

Rapid-Air

Operating Instructions

200T Servo Feed CTL
Control Ver. 'C'



4601 Kishwaukee Street, Rockford, IL 61109
815.397.2578
www.rapidair.com

Thank you for purchasing a Rapid-Air Cut-to-Length (CTL) system. The system is configured from our proven line of servo feeds and stock cutters. Rapid-Air Corp. designed and built its first servo driven roll feed and cutter combination in 1994. As with the whole Rapid-Air product line there has been an ongoing program of product improvement.

Our roots are in stamping and our engineering expertise is extensive. Many of our earliest products remain in use today, in small shops and large factories worldwide. Some of these products are still manufactured, with only slight modifications to the original design allowing for modern manufacturing technologies to be used in their production.

All Rapid-Air products are built right here in our own U.S. factory. No inconsistent design, differing parts or sourcing problems. Just the same reliable quality, renowned support and lasting value you can always expect from Rapid-Air.

TABLE OF CONTENTS

Mechanical Specifications.....	2
Electrical Specifications.....	3
Mechanical Set-up.....	4-8
Servo Feed Operation.....	9-16
Troubleshooting.....	17
Flat Stock Cutter Operation.....	18
Warranty.....	19
Drawing Appendix	

MECHANICAL SPECIFICATIONS

CTL Max Material Width:

208T / FSC6	6" (152mm)
212T / FSC12	12" (304mm)
218T / FSC18	18" (457mm)
224T / FSC24	24" (609mm)

CTL Max Thickness Capacity at Full Width:

208T / FSC6	0.046" (1.17mm)*
212T / FSC12	0.068" (1.73mm)*
218T / FSC18	0.080" (2.03mm)*
224T / FSC24	0.075" (1.90mm)*

* based on low carbon steel, commercial grade

Servo Max Thickness Capacity

208T	0.105" (2.66mm)
212T	0.095" (2.41mm)
218T	0.085" (2.15mm)
224T	0.075" (1.90mm)

Max Cutter Blade Opening

FSC6	0.180" (4.57mm)
FSC12	0.100" (2.54mm)
FSC18	0.180" (4.57mm)
FSC24	0.090" (2.28mm)

Roll Position Repeatability:

± 0.0025"

Roll Type:

8620 C.R.S. Hardened & Ground

Blade Type:

M2 DCF Tool Steel Heated & Tempered to 62-65 Rc

Stock Entrance:

Cascade Rollers and Edge Guides Standard

Options:

Pneumatic Operated Roller Release
Special Rolls – Contact Factory
Self-Centering Edge Guides
Carbide Cutter Blades

ELECTRICAL SPECIFICATIONS

Electrical

Line Voltage:	230 VAC, 3Ø, 50/60 Hz
Rated Input Current:	9.2 Amps
Max Inrush Current:	10.0 Amps
Max Operating Temperature:	30° C Ambient
Controller:	Trio Motion Coordinator MC403
AC Servo Drive:	Kollmorgen AKD-B01206
Display:	Beijer H-T60b-S
Enclosure	
Rating:	IP65
Dimensions:	20" x 20" x 10" (508mm x 508mm x 254mm)
Inputs:	Use PNP sensor or isolated contact Min 3.5 VDC / Max 30 VDC Min 2 mA / Max 15 mA
Outputs:	Sourcing: 24VDC @ 250 mA max.
Options:	460 VAC, 3Ø, 50/60 Hz AC Cooled Enclosure Adjustable Mounting Stand

Pneumatic

Shop Air	Filtered and lightly lubricated Working Pressure 80-120 PSI Maximum Pressure 150 PSI
----------	--

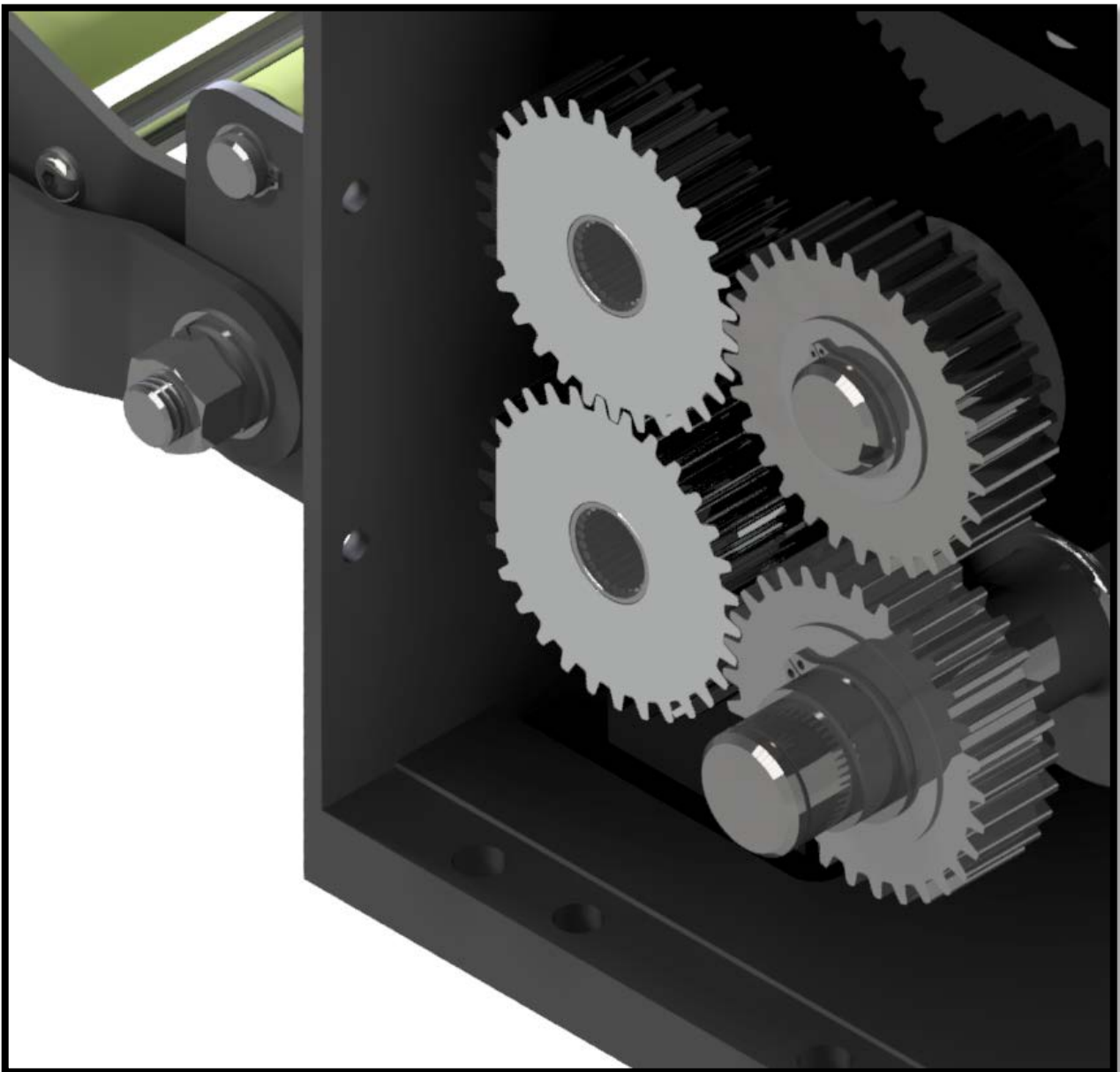
Mechanical Setup

Installation

Since the servo feed and the flat stock cutter have already been mounted on a common base no further mechanical component installation or alignment is required. The CTL cabinet may need to be leveled to steady the entire assembly or optionally it can be anchored to your shop floor. Four ½-13 threaded holes are provided in the cabinet base for this purpose. It will be necessary to bring a compressed air and an electrical service drop to the area you intend to locate the CTL. See the specification pages for requirements.

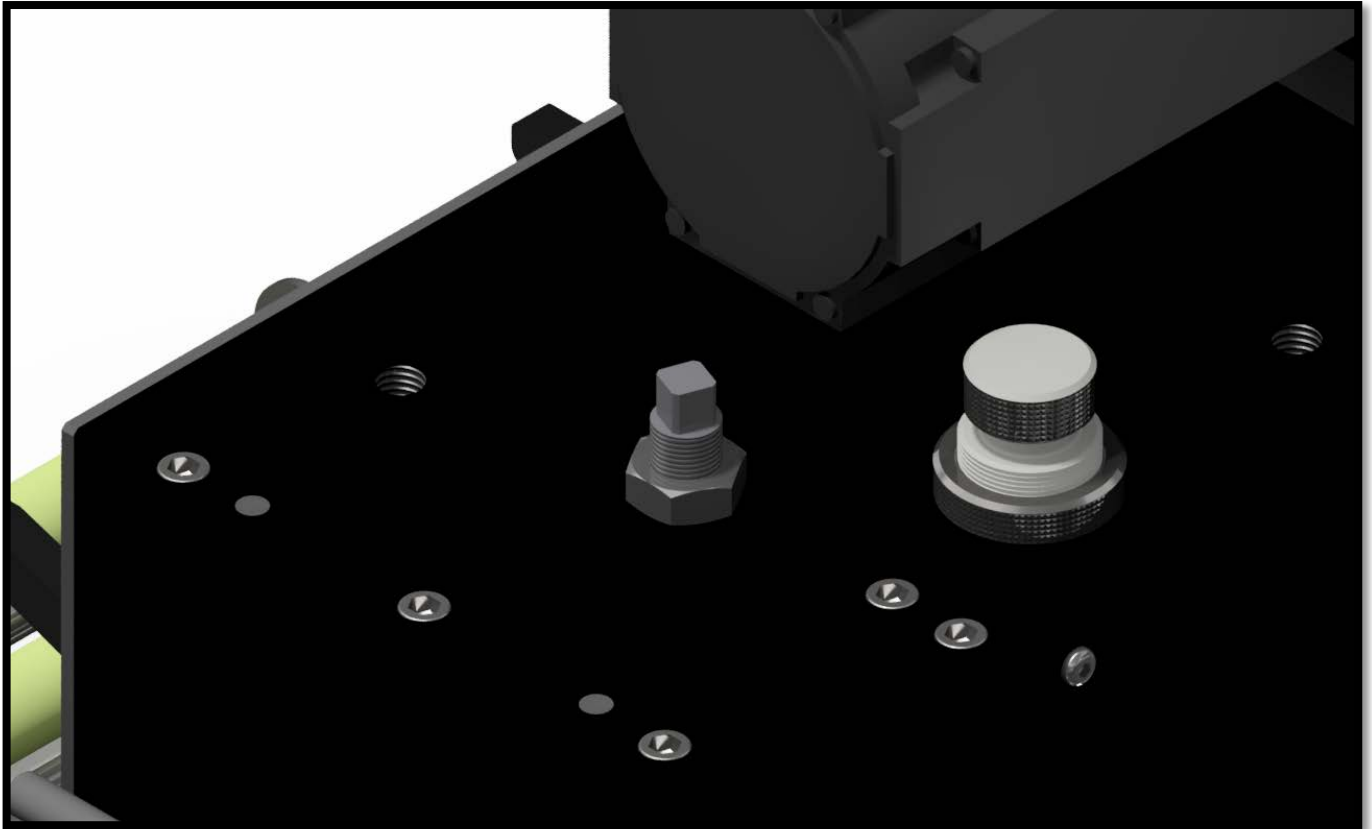
Gear Train

The gear train is located on the same side as the roll release handle. Gear train has been lubricated at the factory, only future maintenance will be required. Use MOBILTAC 375 NC.



Pilot Release Stop

Our 200T(X) series servo feeds are equipped with a pilot release stop as standard. In a press feeding application higher speed applications may benefit from adjusting the pilot release stop. By limiting the amount the rolls can open, time is not wasted by the rolls traveling full open and close. The pilot release stop adjustment is mounted next to the roll pressure knob and should be set to let the rolls open about 0.005/.010" to free the material during piloting. *In a CTL application there is no reason to adjust the pilot release stop.*

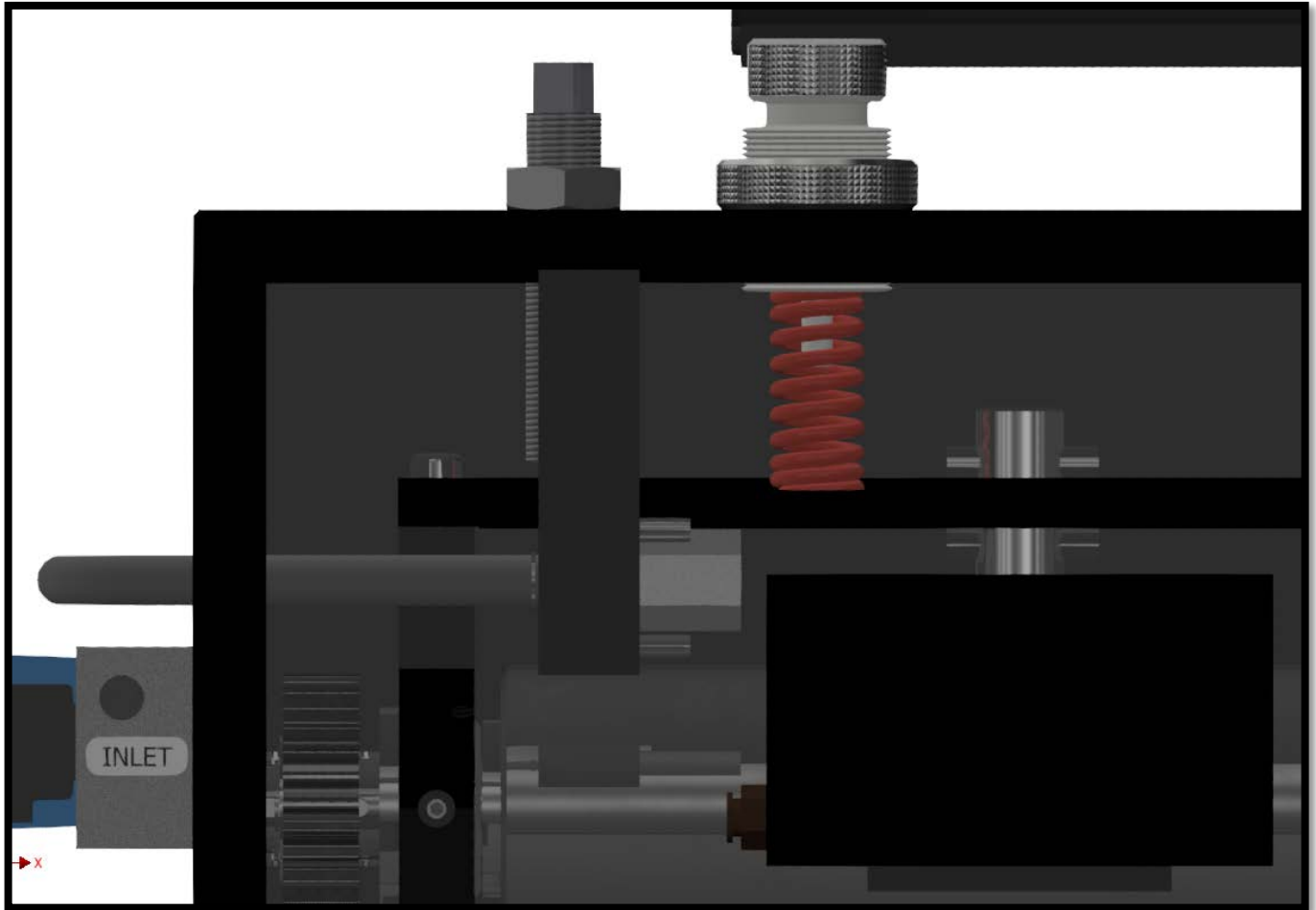


Roll Release Handle

The roll release handle is located on the side of the servo feed. If the PILOT RELEASE STOP has not been set then the handle can travel 'full stroke' and lock in the fully open position. This is the max feed roll opening of 0.180". If the pilot release stop has been set then the handle will only travel enough to open the rolls to the amount set by the pilot release stop. The handle will not lock in this position, **do not force beyond this point!!**

Roll Pressure

The roll pressure knob is located on the top of the servo feed and is a knurled knob with a knurled locking nut. It is positioned perpendicular to the inlet face and uses a compression die spring for adjusting roll pressure. Adjust so there is only enough pressure applied to properly feed the stock. Exerting too much pressure can result in 'fluting' of the edges or cause camber. Maximum roll pressure possible from die spring compressed to 37% of free length is 1,469 lbs. It is not recommended to use this much pressure.



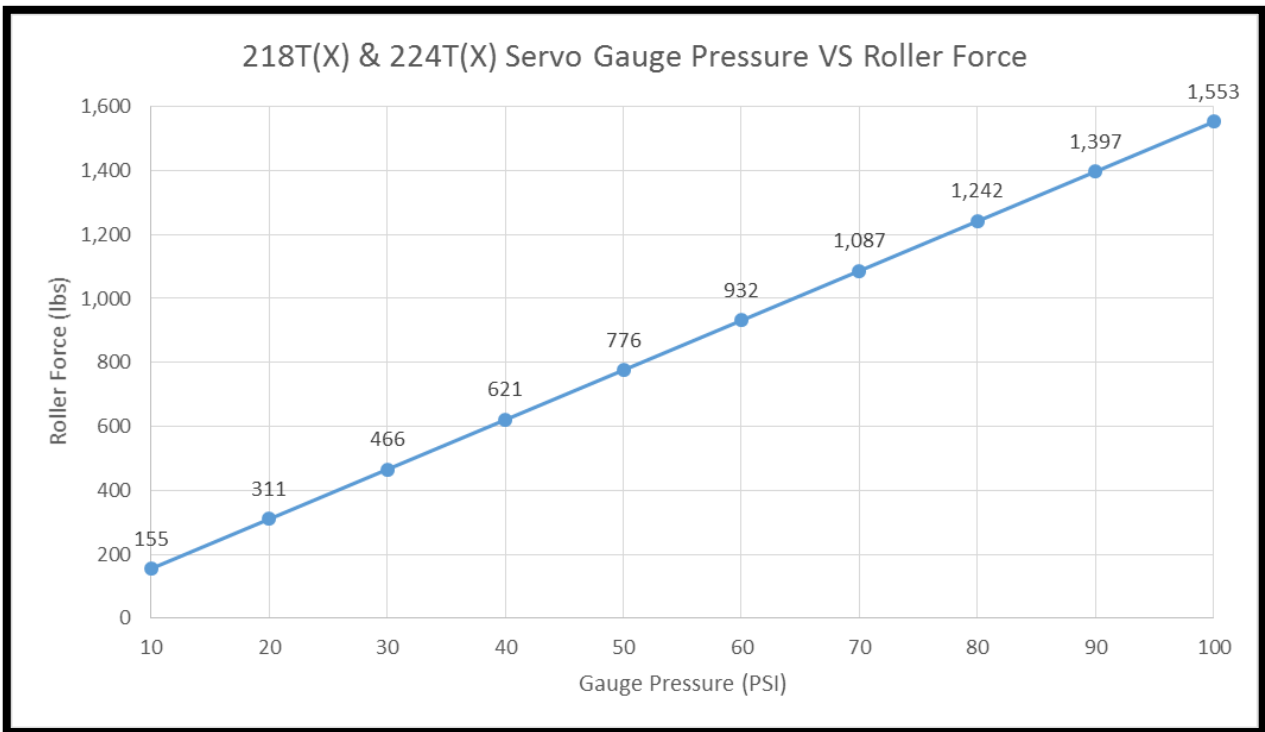
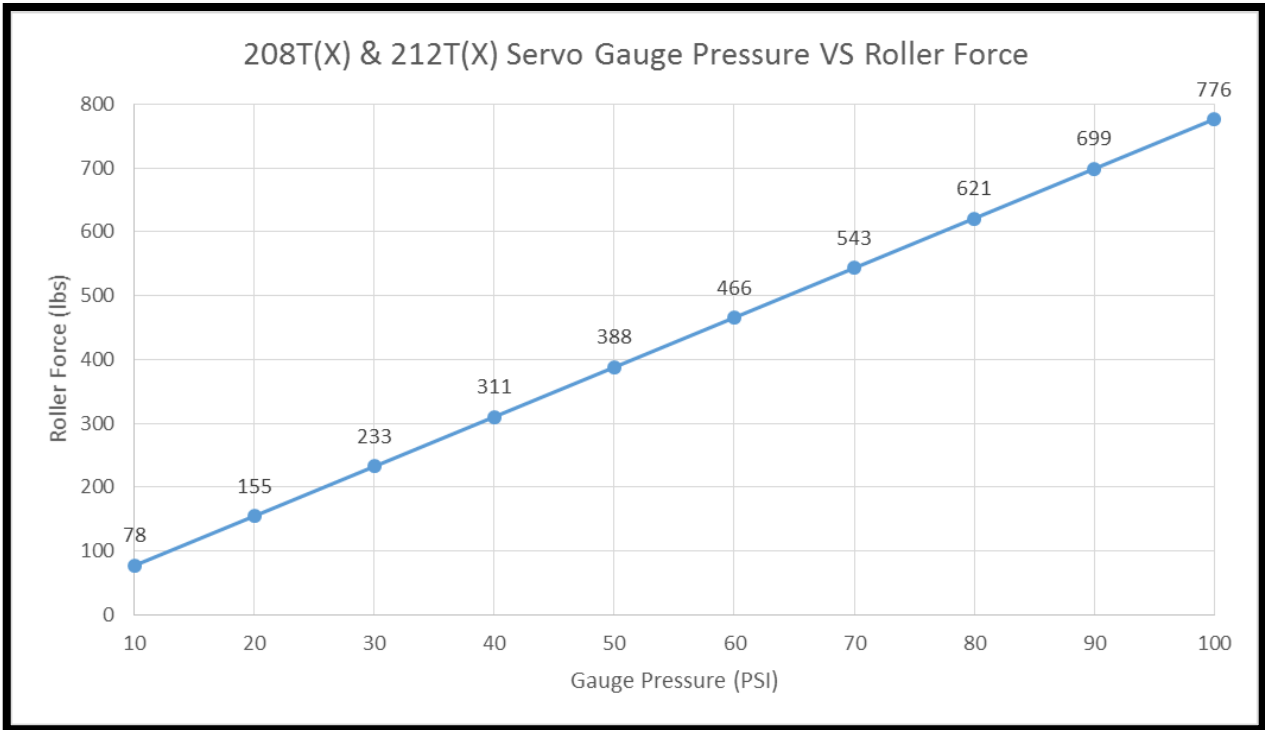
When equipped with the optional ***AIR REGULATED UPPER FEED ROLL***:

When using air pressure to grip the material, the spring regulated grip should be backed out or removed. **DO NOT** use both grip regulating methods together.

