5	496 Shuttle Logic
200 150 01 1x3	220 Vac Power
200 150 02 1x1	220 Vac Power

7.3 Electrical Double Detection Unit Set-Up

The double detect switch settings are as follows:

1. Timing Logic Programming (large switch block):
 - A. On/Off Mode: Switches 1-7
 - B. N/O Output: Switch 8
 - C. Time Range: Switches 9-10

The switch settings are then:

Switch #	1	2	3	4	5	6	7	8	9	10
Position	On	On	On	Off	On	Off	On	On	On	On

2. Amplifier Programming:
 - A. Modulation frequency "A"
 - B. 1.5 millisecond response
 - C. Dark operate

The switch settings are then:

Switch #	1	2	3	4
Position	Off	Off	Off	Off

To set up the double detection, the proper gain needs to be set for the material to feed. Place two pieces of material under the double detector. If the input lamp is on, decrease the gain until the input lamp goes off. If the input lamp is off, increase the gain until the input lamp goes on. Then decrease the gain until the lamp goes off.

Once the gain has been set, remove one of the two pieces of material. The input lamp should go on. Insert and remove the second piece of material under the double detection and note the input. If the input lamp does not respond correctly, repeat the above procedure.

Do not attempt to perform double detection if there is a wide variation in the paper darkness. For example, if the double is set up on a section that doesn't contain dark ink, false doubles may be read if there is a thick dark colored stripe.

For further information on the Banner double detect, please refer to the accompanying Banner booklet.

7.4 Parts List

Item	Qty	Reference	Part #	Description	Man. #
1	1	Solenoid, 90 Vdc	104 011-1	Warner Clutch	Contact KR
2	2	LS1, LS2	190 100	Limit Switch	BZ-2RW82-A2
3	1	Predetermined C.	200 004	Predetermined C.	45610-400
4	1	MOTOR1	200 169-3	Motor, 1/4 HP, DC	4179
5	4	S3, S4, S5	201 069	Switch, SPDT	Contact KR
6	1	S2	201 118	Switch, Toggle	Contact KR
7	1	S1	201 132	Lighted Switch	1500R11E
8	1	PB1	201 156	Pushbutton Switch	Contact KR
9	3	BEAM1, BEAM2, BEAM3	202 261-5	Banner Beamswitch	SM312LVQD
10	1	Double Detect, 220 Vac	202 267-1	Banner Double Det	CD5RB
11	1	Emitter	202 268	Banner DD Emitter	SP12SEL
12	1	Receiver	202 269	Banner DD Receive	SP12RL
13	1	Time Delay R.	202 289	Time Delay Relay	CM1-110V
14	1	DC Motor Board	202 426-2	KB Motor Bd	KB MM-225D
15	1	Program. Control.	202 430	Allen Bradley PLC	100-SR-2345
17	1	F4	208 017	Fuse, 0.5 MDL	Contact KR
18	2	F2, F3	208 029	Fuse, 3.2 MDL	Contact KR
19	3	D1, D2, D3	208 523	Diode	1N4006
20	2	LGT_1, LGT_2, 240 Vac	209 062	Lamp Module	MicroS. RTW 2221
21	1	Filter, AC	209 064	Filter, AC	Contact KR
22	1	S6	201 070	Switch, DPDT	Contact KR
23	1	5 kOhm Pot.	204 318	Speed Pot	Contact KR
24	1	PDC Reset Socket	201 537	2 Pin Twist	Hubbell 7526

8 APPENDIX

(THIS PAGE LEFT BLANK FOR FUTURE REFERENCES)

[illegible]

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

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www.kirkkrudy.com