When adjusting the roll pressure with the air regulated option, increase the pressure in approximately 5 PSI increments until the proper feed is established. Take care not to induce camber in the material by applying excessive force. Record gauge pressure when proper feed is achieved.

Gauge Pressure versus Roll Pressure (reference chart for values)

	<u>208T(X) & 212T(X)</u>	<u>218T(X) & 224T(X) 2 pistons per servo</u>
10 PSI Gauge	78 lbs.	156 lbs.
20 PSI Gauge	155 lbs.	310 lbs.
30 PSI Gauge	233 lbs.	466 lbs.



Entrance Guide

The entrance guide's adjustable rollers should be adjusted to maintain the incoming stock centered on the feed rolls. Similar guides are available as an option for the exit side of the feed rolls. By having a set of guides on each side of the servo feed the setup time for aligning the material in the feed is decreased considerably as you will know that the material is straight through the feed before entering the die.



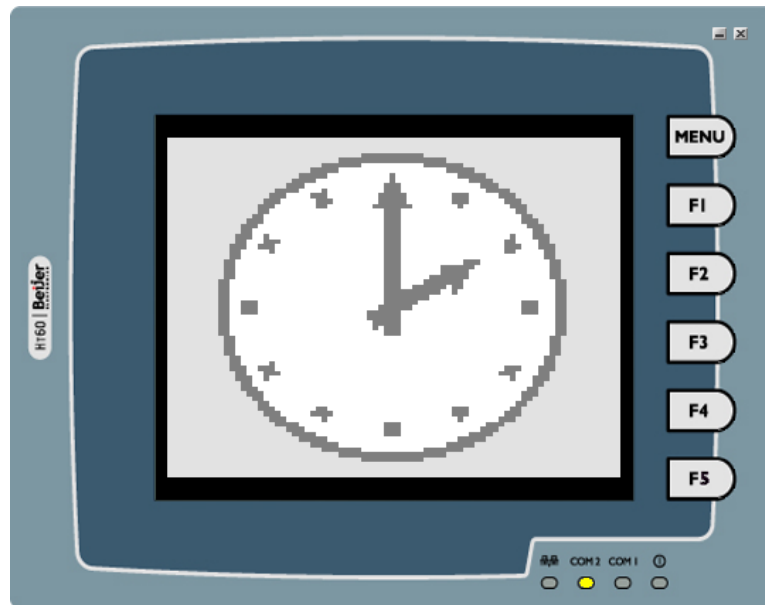
SERVO FEED OPERATION

When the control is turned on some of the components must boot-up, much like a computer. During this period the display will show a 'clock' so you can recognize the control is in the process of getting ready. If the control is turned on immediately after the incoming service is restored, you will notice a longer boot up time is required.

The display is a touch screen. Touch the screen in the general area of an object when it is necessary to enter numbers, 'push' pushbuttons or reset values. The screen has a built in screen saver function whereby it blanks after a predetermined time of inactivity. Touch the screen anywhere to bring back it to life.

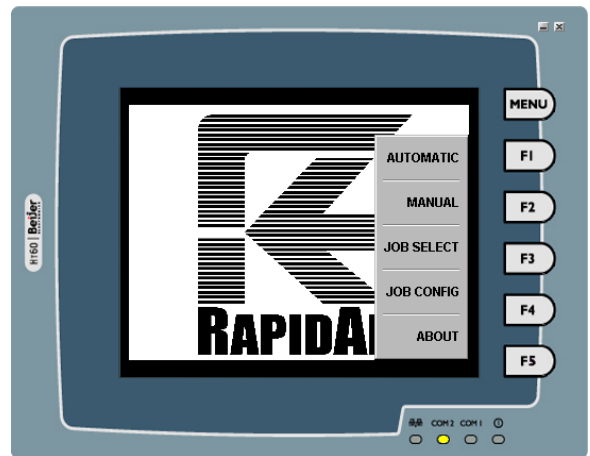
On the right hand side of the display there are 5 programmable function keys. These keys have different functions depending on the active screen. The 'F5' key is typically the EXIT or CANCEL key. The keys are always active. If you forget a key's function you can press the MENU button and the function key menu for the active screen will 'slide out'. The slide out menu is also a touch key so you can either touch the appropriate menu choice or press the 'F' key itself. Once a choice is made the slide out menu will close. You can also close the slide out menu by pressing the MENU button a second time. As you become accustomed to the operation of the CTL you will probably find yourself calling for the slide out menu less and less.

The CTL will power up with the last job used as the active job. This means there is no need to load the same job number day after day.



SERVO FEED OPERATION cont'd

SPLASH SCREEN:



Once the control is booted up and ready to go the Rapid-Air logo will be displayed. This is called the SPLASH screen. The SPLASH screen is the main menu.

- | | |
|-----------------|---|
| F1 – JOB SELECT | Go to this screen to set up the desired job. |
| F2 – AUTOMATIC | Go to this screen to start making parts. |
| F3 – MANUAL | Go to this screen to manually control individual functions. |
| F4 – JOB REVIEW | Go to this screen to quickly see what the active job is and its parameters. |
| F5 – ABOUT | Go to this screen for information about the CTL. |

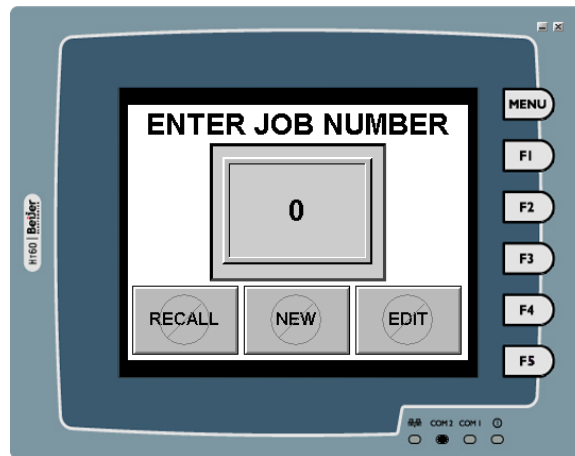
You can change to any screen listed, no particular order is required. For purposes of explaining the controls we will describe how to enter a new job number and the job parameters.

A typical sequence would be:

- **JOB SELECT** – Enter a job number
 - **SELECT NEW, EDIT, OR RECALL**
 - **NEW & EDIT** lead to a series of screens that allow you to configure the job recipe.
- **JOB CONFIG** – After selecting a job number you are automatically sent to the **JOB CONFIG** screen to either confirm the job choice or to enter the new job parameters. You could also choose to go to the **JOB CONFIG** screen to edit an existing job's values.
- **MANUAL** – Allows you to test settings and position the material for production. You are automatically sent to this screen after the **JOB CONFIG** screen.
- **AUTOMATIC** – Ready for production, waiting for the feed initiate signal.

SERVO FEED OPERATION cont'd

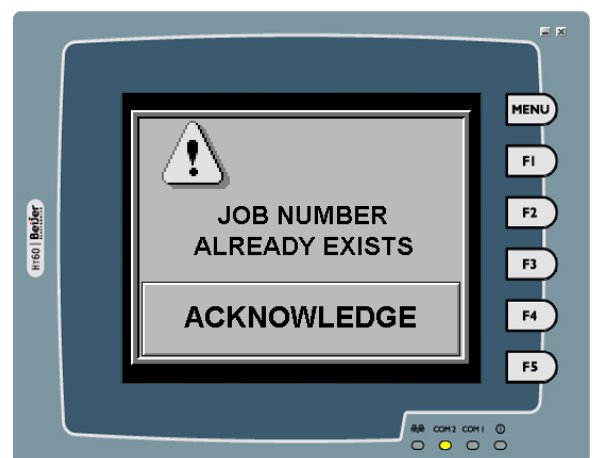
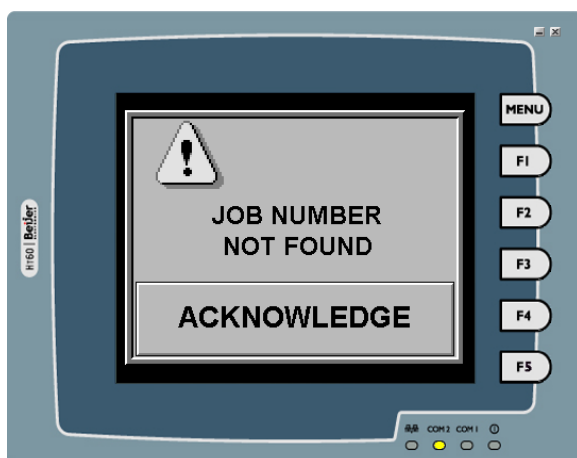
JOB SELECT:



This screen is used to define a new job, edit an existing job or recall an existing job. Up to 99 jobs can be created and stored. Until a valid job number is entered the 'RECALL', 'NEW' and 'EDIT' pushbuttons are not enabled. 'F5' is the only function key used on this screen. Use the 'F5' key to return to the SPLASH screen without changing any job information.

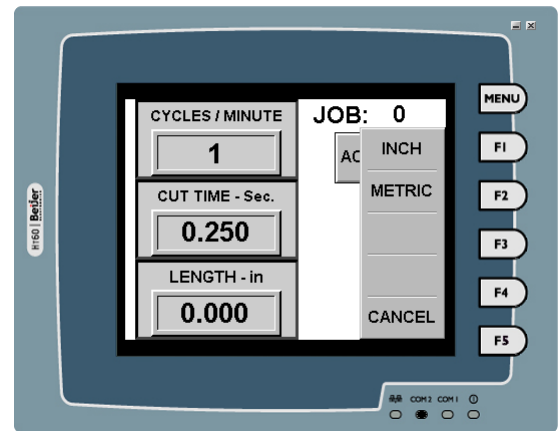
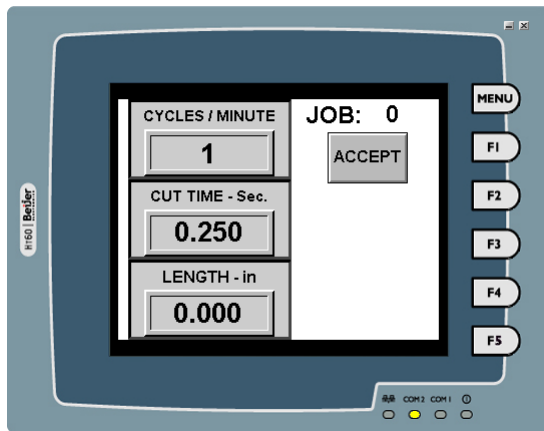
RECALL: This pushbutton recalls a previously set up job and makes it the CTL active job. If any invalid job number is entered you will get a fault message. Simply acknowledge the message and try again. When the recall is successful you will be returned to the SPLASH screen.

NEW & EDIT: Both of these pushbuttons will cause a new screen to appear allowing you to enter the job's parameters. If you've forgotten what job numbers have been set up and you enter a used number and then push 'NEW' you will get a fault message. This action is intended to keep the operator from accidentally changing a stored job. Similarly, if you enter a job number that does not exist and try to 'EDIT' it you will get a fault message. Simply acknowledge the message and try again.



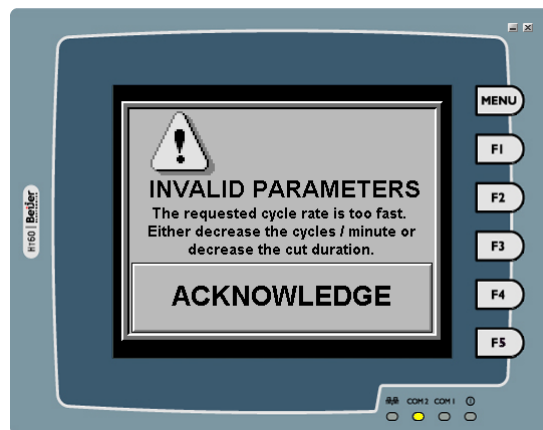
SERVO FEED OPERATION cont'd

NEW / EDIT:



On the 'NEW' job parameter screen, the feed length defaults to inches. Use the 'F1' & 'F2' to toggle between entering the length in inches or millimeters. On the 'EDIT' screen the feed length units will be whatever the job was originally defined as, but it may be changed the same way. **Note**, when changing between inches and millimeters on an existing job the previous length is **not** converted to the new units. For example, if the previously length was 1.25 inches and the units are changed to millimeters the length does not become 31.75 mm, it is now 1.25 mm.

Enter the approximate number of cycles, the amount of time the cut off solenoid is energized and the required feed length. The controller will then compute the move parameters based on a standard trapezoidal move. If the move cannot be made with the given parameters a warning message will be displayed. Acknowledge the message and re-enter the parameters.



If the move parameters are accepted but when the move is tested with material and it is apparent the move is too 'hard' so the rolls slip or other problems are caused, then edit the job and reduce the number of CYCLES per MINUTE. It will be trial and error to find the rate that works best for your particular application. The number of cycles per minute entered will only be an approximation of what is actually produced. Once a job is entered with valid parameters the operator will be returned to the SPLASH screen.

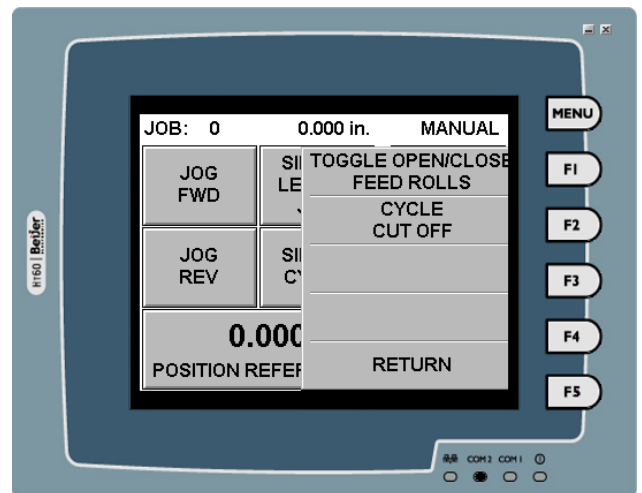
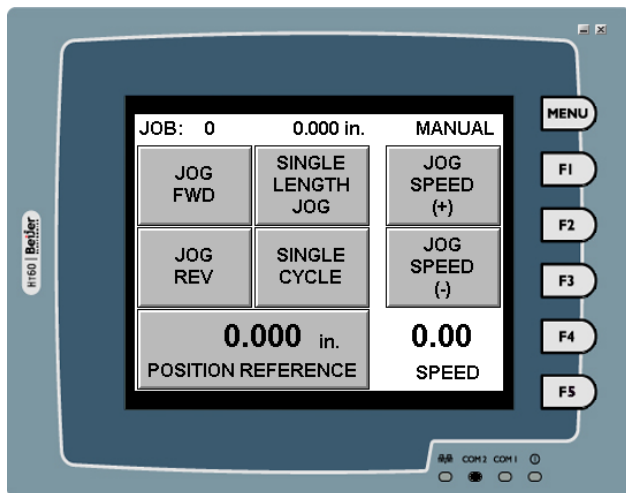
SERVO FEED OPERATION cont'd

MANUAL:

The manual mode is to aid in job setup and for maintenance. You can jog forward (JOG FWD) and you can jog reverse (JOG REV). The jog speed can be changed via the JOG SPEED (+) and JOG SPEED (-) pushbuttons. The speed can vary from 1 to 20. These numbers do not relate to anything like inches/sec, they are just a reference so you can return to a particular speed during future setups. When either jog speed change button is pushed the speed changes a small amount initially. The longer the button is held the more rapid the change becomes.

The SINGLE CYCLE pushbutton will cause 1 feed length to be fed at the normal production speed and accel/decel rates. The JOG LENGTH pushbutton will jog forward just like the JOG FWD button except it will only feed up to the programmed feed length and then the POSITION REFERENCE indicator needs to be reset to 0.000 before it will jog again. Touch the POSITION REFERENCE 'box' to reset it.

'F1' will toggle the rollers open and closed if the servo feed is equipped with air operated rollers. 'F2' will cycle the cut off mechanism.

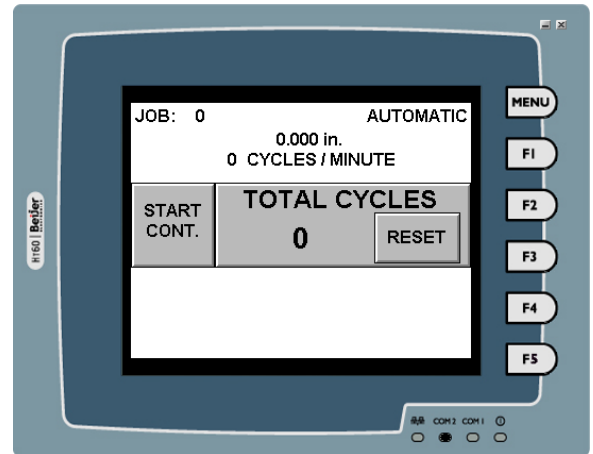
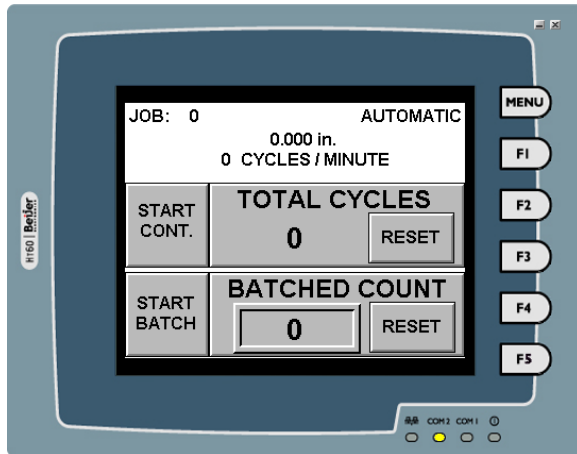


It is possible to jog the servo feed via hardwired pushbuttons. If the CTL was not ordered with a remote jog pendant it is possible to field install JOG FWD and JOG REV pushbuttons. See page 2 of 2 of the included electrical schematic. Like the HMI jog buttons, the hardwired pushbuttons will only be active when the display is on the manual function screen.

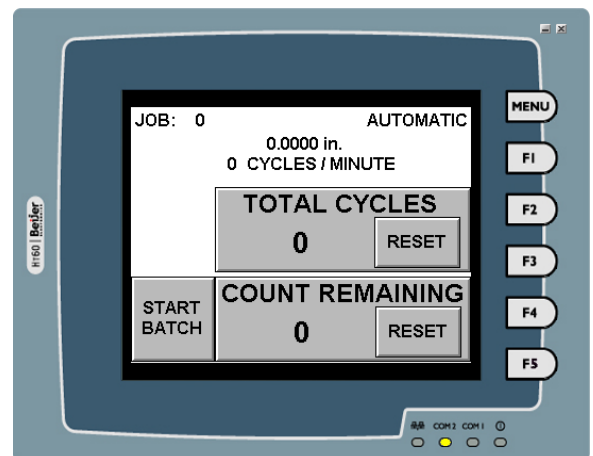
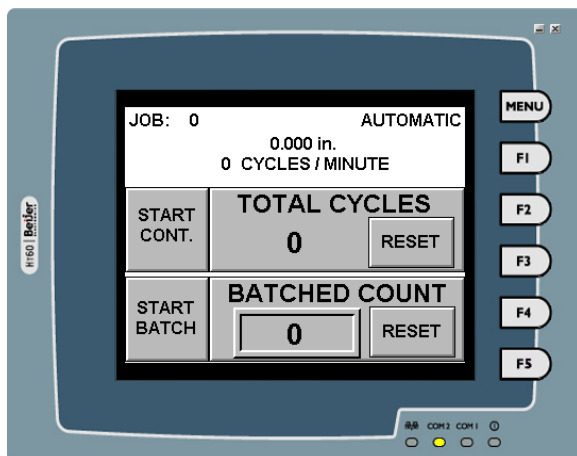
SERVO FEED OPERATION cont'd

AUTOMATIC:

Two modes of operation are available in the automatic mode. One mode is continuous. In this mode the CTL will run until the operator stops the cycle. There is a TOTAL COUNT indicator that will indicate how many cycles have been run. This counter may be RESET at any time. When run in the continuous mode the screen changes and the BATCH start and count display will not be visible.



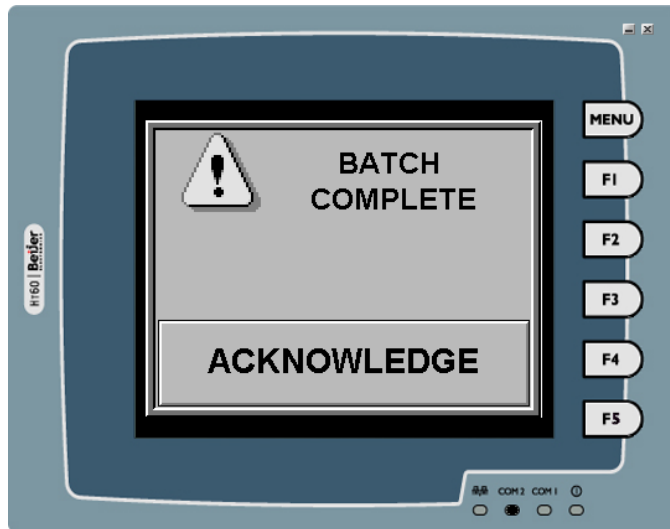
The other mode of operation is in a batch mode. You can enter on the BATCH COUNT the number of pieces you want to make, start the machine and it will automatically stop after the count is complete. Once started in the batch mode the screen changes and the continuous mode start/stop pushbutton is not visible. The TOTAL count display remains visible allowing the operator to see how many cycles have happened and at the same time the BATCH counter will display the number of cycles remaining. The BATCH counter will reset automatically between batches but the TOTAL counter has to be manually reset.



SERVO FEED OPERATION cont'd

AUTOMATIC cont'd:

When operated in the BATCH mode and the batch count is complete the CTL will stop cycling and the following screen will appear.

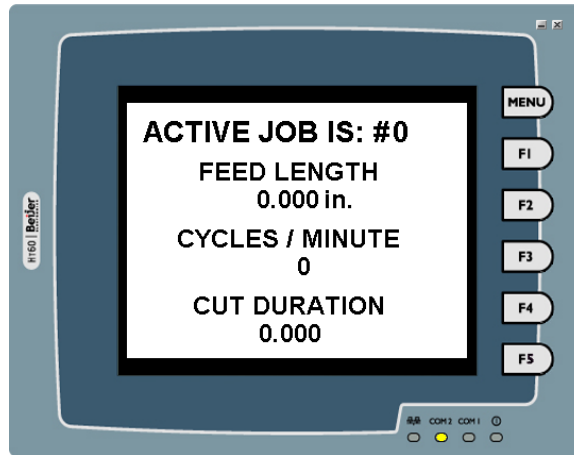


When this screen is acknowledged you are returned to the start of the automatic function. At this point you can start another batch, change batch quantity and start another batch or operate in a continuous mode.

The CTL control has an input dedicated for a TAUT stock sensor. A user supplied sensor wired to this input will cause the CTL to stop cycling if the input is triggered. The feed will continue to feed the length in progress when the input is triggered so it must be adjusted to allow enough stock in the loop to allow the completion of that feed length

JOB REVIEW

When the CTL is powered up the last job used, edited or recalled is the active job by default. If you do not remember what that job is you can review it by pressing 'F4- JOB REVIEW' on the SPLASH screen.



ABOUT

If you contact Rapid-Air Corp. to request parts or seek other assistance with your CTL you may be requested to provide the Rapid-Air serial number or other programming information. You can find this information on the 'ABOUT' screen. Because the display or other parts may not be working when you need to contact us please record the information in the space provided below.



Servo Feed Model Number _____

Serial Number (S/N) _____

Shop Order Number (S.O.) _____

Controller Prog. Number _____

TROUBLESHOOTING

If the servo drive faults out it is reported back to the controller as a general fault condition and the controller is not able to announce the specific cause. The operator interface will display the following message.



There is a 2 character LED display on the front panel of the drive. The left character will be 'F' as in fault, and the right side displays the 3 digit fault number as follows: 1-9-1-[break] (for example).

FLAT STOCK CUTTER OPERATION

The cutter operates by air pressure down, spring return. Different material types and thicknesses will require different amounts of time for the cutter valve to be energized. For example; 0.010" foil will require less time for the blades to cut through the material then when compared to 0.030" cold rolled steel. Each job recipe allows for a different 'CUT TIME'. If maximizing the cycle rate is not important you may find one CUT TIME works well for all of your setups. A suggested starting value is 0.250 second.

Each blade has four cutting edges. When a blade dulls rotate it 90° for a sharp edge. When all four edges have been used, flat grind the large faces on both sides of the blade. After reinstalling the blades it may be necessary to adjust the clearance between the blades.

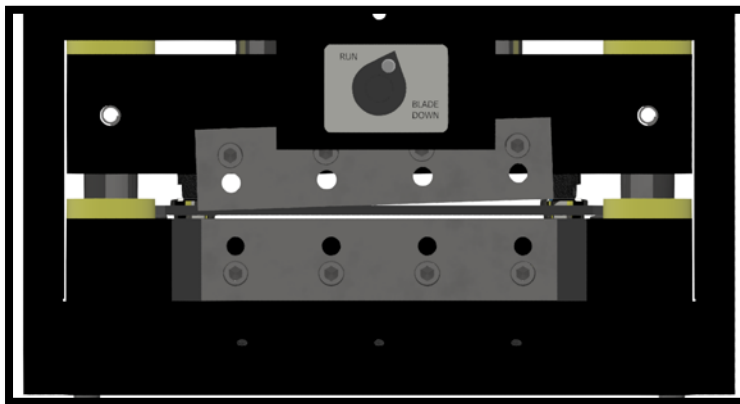
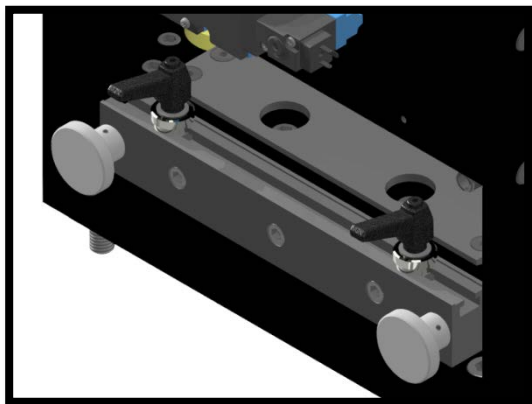
Blade Adjustment - The upper blade may be lowered manually with the eccentric cam located at the top center of the cutter. The purpose for this manual operation is for horizontal blade clearance adjustment. Blade clearance affects the quality of the cut. The CTL is shipped with the cutter's blades clearance set at the factory. To adjust the blade clearance:

- Cam the upper blade down.
- Loosen lower blade holder lock screws. *
- Move lower blade in or out with knurled knobs. **
- When desired clearance is achieved, lock lower blade holder screws.
- Check adjustment by manually cutting bond paper.

The upper blade is mounted with a 2° shear angle.

FSC6 Item #71*
FSC12 Item #51*
FSC18 Item #85*

FSC6 Item #26**
FSC12 Item #29**
FSC18 Item #31**



WARRANTY

Warranty Terms & Conditions

ALL SALES BY THE COMPANY ARE MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS. PLEASE READ.

Warranty – The Company warrants for a period of one year from the date of shipment by the Company that the product shipped is free from defects in material and workmanship. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL IMPLIED WARRANTIES IN LAW, INCLUDING MERCHANTABILITY. The Company obligation under this warranty is limited to repairing or replacing, F.O.B. Rockford, IL, any part or parts proved to have been defective when shipped. In no event shall the Company be liable for special or consequential damages. Provisions set forth in specifications are descriptive and subject to change and are not intended as warranties.

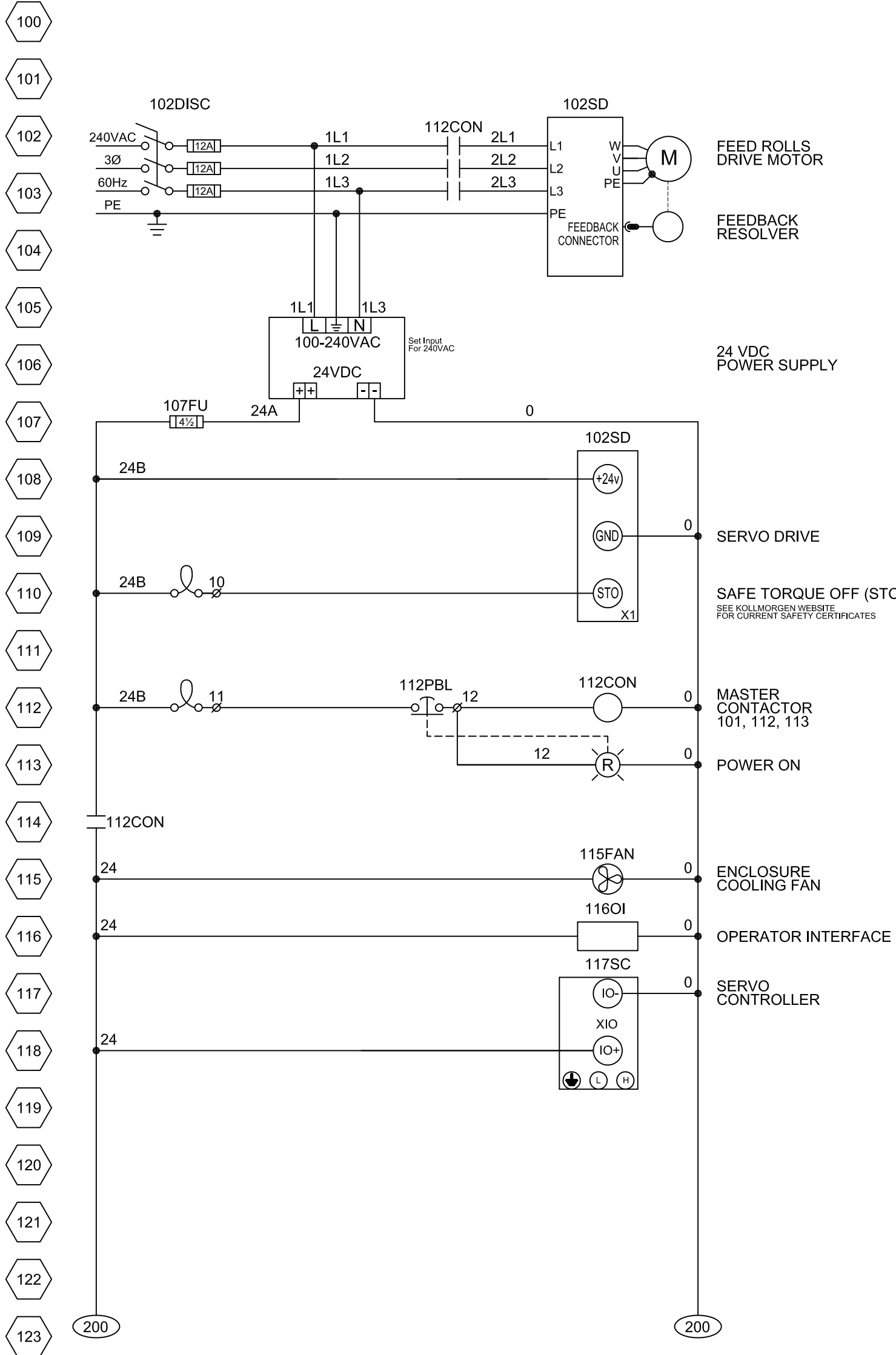
Customer License Agreement

Rapid-Air reserves the rights in its software. The software program is licensed by Rapid-Air to the original purchaser of the equipment which contains the software for use only on the terms set forth in this license.

You may use the program only on the programmable servo controller furnished with the system and only in conjunction with the servo feed supplied with the system.

You may not without expressed permission from Rapid-Air:

- A. Copy, distribute, or document the program for others.
- B. Modify or merge any portion of the program for use on non-compatible hardware.
- C. Make alterations to the program.



- 100
- 101
- 102
- 103
- 104
- 105
- 106
- 107
- 108
- 109
- 110
- 111
- 112
- 113
- 114
- 115
- 116
- 117
- 118
- 119
- 120
- 121
- 122
- 123

FEED ROLLS
DRIVE MOTOR

FEEDBACK
RESOLVER

24 VDC
POWER SUPPLY

SERVO DRIVE

SAFE TORQUE OFF (STO)
SEE KOLLMORGEN WEBSITE
FOR CURRENT SAFETY CERTIFICATES

MASTER
CONTACTOR
101, 112, 113

POWER ON

ENCLOSURE
COOLING FAN

OPERATOR INTERFACE

SERVO
CONTROLLER

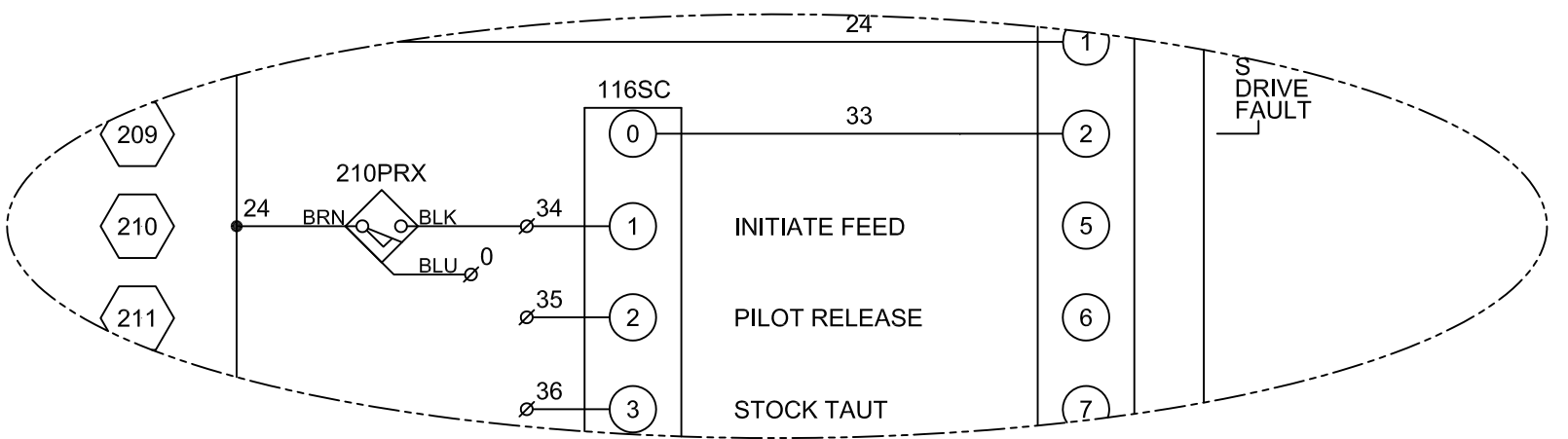
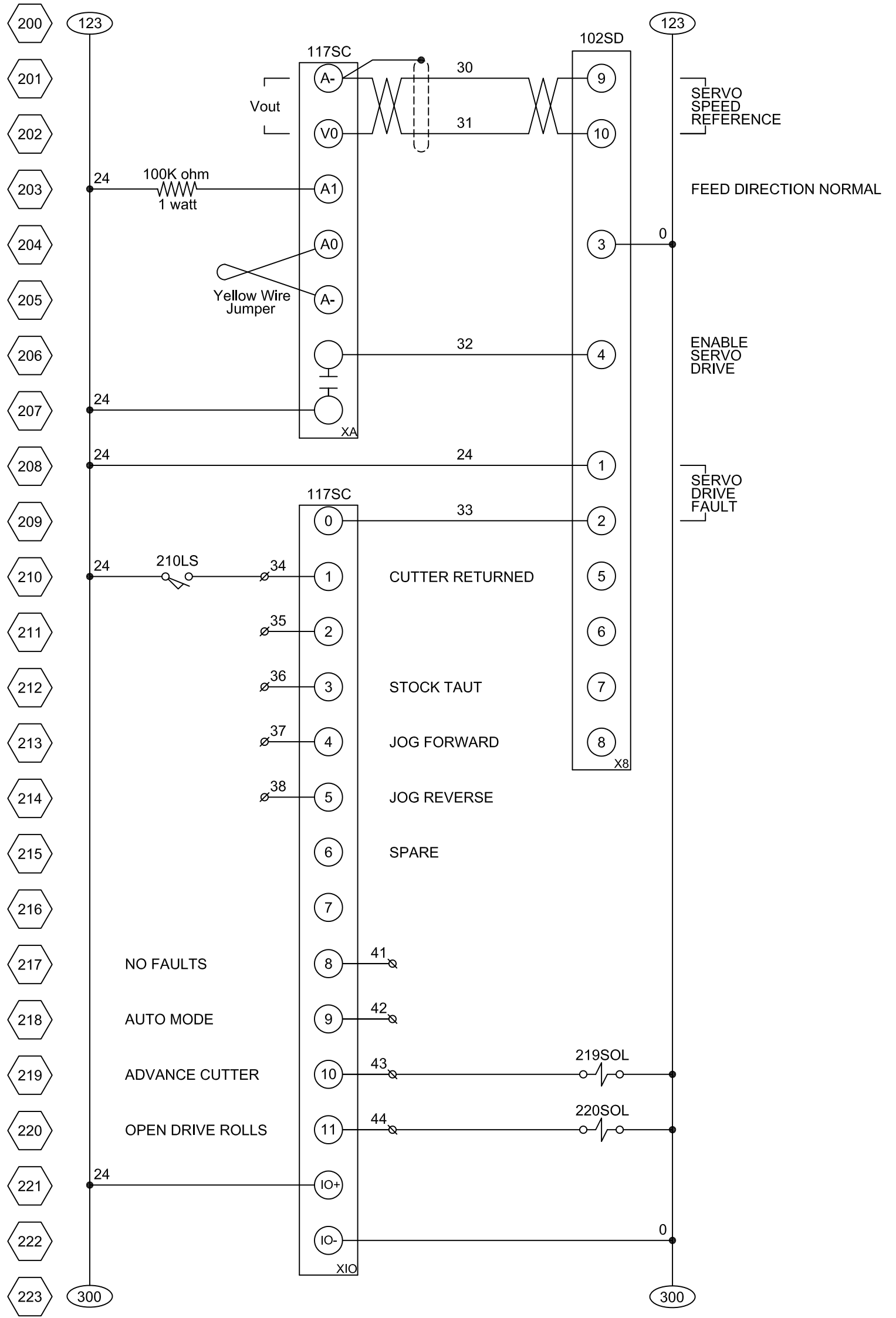
RAPID-AIR CORPORATION
ROCKFORD, IL

PART NAME: 200(X) CUT-TO-LENGTH
WIRING SCHEMATIC

REV.	CHANGE	DATE	SCALE	HEAT TREAT	HARDNESS

DRAWN BY: TJH | CHECKED BY:
DATE: SEPT. 2016 | BRAYING NUMBER: 85500338-1 | D

SHEET 1 OF 2
POWER CIRCUIT



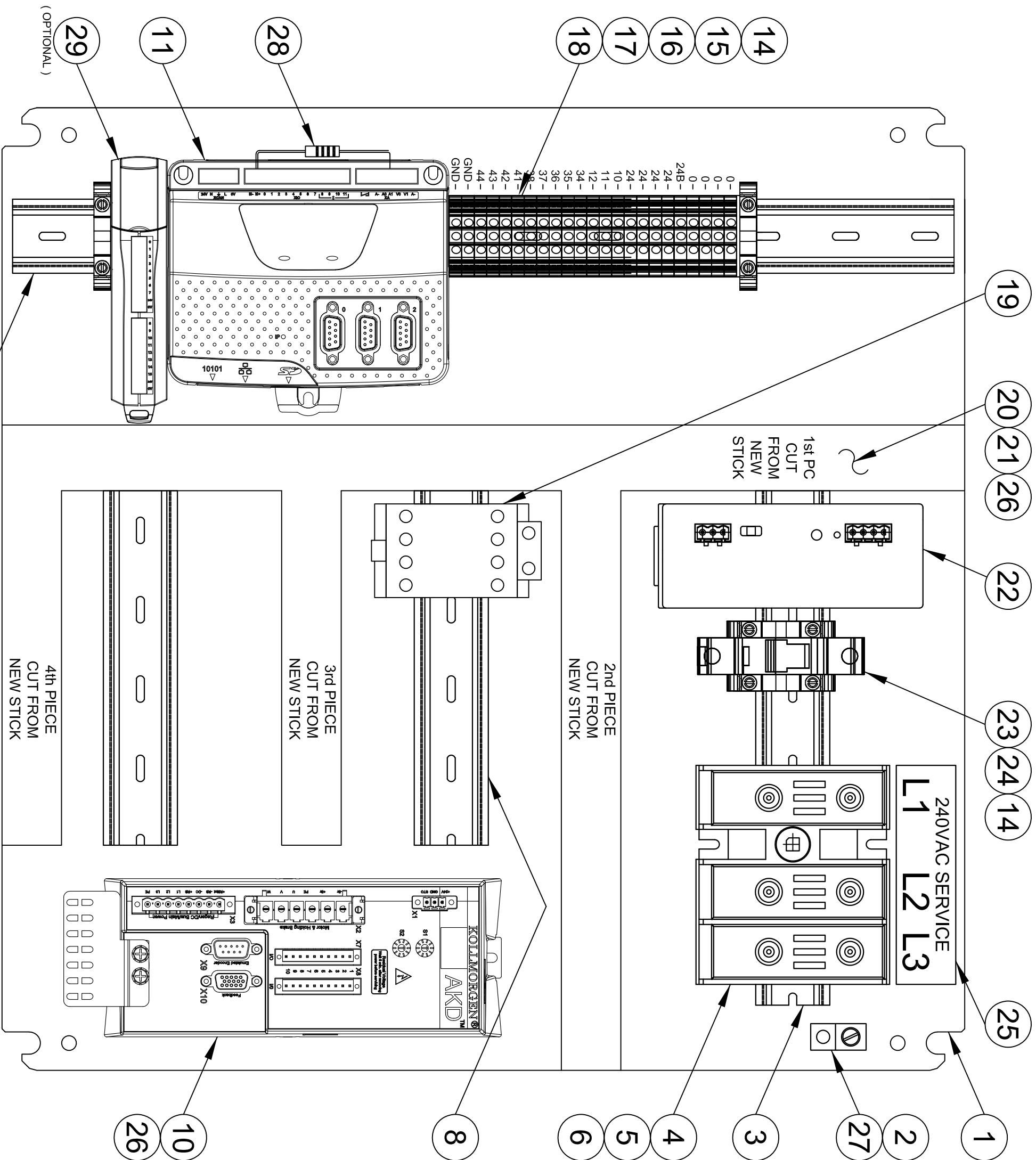
TYPICAL PNP PROX SWITCH WIRING EXAMPLE

RAPID-AIR CORPORATION
ROCKFORD, IL

PART NAME: 200(X) CUT-TO-LENGTH
WIRING SCHEMATIC

REV.	CHANGE	DATE	SCALE	HEAT TREAT	HARDNESS	BRN BY	CHK BY	FINISH	WEIGHT
		SEPT. 2016	N/A			TJH			

SHEET 2 OF 2
I/O CIRCUIT



- REMOVE SUBPANEL PAINT BENEATH THIS ITEM
 - PANEL GROUND CONNECTION SHALL BE MADE VIA RING TERMINAL LOCATED UNDER MOUNTING SCREW HEAD

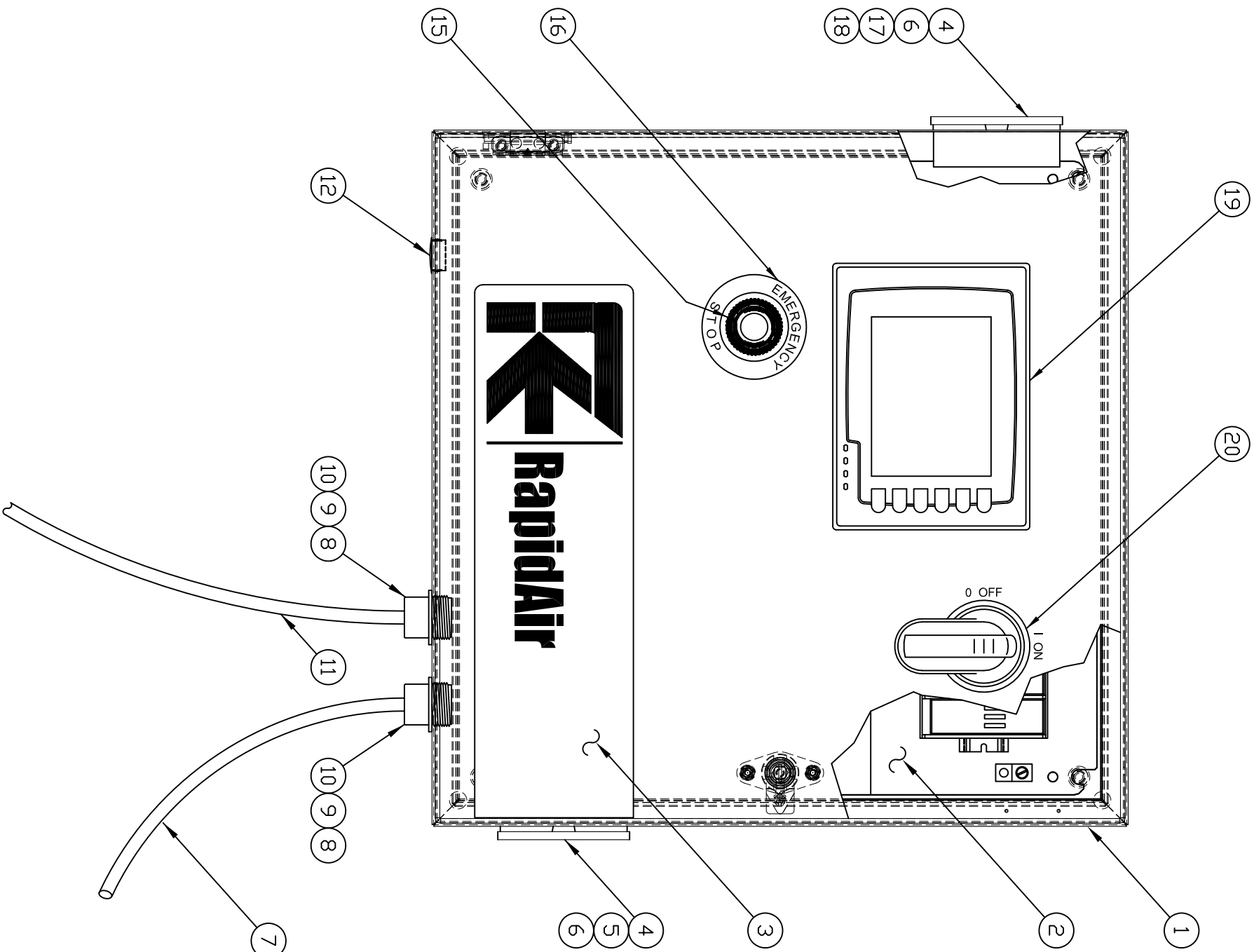
USE WITH:
 85500338 200(x) C-T-L WIRING SCHEMATIC -version 'C' ctrl
 85500335 200(x) WIRING SCHEMATIC - version 'C' ctrl

(OPTIONAL)

N/S	2	69340036	26 GA. FERRULE
N/S	4	69340037	20 GA. FERRULE
N/S	5	69340039	16 GA. FERRULE
N/S	3	69340040	14 GA. FERRULE
N/S	1	69300048	CNTRLR / DISPLAY CABLE
N/S	1	69300047	CNTRLR / DRIVE CABLE
29	1	69100828	SERVO CONTROLLER EXPANSION I/O
28	1	69101008	RESISTOR
27	1	66020050	1/4-20 x 1/2" RHMS
26	29	66008037	8-32 x 3/8" RHMS
25	1	39900311	240VAC DISCONNECT WIRING LABEL
24	1	69101002	4 1/2A FUSE - CLASS CC
23	1	69100597	FUSE HOLDER
22	1	69100435	24VDC @ 5A POWERSUPPLY
21	1	69100748	1" WIRE DUCT COVER
20	1	69100749	1" x 2" WIRE DUCT
19	1	69100819	CONTACTOR
18	2	69100775	GROUND TERMINAL
17	.5	69100773	TERMINAL JUMPERS
16	1	69100771	TERMINAL END BARRIER
15	21	69100770	TERMINAL
14	4	69100772	TERMINAL END ANCHORS
13	2	31900659	TERMINAL STANDOFF
12	1	69100769	DIN RAIL - 18"
11	1	69100827	SERVO CONTROLLER
10	1	69100830	SERVO DRIVE
9			
8	2	69100769	DIN RAIL - 6.38"
7			
6	1	69100584	DISCONNECT SHAFT
5	3	69101007	12A FUSE - CLASS J
4	1	69100582	DISCONNECT - 30A/600VAC
3	1	69100769	DIN RAIL - 9.5"
2	1	69280249	GROUND LUG
1	1	38900199	SUBPANEL

ITEM	QTY.	PART NO.	DESCRIPTION
------	------	----------	-------------

RAPID-AIR CORPORATION			
ROCKFORD, IL			
PART NAME	200(x) SERVO CONTROL Ver. C		
MATERIAL	SUBPANEL ASSEMBLY		
HEAT TREAT	FINISH	HARDNESS	WEIGHT
DRAWN BY	TJH	CHECKED BY	FINAL FINISH
DATE	APRIL 2014	DRAWING NUMBER	28900445
REV.	CHANGE	DATE	SCALE
			D

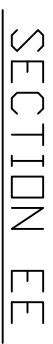
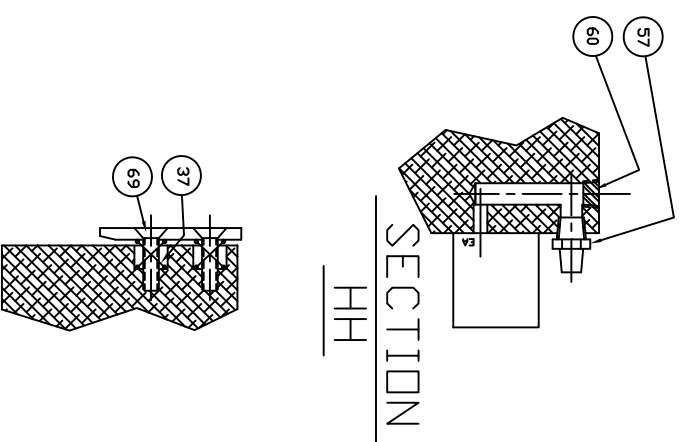
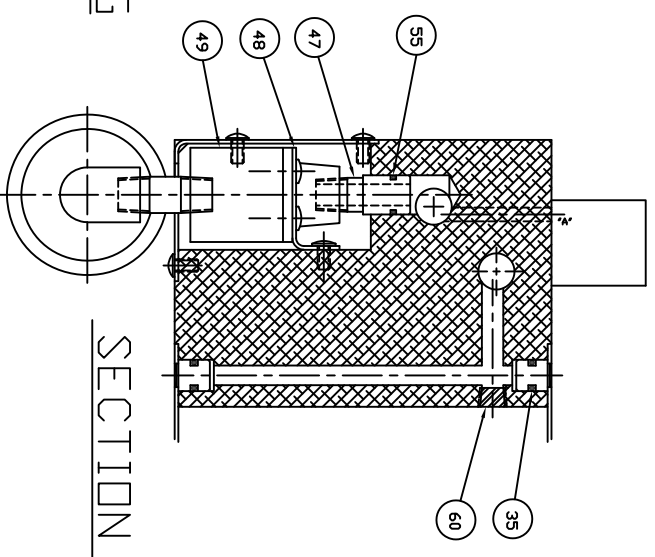
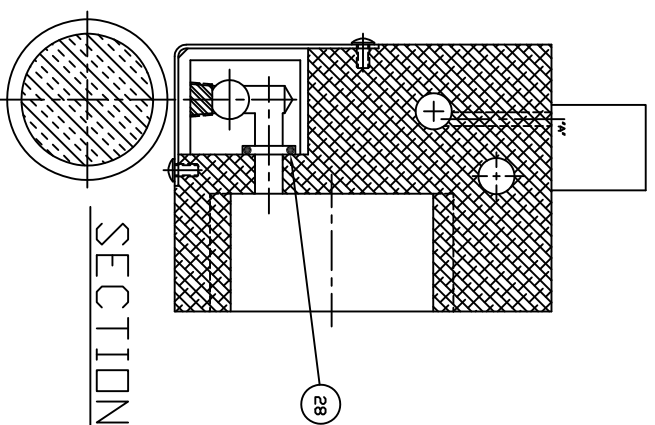
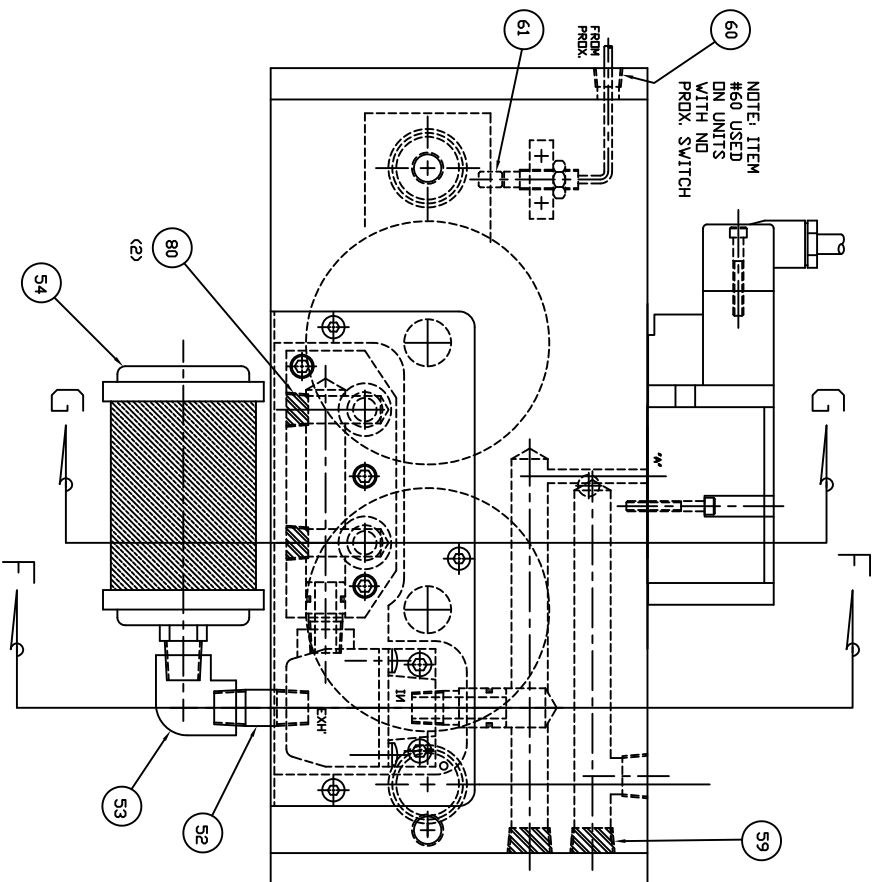


USE WITH:
 85500338 200(x) C-T-L WIRING SCHEMATIC -version 'C' cntrl
 85500335 200(x) WIRING SCHEMATIC - version 'C' cntrl

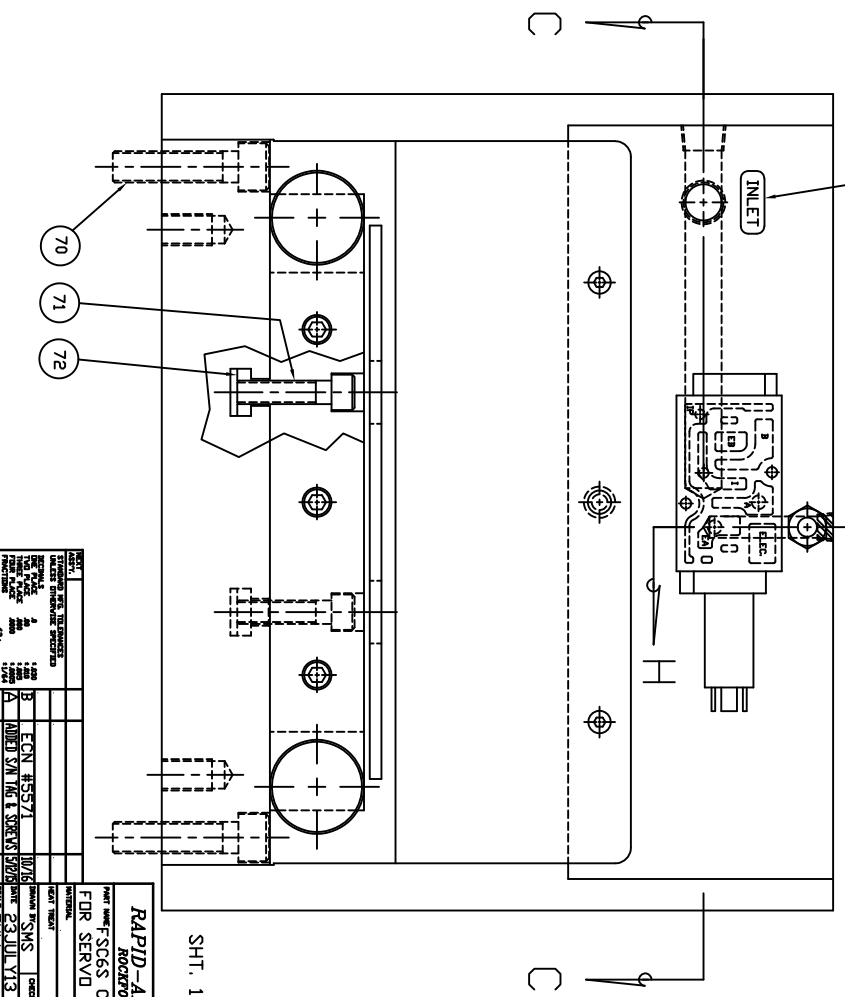
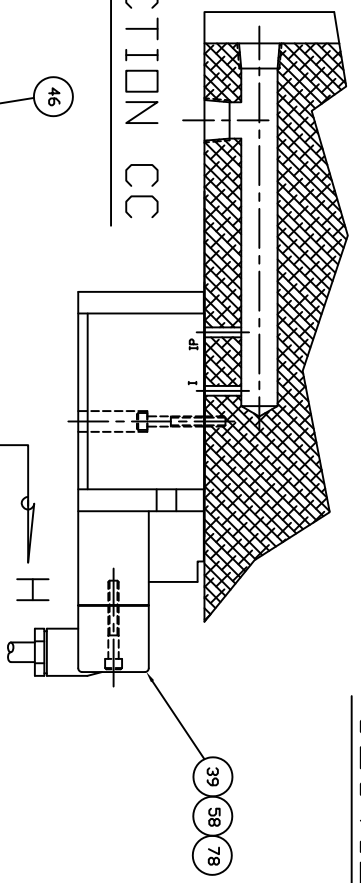
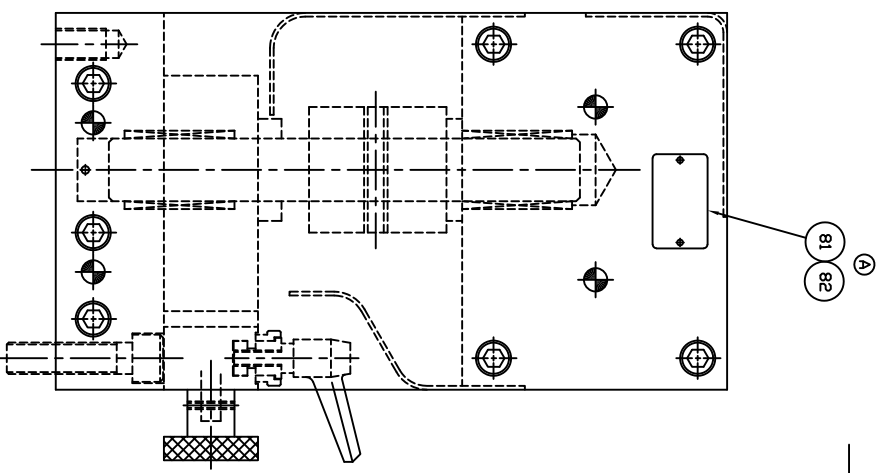
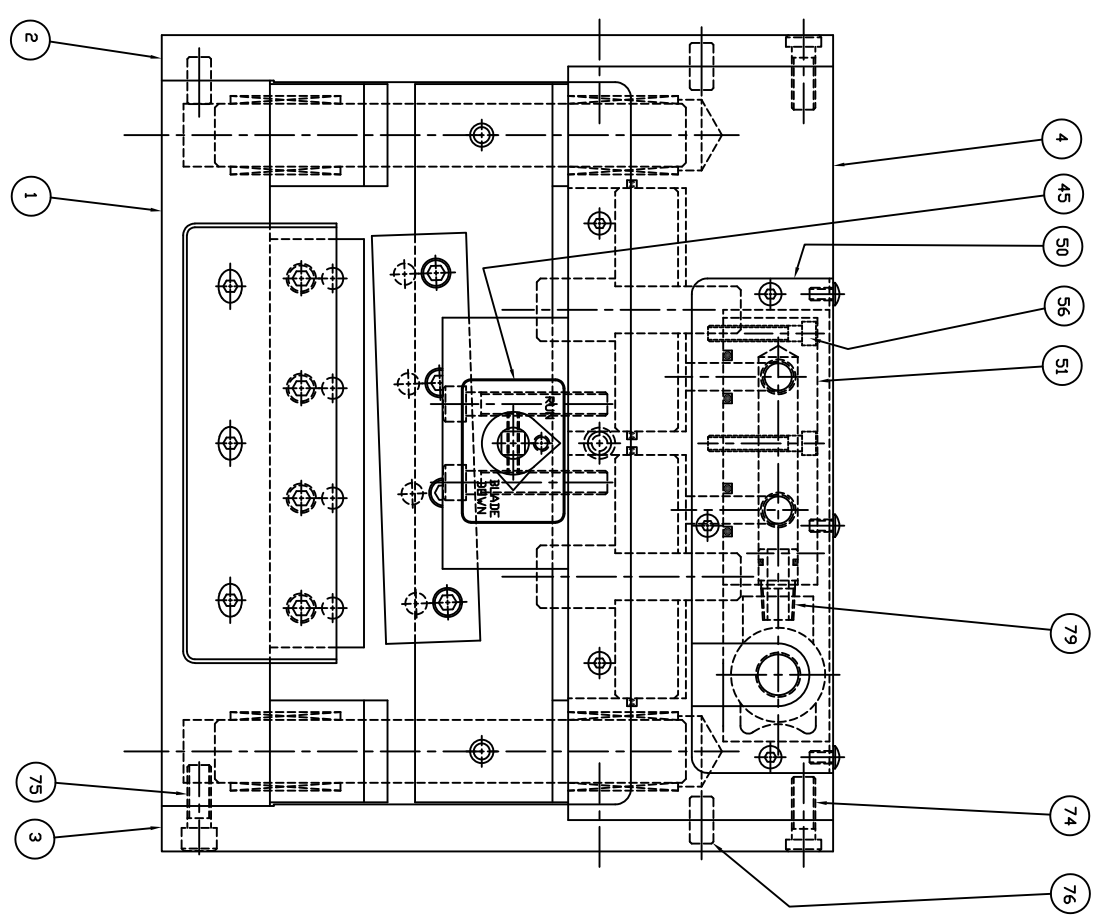
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	38900200	ENCLOSURE
2	1	28900445	SUBPANEL ASSEMBLY
3	1	39900243	LOGO LABEL
4	2	69100643	VENT COVER & FILTER
5	4	66506062	FHSCS 6-32
6	8	65100632	HEX NUT 6-32
7	1	69300042	MOTOR FEEDBACK CABLE
8	2	69280246	SPLIT CORDGRIP SHELL
9	2	69280247	SPLIT CORDGRIP GROMMET
10	2	69280248	METRIC LOCKNUT - M32
11	1	69300041	MOTOR POWER CABLE
12	1	69320005	HOLE PLUG
13			
14			
15	1	69100902	EXTD HEAD PUSHBUTTON
16	1	69200035	E-STOP NAMEPLATE
17	1	69100657	24VDC ENC. COOLING FAN
18	4	66006175	RHMS 6-32
19	1	69100829	OPERATOR INTERFACE
20	1	69100583	DISCONNECT HANDLE
N/S	1	60940015	RETAINER
N/S	1	69280216	INSULATED SLEEVE CLAMP
N/S	1	10900601	100 & 200 SERVO CNTRL STAND

RAPID-AIR CORPORATION		ROCKFORD, IL	
PART NAME 200(x) SERVO CONTROL Ver. C			
CONTROL ASSEMBLY			
MATERIAL		WEIGHT	
HEAT TREAT		HARDNESS	
DRAWN BY T JH	CHECKED BY	FINAL FINISH	
DATE APRIL 2014	BRANDING NUMBER	28900446	
SCALE N/A		D	

NEXT ASSY.	STANDARD MFG. TOLERANCES UNLESS OTHERWISE SPECIFIED
	DECIMALS .0
	THIRD PLACE .000
	FRACTIONS 1/32
FINISH	✓



NOTE: FSC6S FOR SERVO C-T-L, CONTROL VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

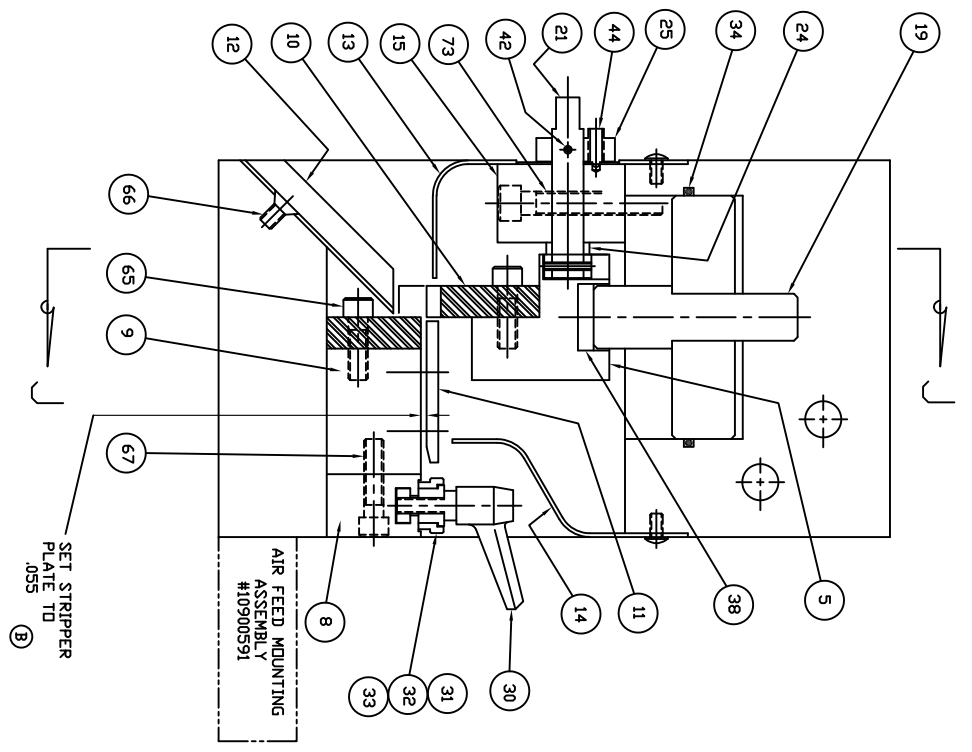
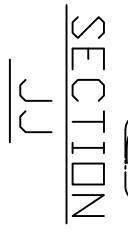
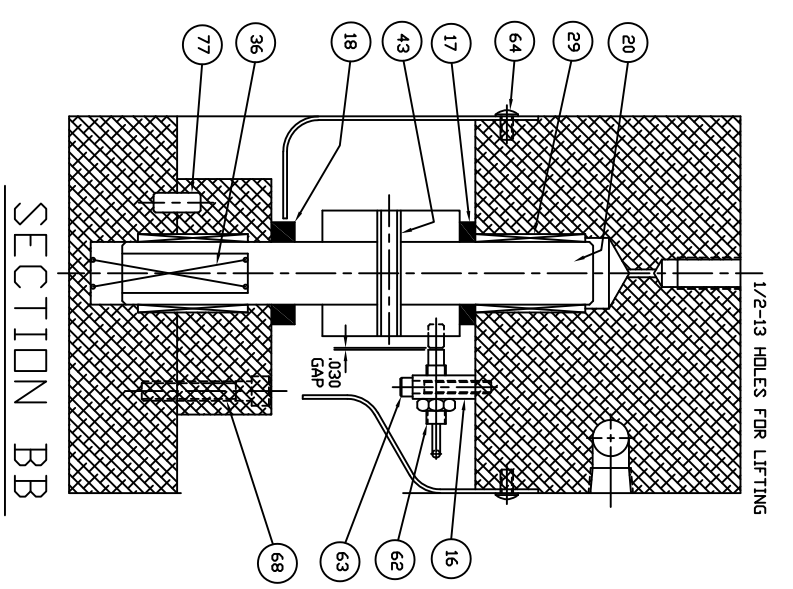
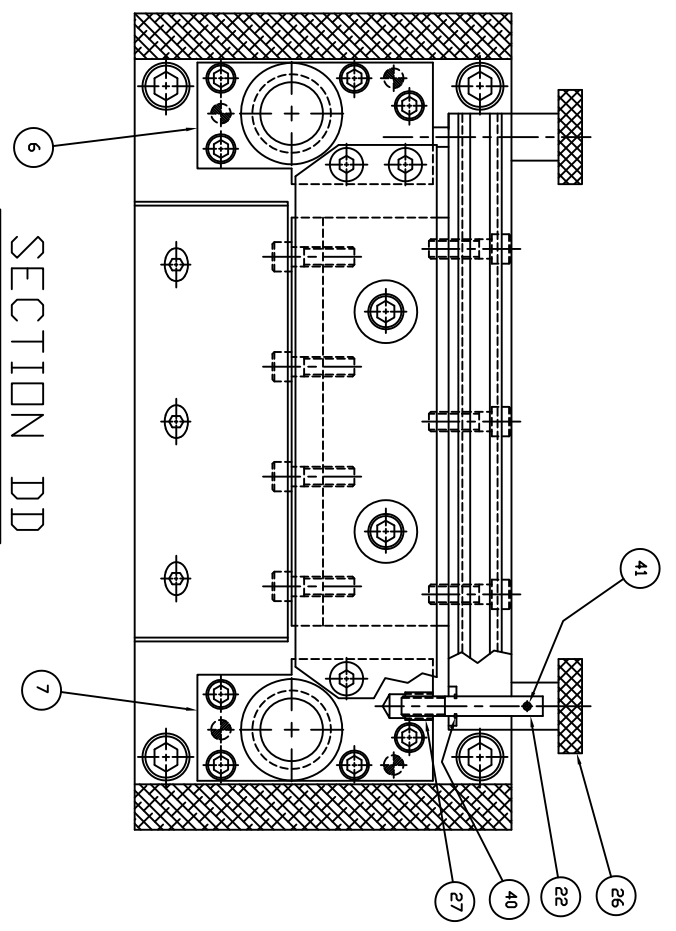


SHT. 1 OF 2

RAPID-AIR CORPORATION ROCKFORD, ILL. 61089 FDR SERVO C-T-L		DATE: 11/30/83 DRAWN: J. J. ... CHECKED: ... APPROVED: ...	
REV.	DESCRIPTION	DATE	BY
A	REVISED	...	...
B	...	...	...
C	...	...	...
D	...	...	...
E	...	...	...

11300361-362

82	2	66300250	DRIVE SCREW
81	1	39900051	S/N TAG
80	2	63130250	PIPE PLUG 1/4"
79	1	36300012	QUICK EXHAUST FITTING
78	2	65900112	SHCS #8-32 X 1 1/8
77	4	62331075	DOVEL PIN 5/16 X 3/4
76	8	62337075	DOVEL PIN 3/8 X 3/4
75	6	65936100	SHCS 3/8-16 X 1
74	8	66700057	LOW HEAD SHCS
73	2	65936225	SHCS 3/8-16 X 2 1/4
72	2	65500005	T-SLOT NUT
71	2	65936150	SHCS 3/8-16 X 1 1/2
70	4	65953200	SHCS 1/2-13 X 2
69	4	66520100	FHSCS 1/4-20 X 1
68	8	65931175	SHCS 5/16-18 X 1 3/4
67	3	65931125	SHCS 5/16-18 X 1 1/4
66	3	66520050	FHSCS 1/4-20 X 1/2
65	8	65931100	SHCS 5/16-18 X 1
64	12	66612037	BHSCS #10-32 X 3/8
63	2	65912125	SHCS #10-32 X 1 1/4
62	1	69100348	PRDX. SWITCH PNP
61	1	62325050	DOVEL PIN 1/4 X 1/2
60	3	63130125	PIPE PLUG 1/8 NPT
59	2	63130375	PIPE PLUG 3/8 NPT
58	1	69200032	MAC VALVE 24 V.D.C.
57	1	67200001	MUFFLER
56	3	65920150	SHCS 1/4-20 X 1 1/2
55	2	60108014	"O" RING
54	1	67200007	MUFFLER
53	1	67100142	90° EL.BOW
52	1	67100141	PIPE NIPPLE
51	1	31702182	QUICK EXHAUST MANIFOLD
50	1	31500445	QUICK EXHAUST COVER
49	1	68000000	QUICK EXHAUST
48	1	31900641	QUICK EXHAUST MTG. BRKT.
47	1	36300009	QUICK EXHAUST FITTING
46	1	39900175	INLET LABEL
45	1	39900248	BLADE ADJUST LABEL
44	1	69400052	SPRING PLUNGER
43	2	62137200	SPIRAL PIN
42	1	62412100	ROLL PIN 1/8 X 1
41	3	62412075	ROLL PIN 1/8 X 3/4
40	2	60910031	RETAINING RING
39	1	69280240	PLUG
38	2	31701441	PISTON WEAR PLATE
37	4	37500013	SPRING
36	2	37500128	SPRING
35	2	60108109	"O" RING
34	2	60108241	"O" RING
33	2	36200028	STOCK GUIDE NUT
32	2	33900243	STOCK GUIDE SLEEVE
31	2	34200240	STOCK GUIDE ROLLER
30	2	36600024	HANDLE
29	4	64100041	BUSHING
28	2	60108207	"O" RING
27	2	65600007	INSERT
26	2	36700040	KNDB
25	1	33900242	POINTER SLEEVE
24	1	34100020	SPACER
23	1	36500037	CAM
22	2	32900600	BLADE ADJ. SHAFT
21	1	32900599	CAM SHAFT
20	2	32900598	GUIDE SHAFT
19	2	23500077	PISTON
18	2	35900045	LOWER BUMPER
17	2	35900044	UPPER BUMPER
16	1	31701617	PRDX. MOUNTING PLATE
15	1	31701616	CAM SHAFT MOUNTING PLATE
14	1	21900279	REAR GUARD ASSEMBLY
13	1	21900278	FRONT GUARD ASSEMBLY
12	1	31500442	SCRAP CHUTE
11	1	31702210	STRIPPER PLATE
10	2	32200014	BLADE
9	1	31702209	BLADE SUPPORT PLATE
8	1	31702208	T-SLOT PLATE
7	1	31701612	RH. BEARING PLATE
6	1	31701611	LH. BEARING PLATE
5	1	30100303	BLADE HOUSING
4	1	30100302	PISTON HOUSING
3	1	31701610	RH. SIDE PLATE
2	1	31701609	LH. SIDE PLATE
1	1	31702207	BASE PLATE



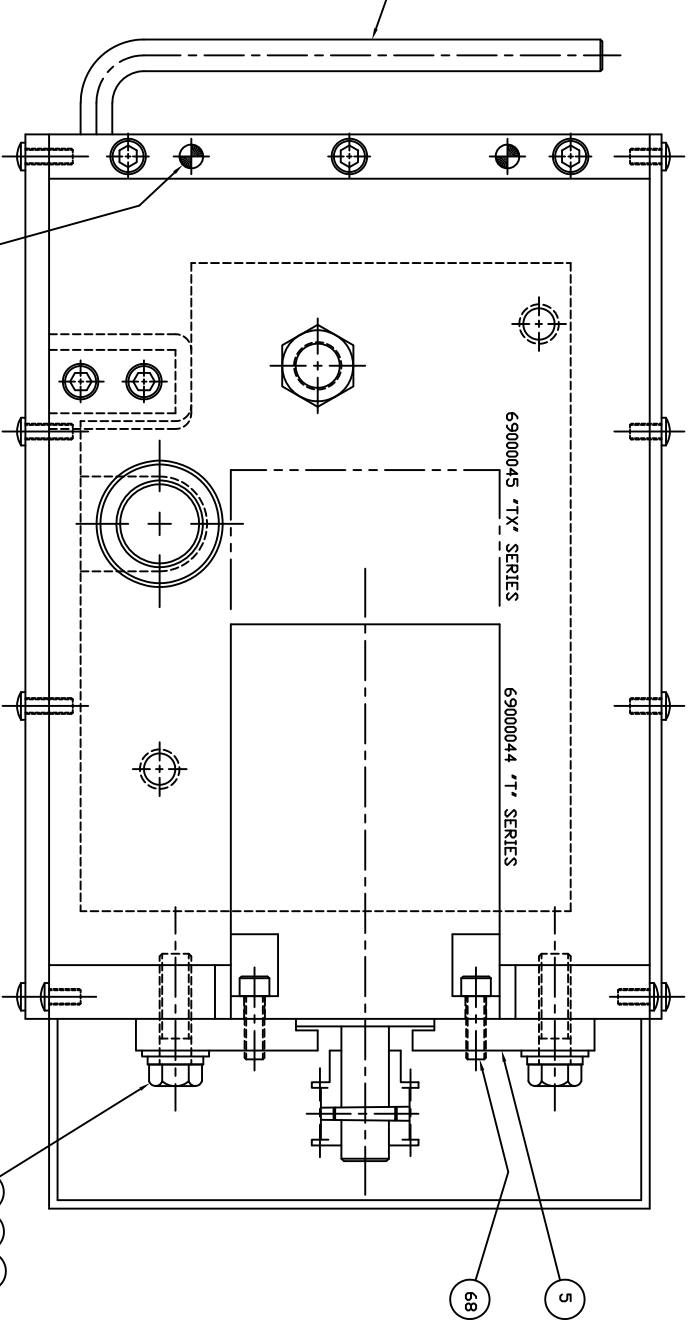
NOTE: FSC6S FOR SERVO C-T-L, CONTROL
VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

RAPID-AIR CORPORATION
ROCKFORD, IL • MADISON, SD

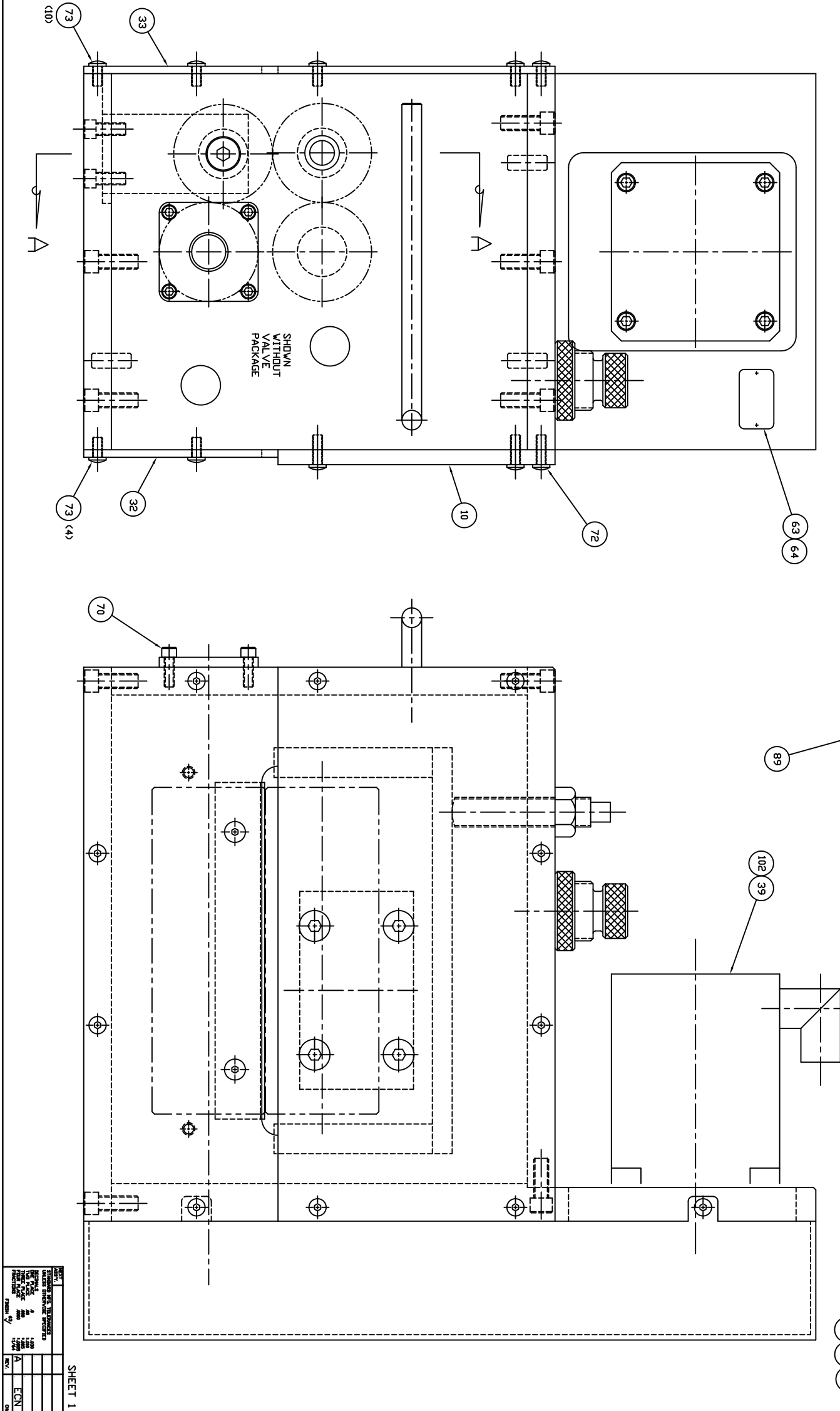
FORM # FSC6S CUTTER W/PNP SENSOR FOR SERVO C-T-L

REV. 1	DATE	BY	CHKD.	APP'D.
1	11/18/83	EDN HSS71		
2	11/18/83	EDN HSS71		
3	11/18/83	EDN HSS71		
4	11/18/83	EDN HSS71		
5	11/18/83	EDN HSS71		
6	11/18/83	EDN HSS71		
7	11/18/83	EDN HSS71		
8	11/18/83	EDN HSS71		
9	11/18/83	EDN HSS71		
10	11/18/83	EDN HSS71		
11	11/18/83	EDN HSS71		
12	11/18/83	EDN HSS71		
13	11/18/83	EDN HSS71		
14	11/18/83	EDN HSS71		
15	11/18/83	EDN HSS71		
16	11/18/83	EDN HSS71		
17	11/18/83	EDN HSS71		
18	11/18/83	EDN HSS71		
19	11/18/83	EDN HSS71		
20	11/18/83	EDN HSS71		
21	11/18/83	EDN HSS71		
22	11/18/83	EDN HSS71		
23	11/18/83	EDN HSS71		
24	11/18/83	EDN HSS71		
25	11/18/83	EDN HSS71		
26	11/18/83	EDN HSS71		
27	11/18/83	EDN HSS71		
28	11/18/83	EDN HSS71		
29	11/18/83	EDN HSS71		
30	11/18/83	EDN HSS71		
31	11/18/83	EDN HSS71		
32	11/18/83	EDN HSS71		
33	11/18/83	EDN HSS71		
34	11/18/83	EDN HSS71		
35	11/18/83	EDN HSS71		
36	11/18/83	EDN HSS71		
37	11/18/83	EDN HSS71		
38	11/18/83	EDN HSS71		
39	11/18/83	EDN HSS71		
40	11/18/83	EDN HSS71		
41	11/18/83	EDN HSS71		
42	11/18/83	EDN HSS71		
43	11/18/83	EDN HSS71		
44	11/18/83	EDN HSS71		
45	11/18/83	EDN HSS71		
46	11/18/83	EDN HSS71		
47	11/18/83	EDN HSS71		
48	11/18/83	EDN HSS71		
49	11/18/83	EDN HSS71		
50	11/18/83	EDN HSS71		
51	11/18/83	EDN HSS71		
52	11/18/83	EDN HSS71		
53	11/18/83	EDN HSS71		
54	11/18/83	EDN HSS71		
55	11/18/83	EDN HSS71		
56	11/18/83	EDN HSS71		
57	11/18/83	EDN HSS71		
58	11/18/83	EDN HSS71		
59	11/18/83	EDN HSS71		
60	11/18/83	EDN HSS71		
61	11/18/83	EDN HSS71		
62	11/18/83	EDN HSS71		
63	11/18/83	EDN HSS71		
64	11/18/83	EDN HSS71		
65	11/18/83	EDN HSS71		
66	11/18/83	EDN HSS71		
67	11/18/83	EDN HSS71		
68	11/18/83	EDN HSS71		
69	11/18/83	EDN HSS71		
70	11/18/83	EDN HSS71		
71	11/18/83	EDN HSS71		
72	11/18/83	EDN HSS71		
73	11/18/83	EDN HSS71		
74	11/18/83	EDN HSS71		
75	11/18/83	EDN HSS71		
76	11/18/83	EDN HSS71		
77	11/18/83	EDN HSS71		
78	11/18/83	EDN HSS71		
79	11/18/83	EDN HSS71		
80	11/18/83	EDN HSS71		
81	11/18/83	EDN HSS71		
82	11/18/83	EDN HSS71		

ITEM QTY	PART NO.	DESCRIPTION
104	2	65920125 SHCS 1/4-20 X 1 1/4
103	1	60108014 'O' RING
102	1	28900446 CONTRL ASSEMBLY
101	1	32500045 TAPER PIN INSTALLATION
100	2	60900185 RETAINING RING
99	2	60910098 RETAINING RING
98	2	60910112 RETAINING RING
97	1	60910087 RETAINING RING
96	1	60910050 RETAINING RING
95	1	60108230 'O' RING
94	1	60108228 'O' RING
93	1	60108212 'O' RING
92	2	61300050 LCKD WASHER 1/2
91	2	61200034 FLAT WASHER 1/2
90	3	62425100 ROLL PIN
89	8	62337100 DOWEL PIN 3/8 X 1
88	2	62137150 SPIRAL PIN
87	1	62500006 TAPER PIN
86	1	36800013 KEY
85	1	36800006 KEY
84	1	36800021 KEY
83	1	37500117 SPRING
82	2	63130250 PIPE PLUG
81	1	66700072 SET SCREW
80	4	66620037 SET SCREW



79	1	66162200 SHOULDER SCREW
78	4	66137075 SHOULDER SCREW
77	1	36300004 GAUGE FITTING
76	2	65931075 SHCS 5/16-18 X 3/4
75	2	65936075 SHCS 3/8-16 X 3/4
74	4	66536100 BHSCS 3/8-16 X 1
73	14	66620050 BHSCS 1/4-20 X 1/2
72	6	66620075 BHSCS 1/4-20 X 3/4
71	1	69200032 VAL VE
70	4	65920075 SHCS 1/4-20 X 3/4
69	4	66520062 FHSCS 1/4-20 X 5/8
68	4	65931100 SHCS 5/16-18 X 1
67	2	65853150 HEX BOLT 1/2-13 X 1 1/2
66	12	65936100 SHCS 3/8-16 X 1
65	4	66520050 FHSCS 1/4-20 X 1/2
64	2	66300250 DRIVE SCREW
63	1	39900051 S/N TAG
62	1	39900246 RAPID-AIR LOGO
61	1	68000024 REGULATOR
60	1	31500493 ENTRANCE GUIDE
59	1	31500492 EXIT GUIDE
58	1	68000026 GAUGE
57	1	31702137 REGULATOR RETAINING PLATE
56	1	34100236 GAUGE SPACER
55	1	31702113 GAUGE & REGULATOR PLATE
54	1	10900506 CASCADE ASSEMBLY
53	4	65102520 HEX NUT 1/4-20
52	1	65117516 JAM NUT 3/4-16
51	1	36200031 ADJUSTING SCREW LOCKNUT
50	1	36100078 ADJUSTING SCREW
49	1	36100104 POSITIVE STOP SCREW
48	1	64520022 THRUST WASHER
47	2	64520025 THRUST WASHER
46	8	64520008 THRUST WASHER
45	4	64510002 THRUST BEARING
44	2	64500057 NEEDLE BEARING
43	2	64500066 NEEDLE BEARING
42	2	64600049 BALL BEARING
41	1	64100046 DILLITE BUSHING
40	1	64100075 DILLITE BUSHING
39	1	69000044 MOTOR
38	1	36500045 CAM
37	1	36600036 CAM HANDLE
36	1	35500231 PISTON
35	1	31702112 MANIFOLD PLATE
34	1	31400550 PISTON COVER
33	1	31500491 ENTRANCE GUARD
32	1	31500490 LOWER EXIT GUARD
31	1	34100325 SPACER
30	1	34100381 SPACER
29	1	34100323 SPACER
28	2	34100322 SPACER
27	2	34100321 ROLLER SPACER
26	2	33900265 BEARING SLEEVE
25	1	32900858 ECCENTRIC SHAFT
24	1	32900859 PIVOT SHAFT
23	1	31500489 BELT COVER
22	1	32500046 TIMING BELT
21	1	32500036 BUSHING (FOR 32500029)
20	1	32500029 PULLEY (LOWER ROLL)
19	1	32500044 MOTOR PULLEY
18	2	32600233 UPPER IDLER SPUR GEAR
17	2	32600232 LOWER IDLER SPUR GEAR
16	1	32600292 UPPER ROLLER SPUR GEAR
15	1	32600235 LOWER ROLLER SPUR GEAR
14	1	34200385 UPPER ROLLER
13	1	34200384 LOWER ROLLER
12	1	30100290 BEARING HOUSING
11	1	30100292 PISTON HOUSING
10	1	31702474 PISTON HOUSING MOUNTING PLATE
9	1	31702115 GEAR SUPPORT PLATE
8	1	31702111 CAM PIVOT PLATE
7	1	31702116 ROLLER TOP PLATE
6	2	31702106 ROLLER SIDE PLATE
5	1	31702473 MOTOR MOUNTING PLATE
4	1	31702472 TOP PLATE
3	1	31702471 L.H. SIDE PLATE
2	1	31702470 R.H. SIDE PLATE
1	1	31702469 BOTTOM PLATE

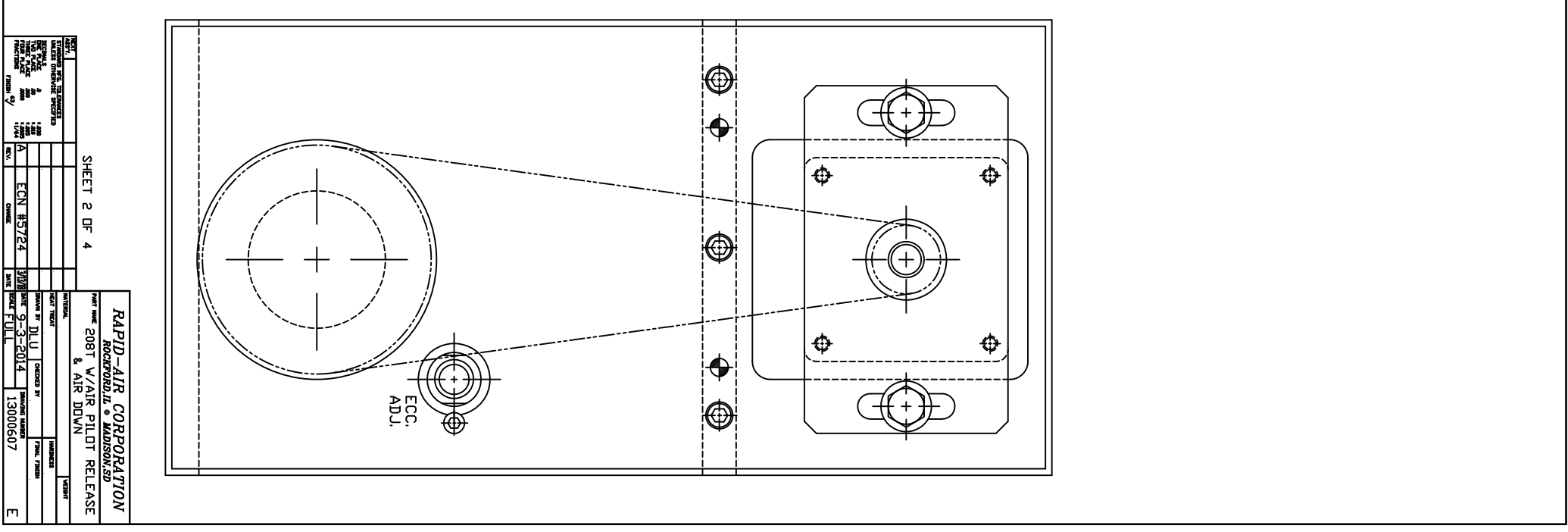
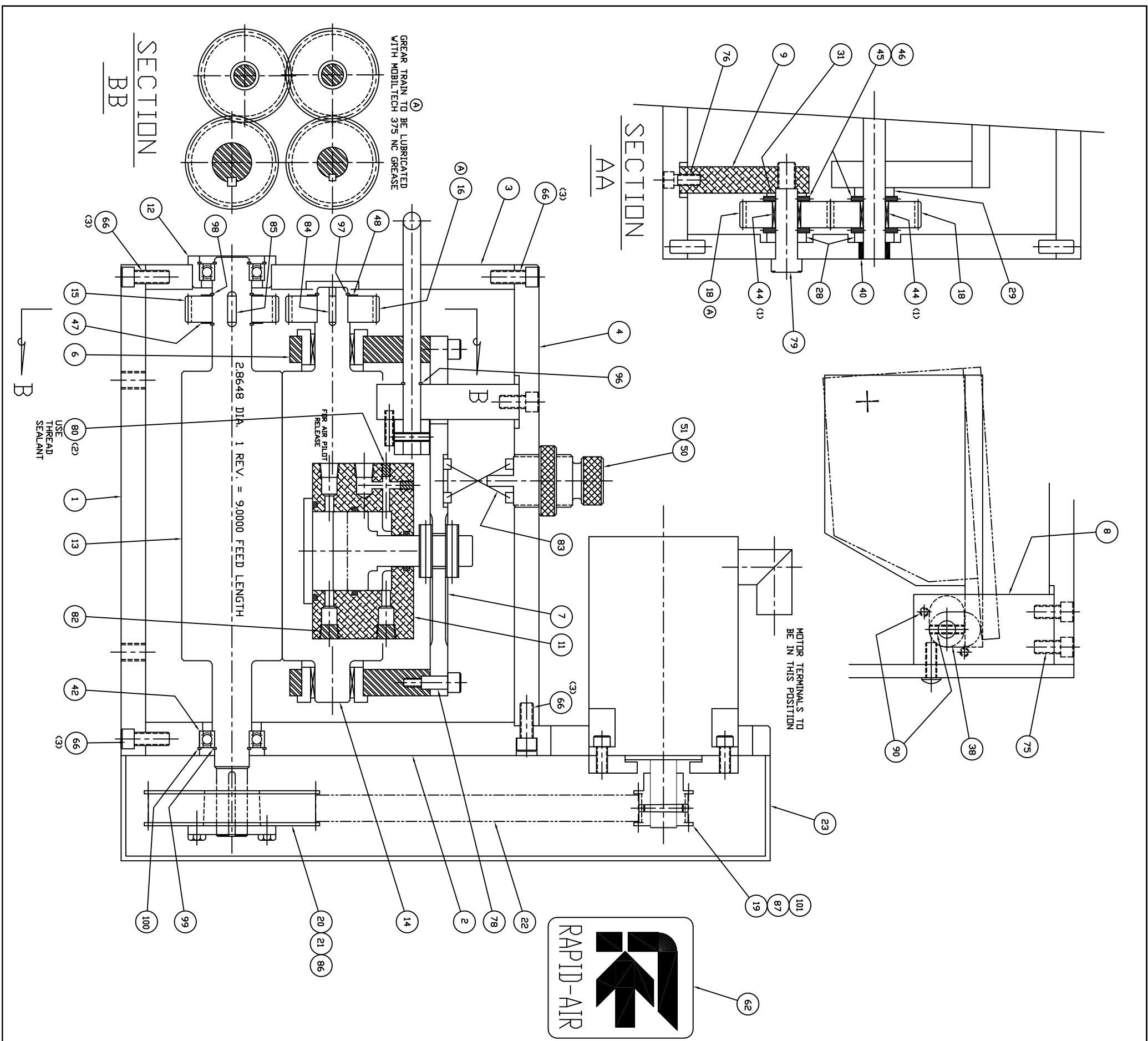


ITEM QTY	PART NO.	DESCRIPTION
79	1	66162200 SHOULDER SCREW
78	4	66137075 SHOULDER SCREW
77	1	36300004 GAUGE FITTING
76	2	65931075 SHCS 5/16-18 X 3/4
75	2	65936075 SHCS 3/8-16 X 3/4
74	4	66536100 BHSCS 3/8-16 X 1
73	14	66620050 BHSCS 1/4-20 X 1/2
72	6	66620075 BHSCS 1/4-20 X 3/4
71	1	69200032 VAL VE
70	4	65920075 SHCS 1/4-20 X 3/4
69	4	66520062 FHSCS 1/4-20 X 5/8
68	4	65931100 SHCS 5/16-18 X 1
67	2	65853150 HEX BOLT 1/2-13 X 1 1/2
66	12	65936100 SHCS 3/8-16 X 1
65	4	66520050 FHSCS 1/4-20 X 1/2
64	2	66300250 DRIVE SCREW
63	1	39900051 S/N TAG
62	1	39900246 RAPID-AIR LOGO
61	1	68000024 REGULATOR
60	1	31500493 ENTRANCE GUIDE
59	1	31500492 EXIT GUIDE
58	1	68000026 GAUGE
57	1	31702137 REGULATOR RETAINING PLATE
56	1	34100236 GAUGE SPACER
55	1	31702113 GAUGE & REGULATOR PLATE
54	1	10900506 CASCADE ASSEMBLY
53	4	65102520 HEX NUT 1/4-20
52	1	65117516 JAM NUT 3/4-16
51	1	36200031 ADJUSTING SCREW LOCKNUT
50	1	36100078 ADJUSTING SCREW
49	1	36100104 POSITIVE STOP SCREW
48	1	64520022 THRUST WASHER
47	2	64520025 THRUST WASHER
46	8	64520008 THRUST WASHER
45	4	64510002 THRUST BEARING
44	2	64500057 NEEDLE BEARING
43	2	64500066 NEEDLE BEARING
42	2	64600049 BALL BEARING
41	1	64100046 DILLITE BUSHING
40	1	64100075 DILLITE BUSHING
39	1	69000044 MOTOR
38	1	36500045 CAM
37	1	36600036 CAM HANDLE
36	1	35500231 PISTON
35	1	31702112 MANIFOLD PLATE
34	1	31400550 PISTON COVER
33	1	31500491 ENTRANCE GUARD
32	1	31500490 LOWER EXIT GUARD
31	1	34100325 SPACER
30	1	34100381 SPACER
29	1	34100323 SPACER
28	2	34100322 SPACER
27	2	34100321 ROLLER SPACER
26	2	33900265 BEARING SLEEVE
25	1	32900858 ECCENTRIC SHAFT
24	1	32900859 PIVOT SHAFT
23	1	31500489 BELT COVER
22	1	32500046 TIMING BELT
21	1	32500036 BUSHING (FOR 32500029)
20	1	32500029 PULLEY (LOWER ROLL)
19	1	32500044 MOTOR PULLEY
18	2	32600233 UPPER IDLER SPUR GEAR
17	2	32600232 LOWER IDLER SPUR GEAR
16	1	32600292 UPPER ROLLER SPUR GEAR
15	1	32600235 LOWER ROLLER SPUR GEAR
14	1	34200385 UPPER ROLLER
13	1	34200384 LOWER ROLLER
12	1	30100290 BEARING HOUSING
11	1	30100292 PISTON HOUSING
10	1	31702474 PISTON HOUSING MOUNTING PLATE
9	1	31702115 GEAR SUPPORT PLATE
8	1	31702111 CAM PIVOT PLATE
7	1	31702116 ROLLER TOP PLATE
6	2	31702106 ROLLER SIDE PLATE
5	1	31702473 MOTOR MOUNTING PLATE
4	1	31702472 TOP PLATE
3	1	31702471 L.H. SIDE PLATE
2	1	31702470 R.H. SIDE PLATE
1	1	31702469 BOTTOM PLATE

SHEET 1 OF 4

DATE: 12/24/04
 DRAWN BY: JLU
 CHECKED BY:
 APPROVED BY:
 PART NO.: 2881 W/AIR PILOT RELEASE
 REV: 3-2014
 QTY: 13000607
 UNIT: FULL

PART NO.: 2881 W/AIR PILOT RELEASE
 ROCKWELL & MANDSON, SD
 RAPID-AIR CORPORATION
 & AIR DOWN

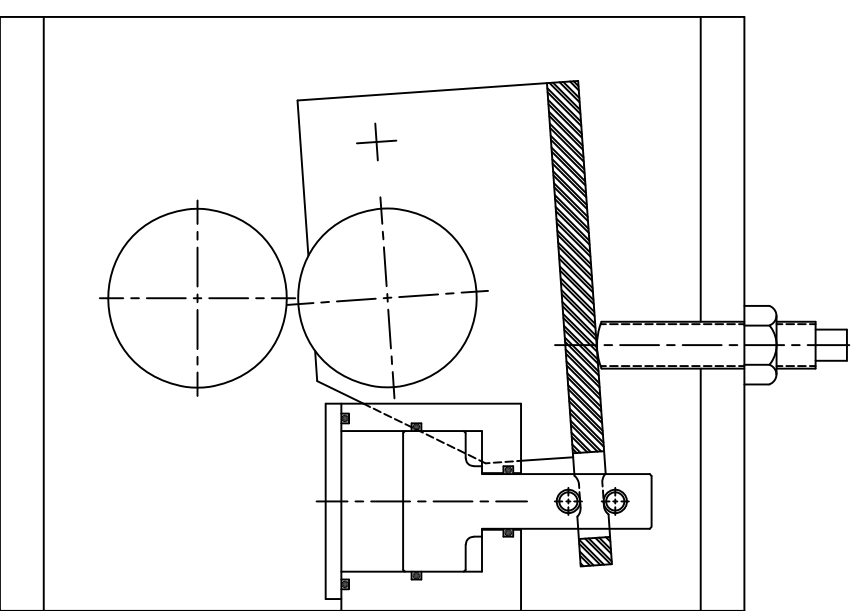
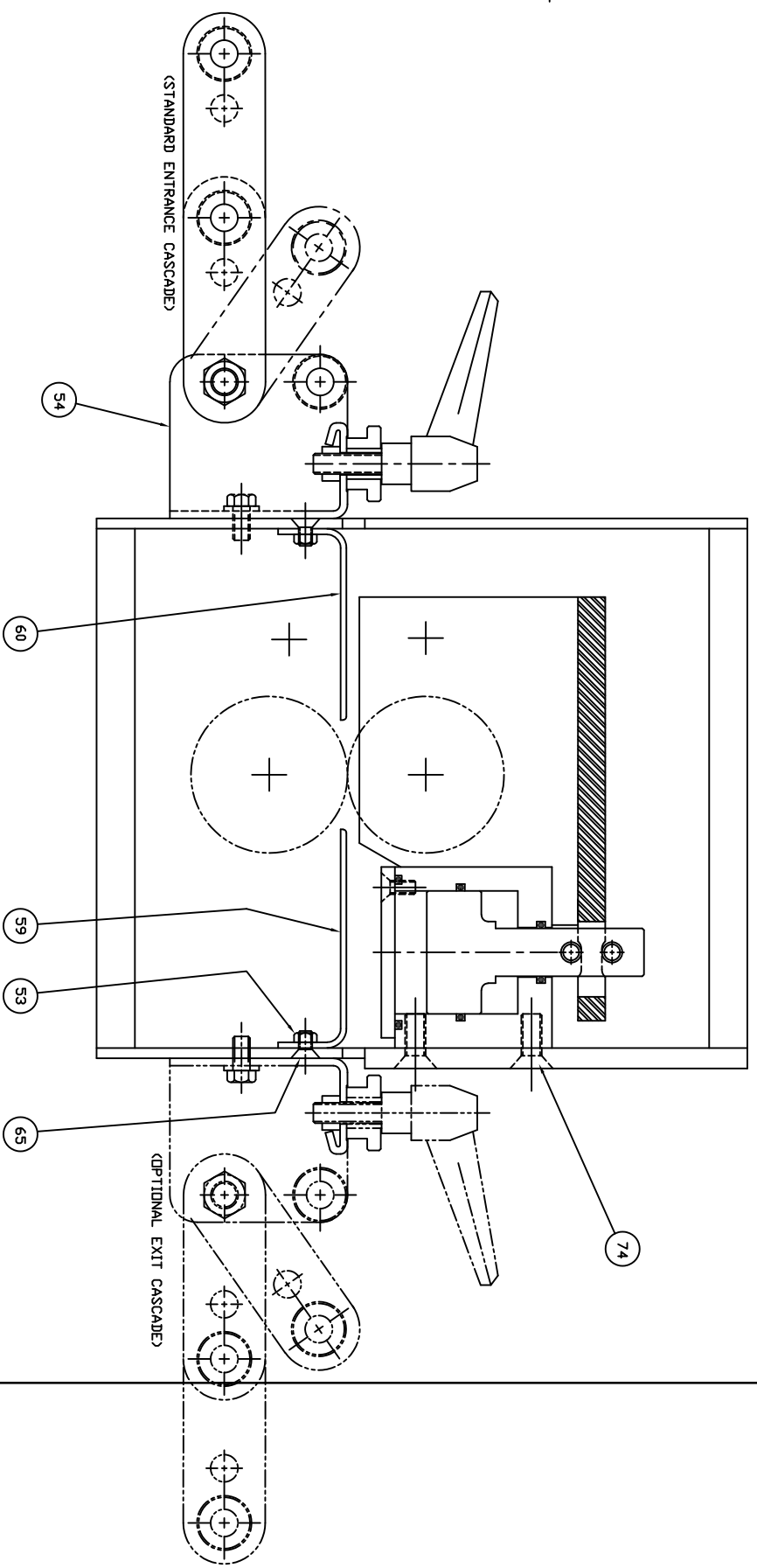
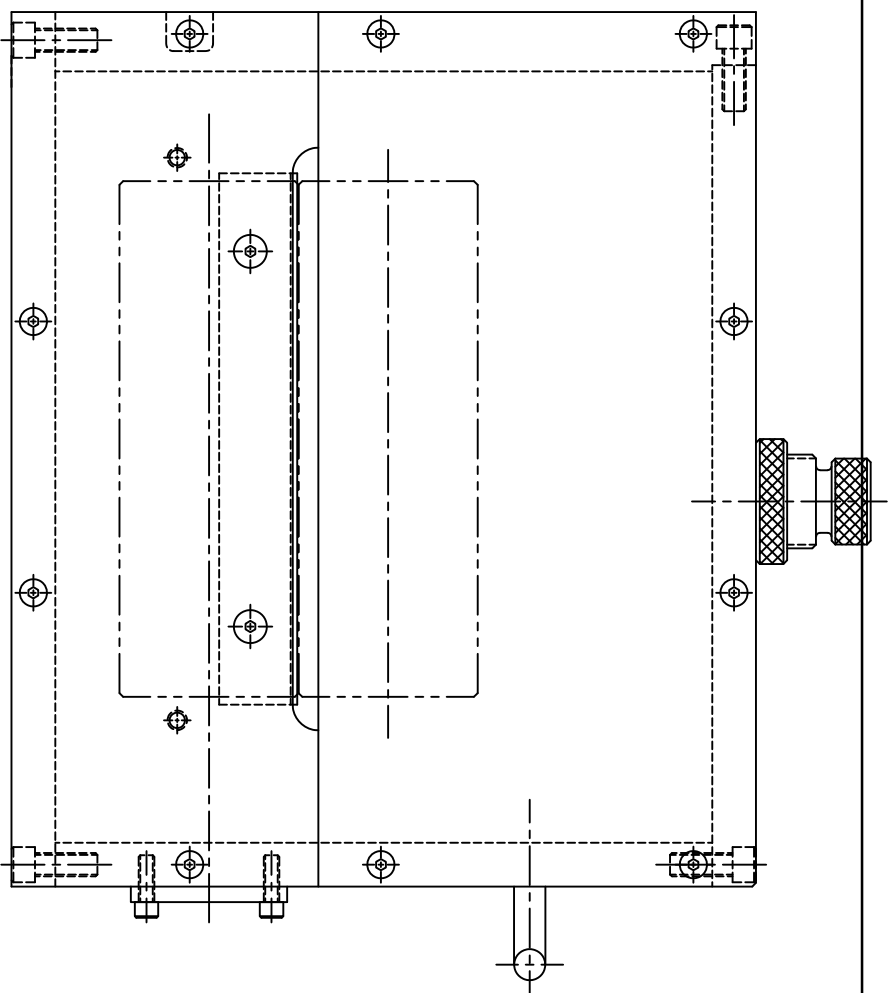


SHEET 2 OF 4

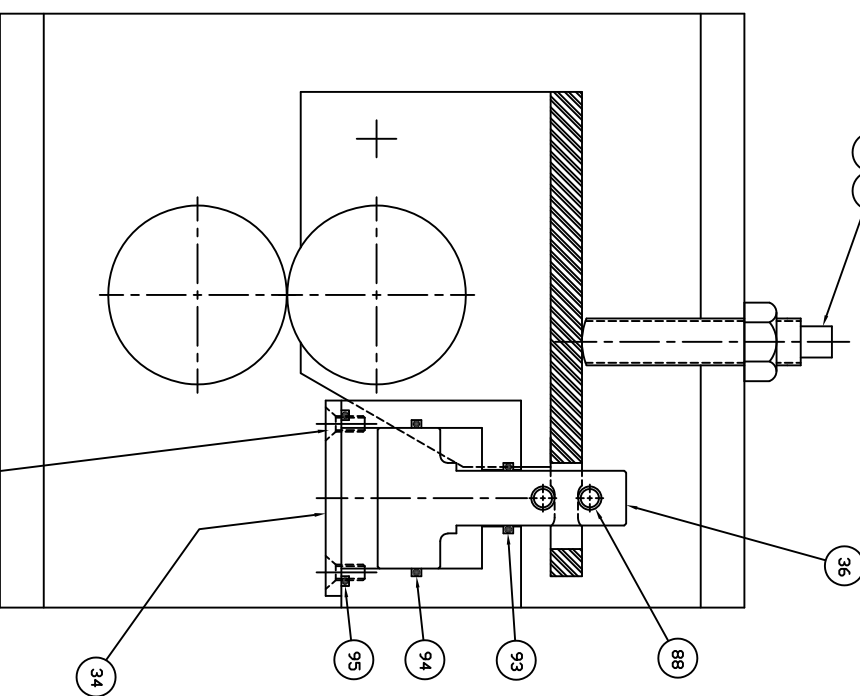
DATE	APPROVED	DESIGNED BY	CHECKED BY
1998	[Signature]	D.L.U.	[Signature]
REV. A	ECN #3724	9/98	9-3-2014
REV. B			

RAPID-AIR CORPORATION
ROCKFORD, IL • WADSWORTH, SD
2081 W/AIR PLOTT RELEASE & AIR DOWN

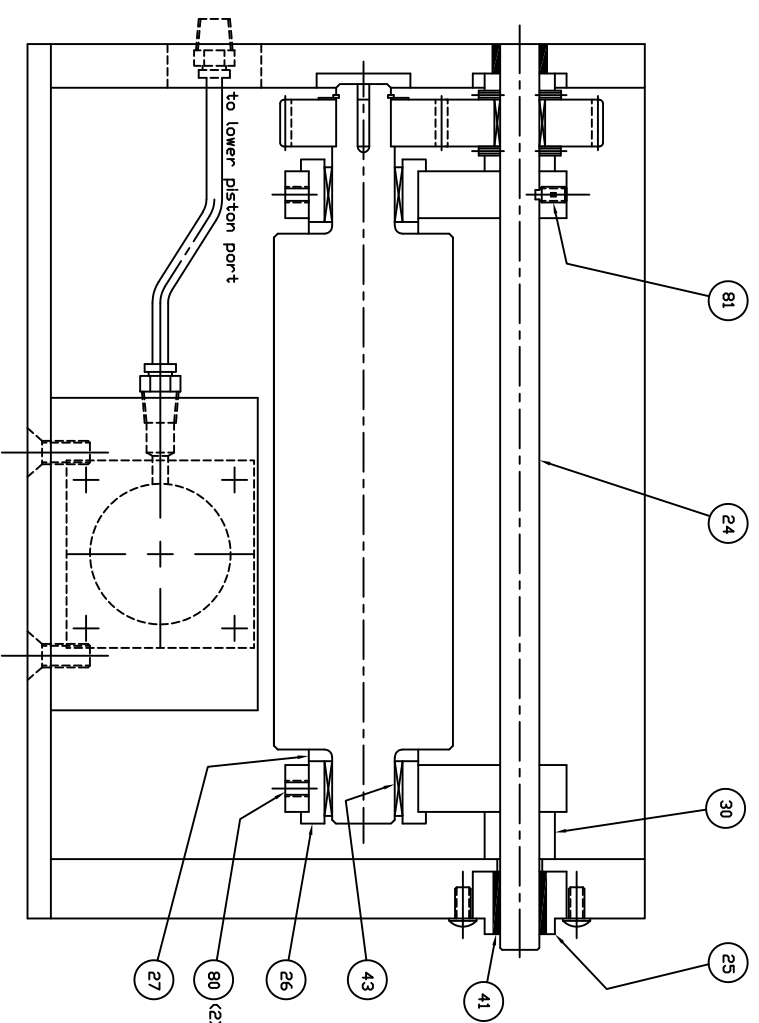
13000607



ROLLERS OPEN



ROLLERS CLOSED

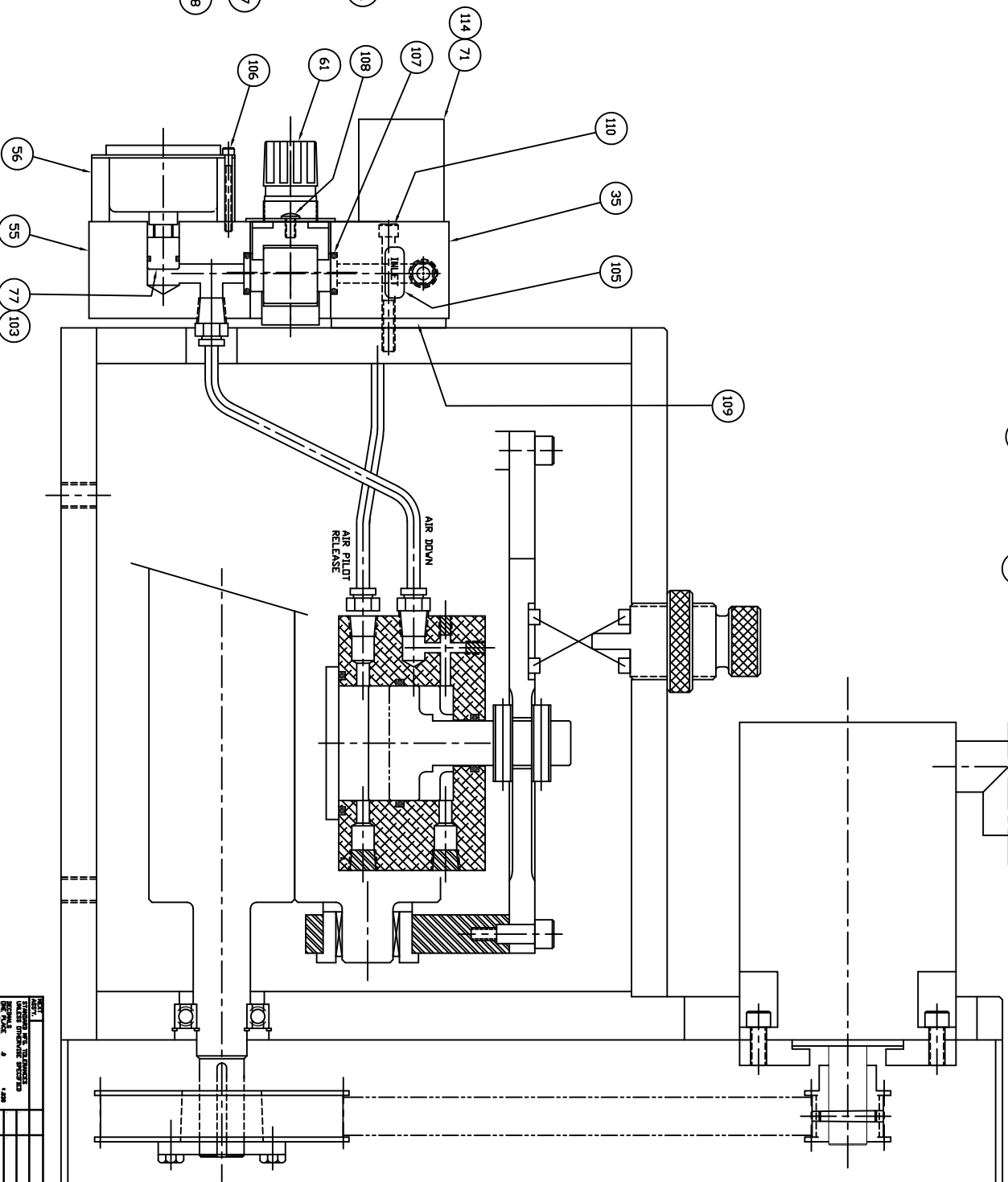
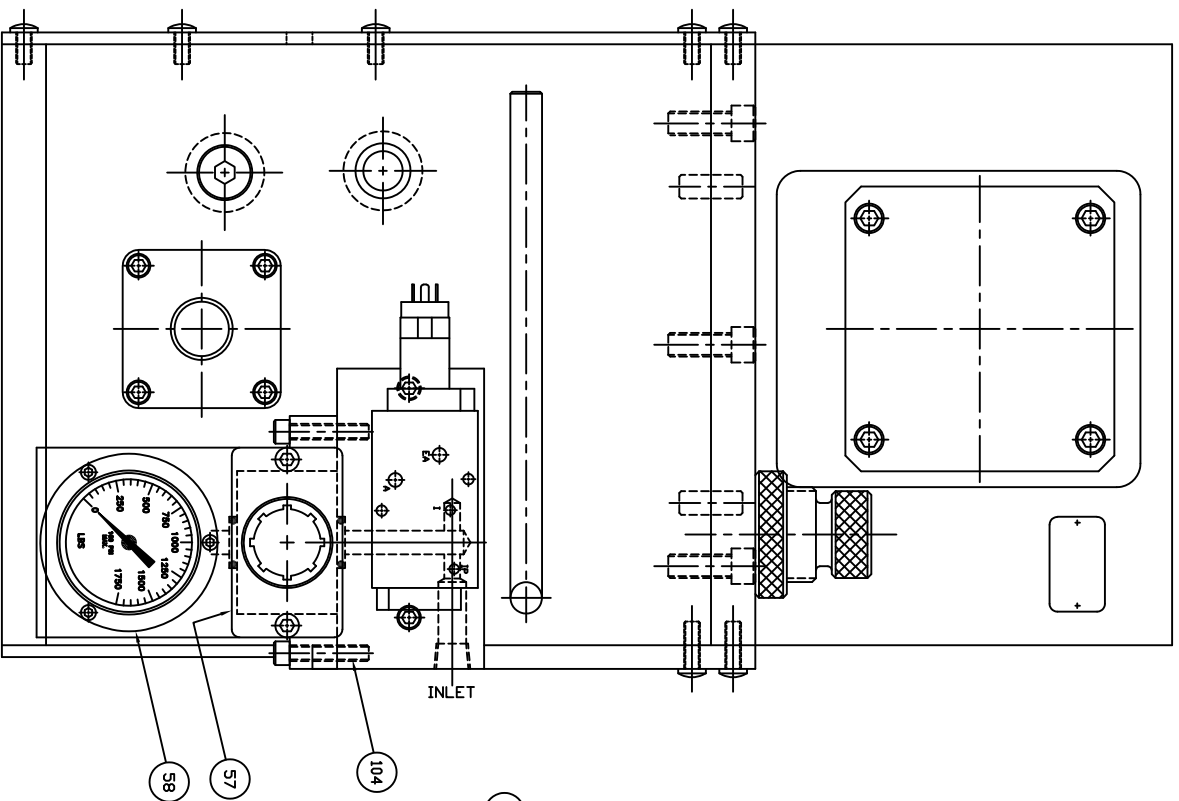
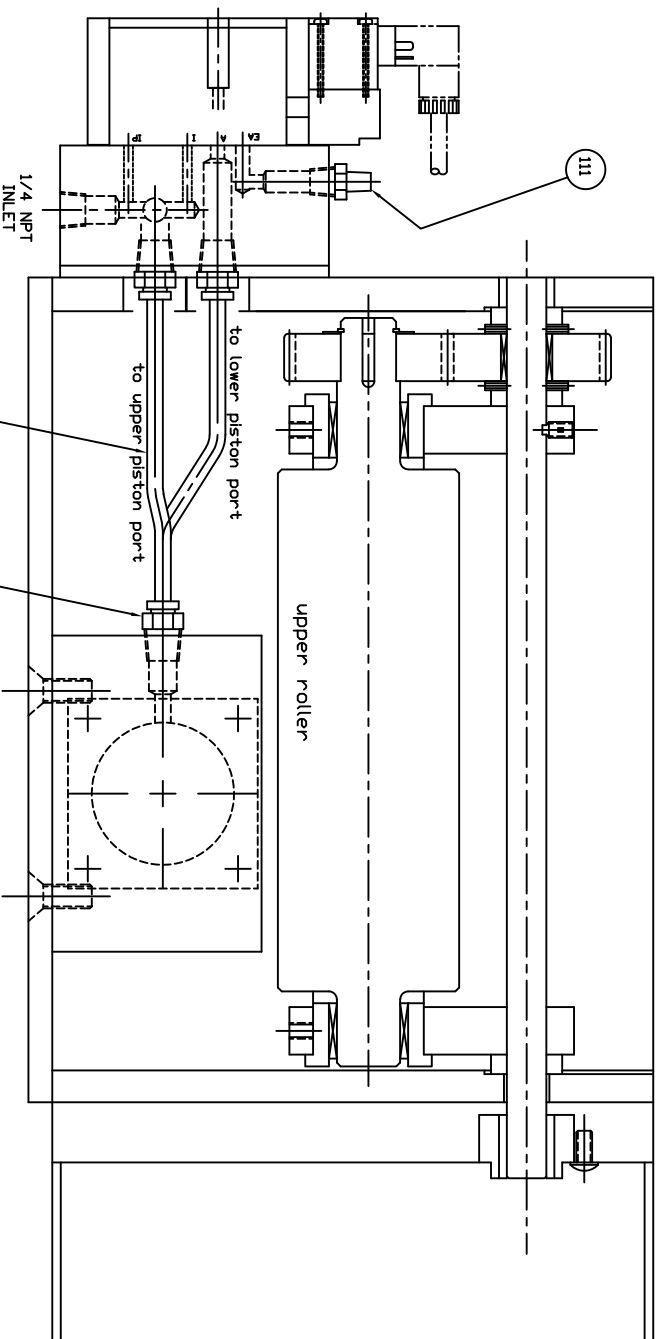


REV	DATE	BY	CHKD	DESCRIPTION
1	10/10/03	DLU	DLU	ISSUED FOR PRODUCTION
2	10/10/03	DLU	DLU	REVISION
3	10/10/03	DLU	DLU	REVISION
4	10/10/03	DLU	DLU	REVISION
5	10/10/03	DLU	DLU	REVISION
6	10/10/03	DLU	DLU	REVISION
7	10/10/03	DLU	DLU	REVISION
8	10/10/03	DLU	DLU	REVISION
9	10/10/03	DLU	DLU	REVISION
10	10/10/03	DLU	DLU	REVISION
11	10/10/03	DLU	DLU	REVISION
12	10/10/03	DLU	DLU	REVISION
13	10/10/03	DLU	DLU	REVISION
14	10/10/03	DLU	DLU	REVISION
15	10/10/03	DLU	DLU	REVISION
16	10/10/03	DLU	DLU	REVISION
17	10/10/03	DLU	DLU	REVISION
18	10/10/03	DLU	DLU	REVISION
19	10/10/03	DLU	DLU	REVISION
20	10/10/03	DLU	DLU	REVISION
21	10/10/03	DLU	DLU	REVISION
22	10/10/03	DLU	DLU	REVISION
23	10/10/03	DLU	DLU	REVISION
24	10/10/03	DLU	DLU	REVISION
25	10/10/03	DLU	DLU	REVISION
26	10/10/03	DLU	DLU	REVISION
27	10/10/03	DLU	DLU	REVISION
28	10/10/03	DLU	DLU	REVISION
29	10/10/03	DLU	DLU	REVISION
30	10/10/03	DLU	DLU	REVISION
31	10/10/03	DLU	DLU	REVISION
32	10/10/03	DLU	DLU	REVISION
33	10/10/03	DLU	DLU	REVISION
34	10/10/03	DLU	DLU	REVISION
35	10/10/03	DLU	DLU	REVISION
36	10/10/03	DLU	DLU	REVISION
37	10/10/03	DLU	DLU	REVISION
38	10/10/03	DLU	DLU	REVISION
39	10/10/03	DLU	DLU	REVISION
40	10/10/03	DLU	DLU	REVISION
41	10/10/03	DLU	DLU	REVISION
42	10/10/03	DLU	DLU	REVISION
43	10/10/03	DLU	DLU	REVISION
44	10/10/03	DLU	DLU	REVISION
45	10/10/03	DLU	DLU	REVISION
46	10/10/03	DLU	DLU	REVISION
47	10/10/03	DLU	DLU	REVISION
48	10/10/03	DLU	DLU	REVISION
49	10/10/03	DLU	DLU	REVISION
50	10/10/03	DLU	DLU	REVISION
51	10/10/03	DLU	DLU	REVISION
52	10/10/03	DLU	DLU	REVISION
53	10/10/03	DLU	DLU	REVISION
54	10/10/03	DLU	DLU	REVISION
55	10/10/03	DLU	DLU	REVISION
56	10/10/03	DLU	DLU	REVISION
57	10/10/03	DLU	DLU	REVISION
58	10/10/03	DLU	DLU	REVISION
59	10/10/03	DLU	DLU	REVISION
60	10/10/03	DLU	DLU	REVISION
61	10/10/03	DLU	DLU	REVISION
62	10/10/03	DLU	DLU	REVISION
63	10/10/03	DLU	DLU	REVISION
64	10/10/03	DLU	DLU	REVISION
65	10/10/03	DLU	DLU	REVISION
66	10/10/03	DLU	DLU	REVISION
67	10/10/03	DLU	DLU	REVISION
68	10/10/03	DLU	DLU	REVISION
69	10/10/03	DLU	DLU	REVISION
70	10/10/03	DLU	DLU	REVISION
71	10/10/03	DLU	DLU	REVISION
72	10/10/03	DLU	DLU	REVISION
73	10/10/03	DLU	DLU	REVISION
74	10/10/03	DLU	DLU	REVISION

SHEET 3 OF 4

RAPID-AIR CORPORATION
 ROCKFORD, IL • MADISON, SD
 & AIR DIVN

PART NAME: 2081 V/AIR PILOT RELEASE
 DATE: 9-3-2014
 DRAWING NO: 13000607
 REV: 1



SHEET 4 OF 4

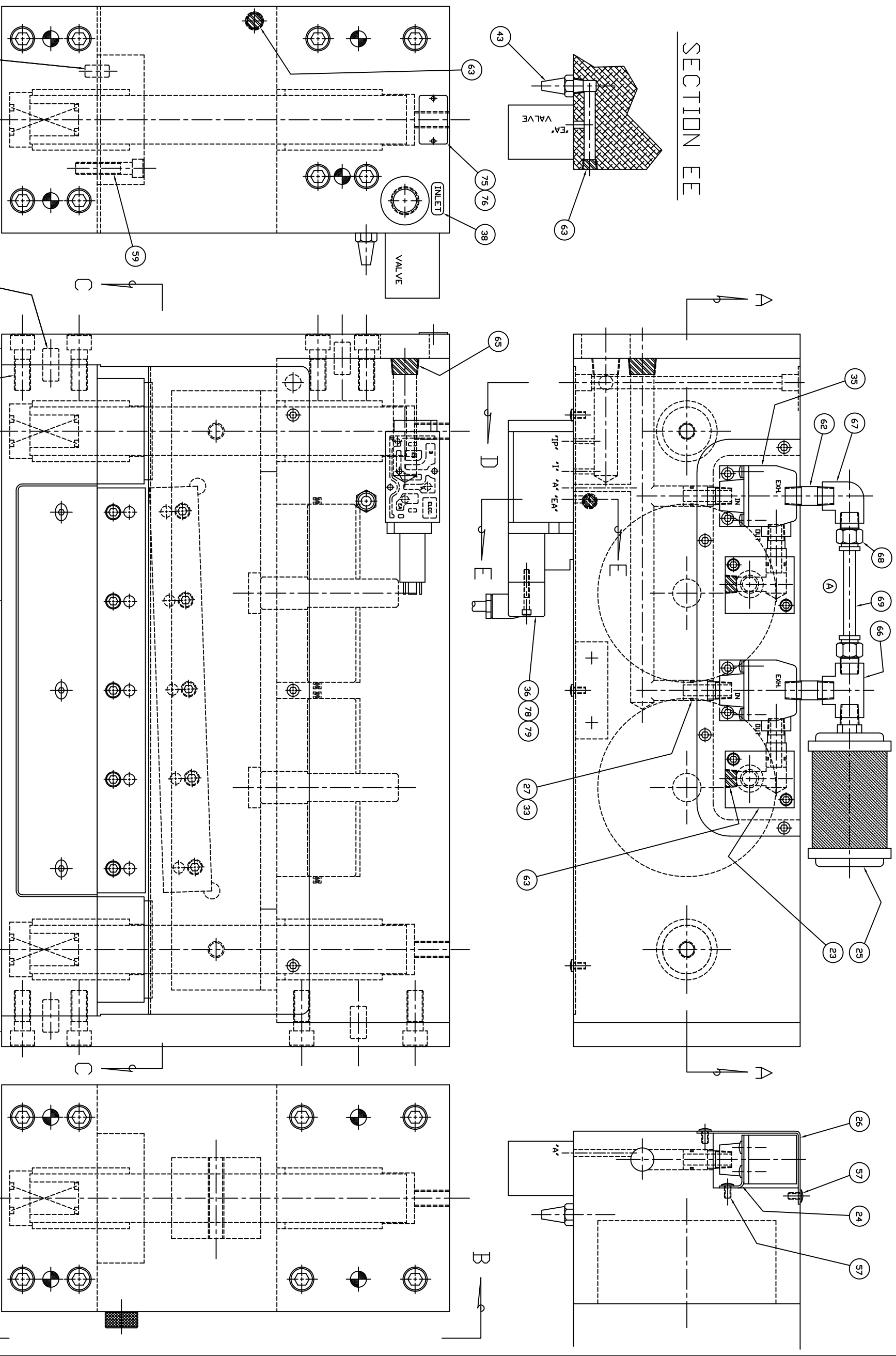
REV.	DATE	BY	CHKD.	DESCRIPTION
1	1/24/88	WJ	WJ	ISSUED FOR MANUFACTURE
2	3/20/88	WJ	WJ	REVISED TO ADD AIR PILOT RELEASE
3	3/20/88	WJ	WJ	REVISED TO ADD AIR DOWN
4	3/20/88	WJ	WJ	REVISED TO ADD AIR PILOT RELEASE
5	3/20/88	WJ	WJ	REVISED TO ADD AIR DOWN
6	3/20/88	WJ	WJ	REVISED TO ADD AIR PILOT RELEASE
7	3/20/88	WJ	WJ	REVISED TO ADD AIR DOWN
8	3/20/88	WJ	WJ	REVISED TO ADD AIR PILOT RELEASE
9	3/20/88	WJ	WJ	REVISED TO ADD AIR DOWN
10	3/20/88	WJ	WJ	REVISED TO ADD AIR PILOT RELEASE
11	3/20/88	WJ	WJ	REVISED TO ADD AIR DOWN
12	3/20/88	WJ	WJ	REVISED TO ADD AIR PILOT RELEASE
13	3/20/88	WJ	WJ	REVISED TO ADD AIR DOWN
14	3/20/88	WJ	WJ	REVISED TO ADD AIR PILOT RELEASE
15	3/20/88	WJ	WJ	REVISED TO ADD AIR DOWN
16	3/20/88	WJ	WJ	REVISED TO ADD AIR PILOT RELEASE
17	3/20/88	WJ	WJ	REVISED TO ADD AIR DOWN
18	3/20/88	WJ	WJ	REVISED TO ADD AIR PILOT RELEASE
19	3/20/88	WJ	WJ	REVISED TO ADD AIR DOWN
20	3/20/88	WJ	WJ	REVISED TO ADD AIR PILOT RELEASE

RAPID-AIR CORPORATION
 ROCKFORD, IL • MADISON, SD
 & AIR DOWN

PART NAME: 2081 W/AIR PILOT RELEASE
 DATE: 3-20-88
 DRAWN BY: WJ
 CHECKED BY: WJ
 PART NUMBER: 13000607

E

SECTION EE

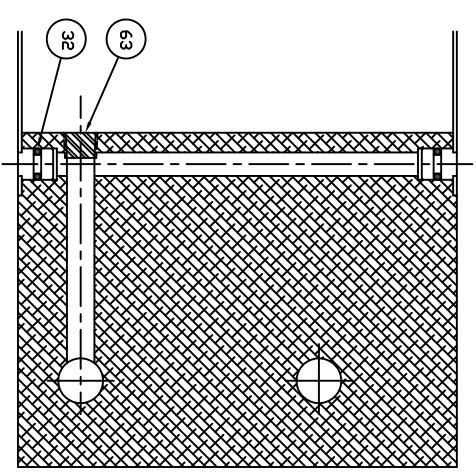
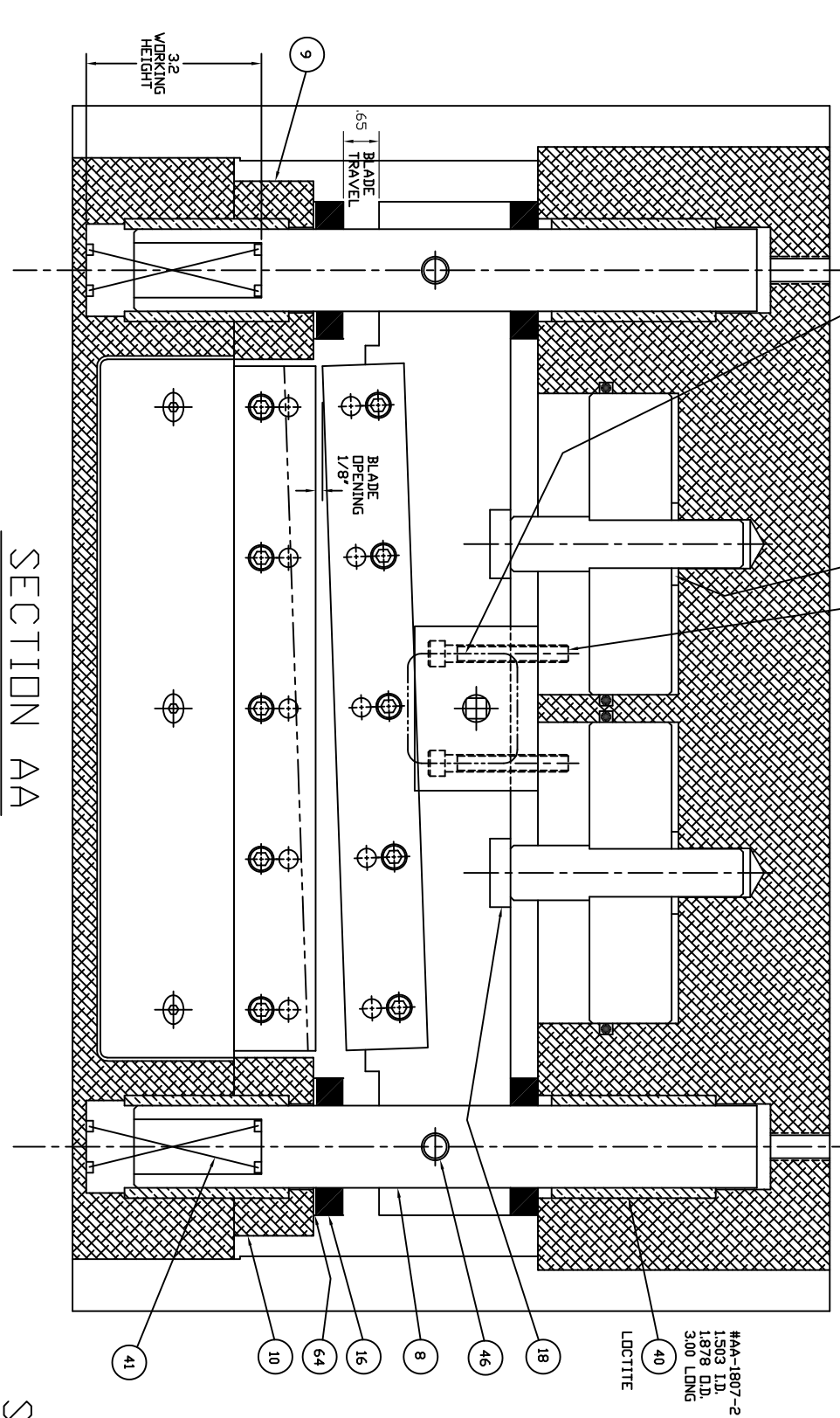
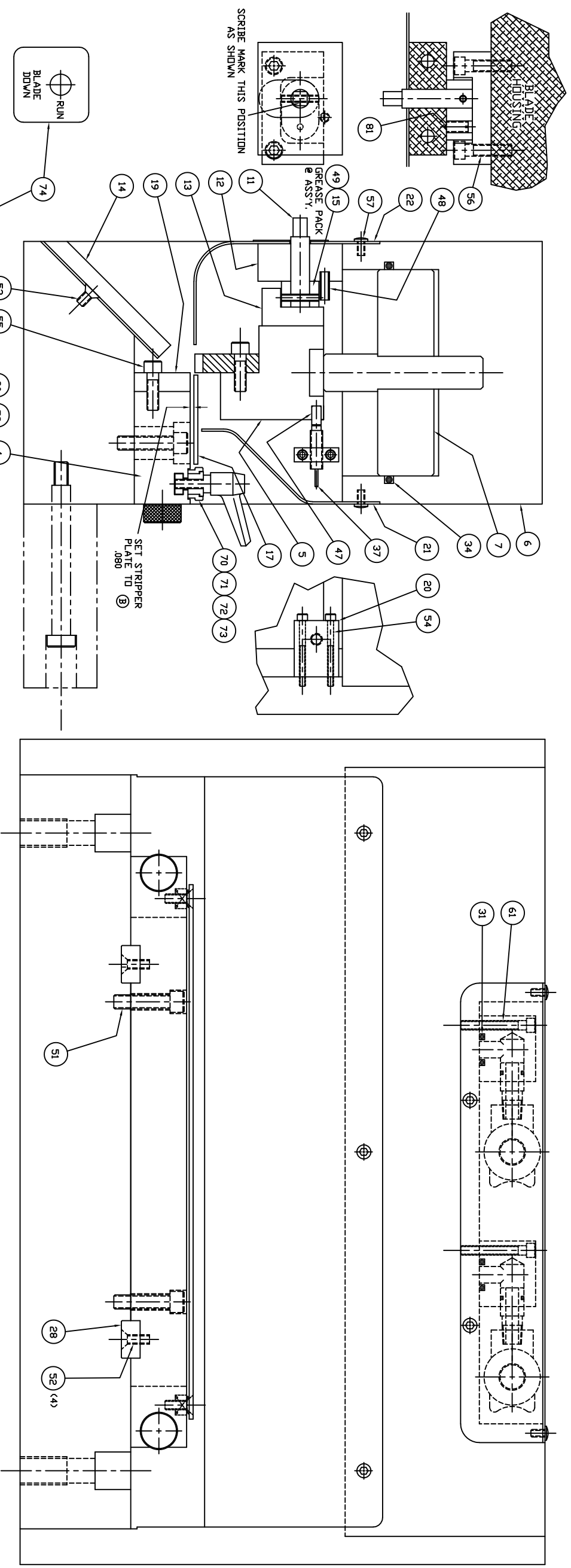


(A) CHANGED ITEM #68 FROM 67100146 TO 67100120
 CHANGED ITEM #69 FROM 67100145 TO 64230011
 PER REQUEST FROM MFG. 5-11-2015

NOTE: FSC125 FOR SERV0 C-T-L, CONTROL
 VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

REVISION		DATE		BY		CHKD	
1	REVISED FOR	11/13/03	11/13/03	SM	SM	SM	SM
2	REVISED FOR	11/13/03	11/13/03	SM	SM	SM	SM
3	REVISED FOR	11/13/03	11/13/03	SM	SM	SM	SM

ITEM #	DESCRIPTION	DATE	BY	CHKD
11300351-352	RAPID-AIR CORPORATION ROCKFORD, IL • MADISON, SD			
11300380	FSC125 CUTTER W/PNP SENSOR FOR SERV0 C-T-L			



VIEW BB

#AA-1807-2
1.503 I.D.
1.878 O.D.
3.00 LENG
LOCTITE

NOTE: FSC12S FOR SERVO C-T-L, CONTROL
VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

SECTION DD

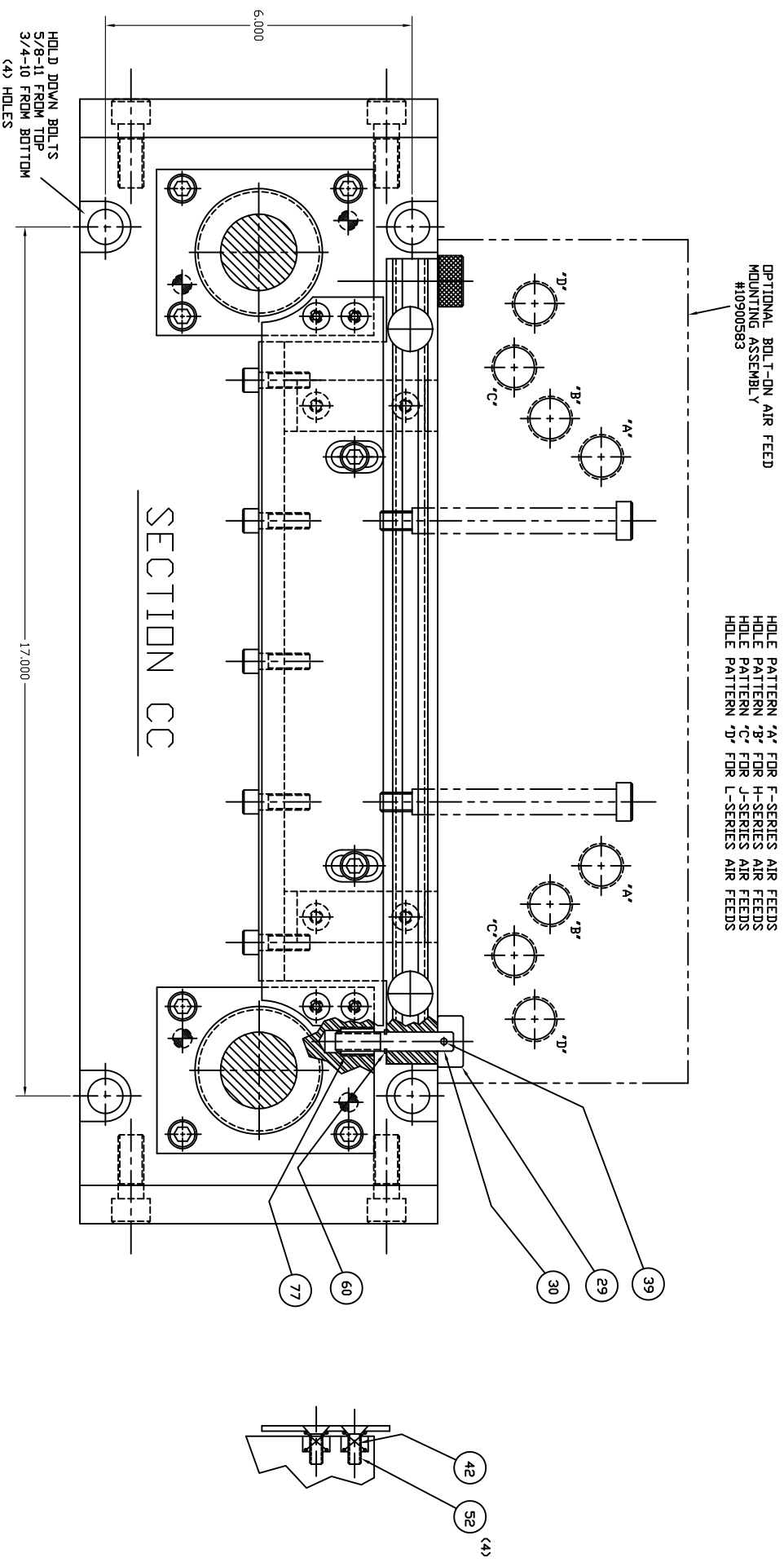
SECTION AA

REV	DATE	BY	CHKD	DESCRIPTION
1				ISSUED FOR MANUFACTURE
2				REVISED TO ADD SECTION DD
3				REVISED TO ADD SECTION BB
4				REVISED TO ADD SECTION AA
5				REVISED TO ADD SECTION DD
6				REVISED TO ADD SECTION BB
7				REVISED TO ADD SECTION AA
8				REVISED TO ADD SECTION DD
9				REVISED TO ADD SECTION BB
10				REVISED TO ADD SECTION AA
11				REVISED TO ADD SECTION DD
12				REVISED TO ADD SECTION BB
13				REVISED TO ADD SECTION AA
14				REVISED TO ADD SECTION DD
15				REVISED TO ADD SECTION BB
16				REVISED TO ADD SECTION AA
17				REVISED TO ADD SECTION DD
18				REVISED TO ADD SECTION BB
19				REVISED TO ADD SECTION AA
20				REVISED TO ADD SECTION DD
21				REVISED TO ADD SECTION BB
22				REVISED TO ADD SECTION AA
23				REVISED TO ADD SECTION DD
24				REVISED TO ADD SECTION BB
25				REVISED TO ADD SECTION AA
26				REVISED TO ADD SECTION DD
27				REVISED TO ADD SECTION BB
28				REVISED TO ADD SECTION AA
29				REVISED TO ADD SECTION DD
30				REVISED TO ADD SECTION BB
31				REVISED TO ADD SECTION AA
32				REVISED TO ADD SECTION DD
33				REVISED TO ADD SECTION BB
34				REVISED TO ADD SECTION AA
35				REVISED TO ADD SECTION DD
36				REVISED TO ADD SECTION BB
37				REVISED TO ADD SECTION AA
38				REVISED TO ADD SECTION DD
39				REVISED TO ADD SECTION BB
40				REVISED TO ADD SECTION AA
41				REVISED TO ADD SECTION DD
42				REVISED TO ADD SECTION BB
43				REVISED TO ADD SECTION AA
44				REVISED TO ADD SECTION DD
45				REVISED TO ADD SECTION BB
46				REVISED TO ADD SECTION AA
47				REVISED TO ADD SECTION DD
48				REVISED TO ADD SECTION BB
49				REVISED TO ADD SECTION AA
50				REVISED TO ADD SECTION DD
51				REVISED TO ADD SECTION BB
52				REVISED TO ADD SECTION AA
53				REVISED TO ADD SECTION DD
54				REVISED TO ADD SECTION BB
55				REVISED TO ADD SECTION AA
56				REVISED TO ADD SECTION DD
57				REVISED TO ADD SECTION BB
58				REVISED TO ADD SECTION AA
59				REVISED TO ADD SECTION DD
60				REVISED TO ADD SECTION BB
61				REVISED TO ADD SECTION AA
62				REVISED TO ADD SECTION DD
63				REVISED TO ADD SECTION BB
64				REVISED TO ADD SECTION AA
65				REVISED TO ADD SECTION DD
66				REVISED TO ADD SECTION BB
67				REVISED TO ADD SECTION AA
68				REVISED TO ADD SECTION DD
69				REVISED TO ADD SECTION BB
70				REVISED TO ADD SECTION AA
71				REVISED TO ADD SECTION DD
72				REVISED TO ADD SECTION BB
73				REVISED TO ADD SECTION AA
74				REVISED TO ADD SECTION DD
75				REVISED TO ADD SECTION BB
76				REVISED TO ADD SECTION AA
77				REVISED TO ADD SECTION DD
78				REVISED TO ADD SECTION BB
79				REVISED TO ADD SECTION AA
80				REVISED TO ADD SECTION DD
81				REVISED TO ADD SECTION BB

RAPID-AIR CORPORATION
ROCKFORD, IL • MADISON, SD
FSC12S CUTTER W/PNP
SENSOR FOR SERVO C-T-L

11300351-352

82		
81	69400065	BALL PLUNGER
80	34700066	WASHER
79	69280240	VALVE PLUG
78	65908125	SHCS #8-32 X 1 1/4
77	65600004	THREADED INSERT
76	66300250	DRIVE SCREW
75	39900051	SERIAL # TAG
74	39900302	BLADE POSITION LABEL
73	36200028	STOCK GUIDE NUT
72	33900243	STOCK GUIDE ROLLER SLEEVE
71	34200240	STOCK GUIDE ROLLER
70	36600024	HANDLE
69	64230011	TUBING 1/4
68	67100120	MALE FITTING 3/8 NPT TO 1/4 TUBE
67	67100142	PIPE ELBOW 3/8 NPT FEMALE
66	67100159	PIPE TEE 3/8 NPT FEMALE
65	63130500	PIPE PLUG 1/2 NPT
64	34100348	SPACER
63	6388290 (4)	PIPE PLUG 1/4 NPT
62	67100141	HEX NIPPLE 3/8 NPT
61	65920175	SHCS 1/4-20 X 1 3/4
60	60910037	RETAINING RING 3/8
59	65936175	SHCS 3/8-16 X 1 3/4
58	65931225	SHCS 5/16-18 X 2 1/4
57	66612037	BHSCS #10-32 X 3/8
56	65931125	SHCS 5/16-18 X 1 1/4
55	65931100	SHCS 5/16-18 X 1
54	65908175	SHCS #8-32 X 1 3/4
53	66520050	FHSCS 1/4-20 X 1/2
52	66520075	FHSCS 1/4-20 X 3/4
51	65936150	SHCS 3/8-16 X 1 1/2
50	65953125	SHCS 1/2-13 X 1 1/4
49	62419100	ROLL PIN 3/16 X 1
48	62425075	ROLL PIN 1/4 X 3/4
47	62325050	DOWEL PIN 1/4 X 1/2
46	62150250	SPIRAL PIN 1/2 X 2 1/2
45	62350100	DOWEL PIN 1/2 X 1
44	62337075	DOWEL PIN 3/8 X 3/4
43	67200002	MUFFLER
42	37500085	SPRING
41	37500160	SPRING CENTURY #72486
40	64100080	BRONZE BUSHING #44-1807-2
39	62412100	ROLL PIN 1/8 X 1
38	39900175	INLET LABEL
37	69100348	PRDX. SWITCH PNP
36	69200032	MAC VALVE 24 V.D.C.
35	68000000	QUICK EXHAUST
34	60108357	"D" RING 5.50 I.D. X .210
33	60108014	"D" RING 1/2 I.D. X .070
32	60108109	"D" RING 5/16 I.D. X .103
31	60108207	"D" RING 9/16 I.D. X .139
30	32900874	ADJUSTING SHAFT
29	36700019	KNDB
28	36800039	KEY
27	36300009	QUICK EXHAUST FITTING
26	31500435	QUICK EXHAUST COVER
25	67200007	MUFFLER
24	31900641	QUICK EXHAUST BRACKET
23	31702179	MANIFOLD PLATE
22	21900269	FRONT GUARD
21	21900268	REAR GUARD
20	31702178	PRDX. MTG. PLATE
19	32000013	BLADE
18	31702177	PISTON WEAR PLATE
17	31702176	STRIPPER PLATE
16	35900086	BUMPER
15	36500046	CAM
14	31500434	SCRAP CHUTE
13	31702175	CAM PLATE
12	31702174	CAM SHAFT PLATE
11	32900873	CAM SHAFT
10	31702173	RH. BRG. PLATE
9	31702172	LH. BRG. PLATE
8	32900872	GUIDE SHAFT
7	25500076	PISTON ASSEMBLY
6	30100297	PISTON HOUSING
5	30100296	UPPER BLADE HOUSING
4	30100295	LOWER BLADE HOUSING
3	31702171	RH. SIDE PLATE
2	31702170	LH. SIDE PLATE
1	31702169	BASE PLATE



NOTE: FSCIS FOR SERVO C-T-L, CONTROL VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

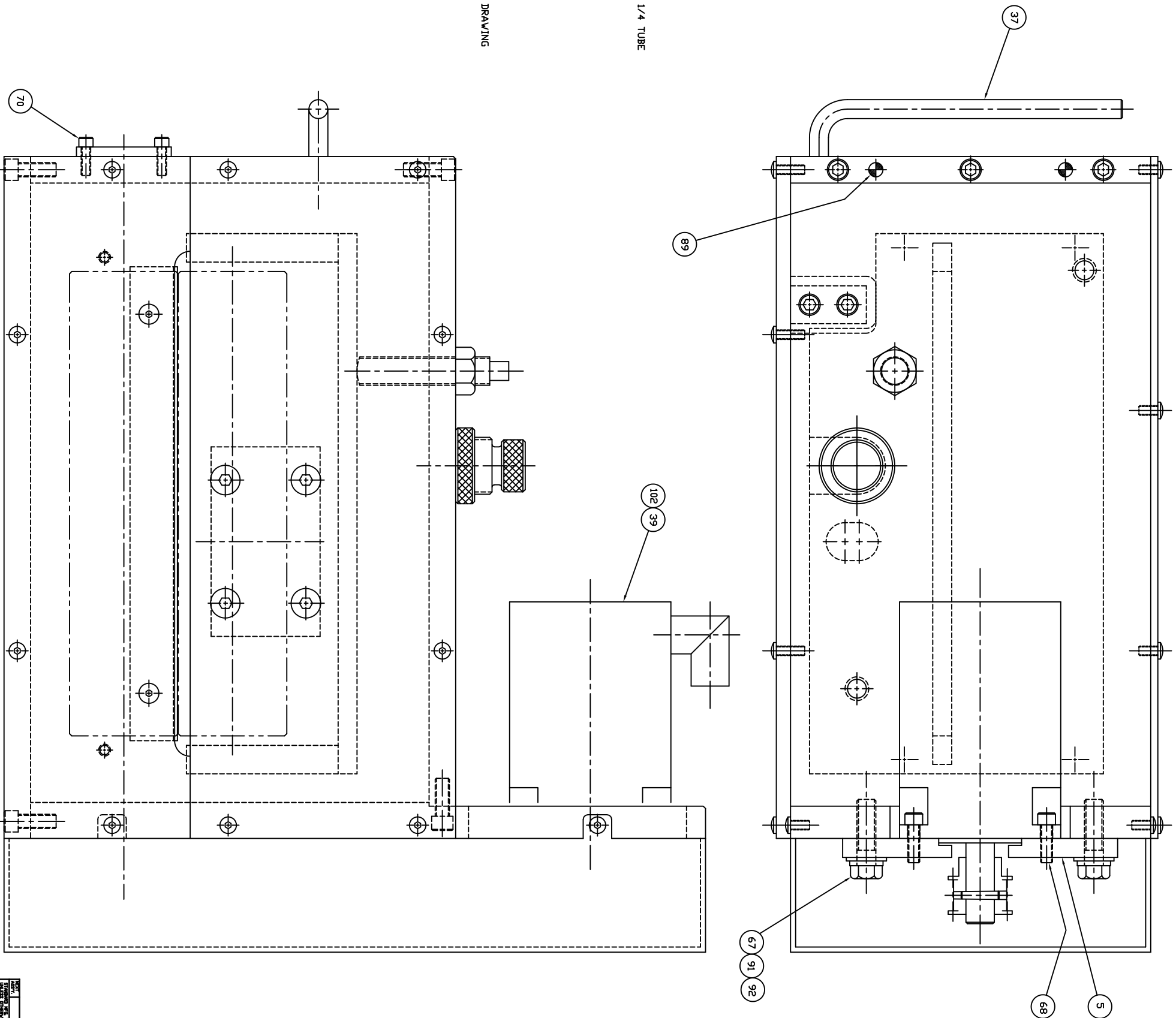
REV	DATE	DESCRIPTION
1	10/16/00	ISSUED FOR PRODUCTION
2	10/16/00	REVISED TO ADD PNP SENSOR OPTION
3	10/16/00	REVISED TO ADD C-T-L CONTROL OPTION
4	10/16/00	REVISED TO ADD 24VDC VALVE OPTION
5	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
6	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
7	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
8	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
9	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
10	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
11	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
12	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
13	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
14	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
15	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
16	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
17	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
18	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
19	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
20	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
21	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
22	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
23	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
24	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
25	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
26	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
27	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
28	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
29	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
30	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
31	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
32	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
33	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
34	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
35	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
36	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
37	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
38	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
39	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
40	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
41	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
42	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
43	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
44	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
45	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
46	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
47	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
48	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
49	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
50	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
51	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
52	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
53	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
54	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
55	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
56	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
57	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
58	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
59	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
60	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
61	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
62	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
63	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
64	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
65	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
66	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
67	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
68	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
69	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
70	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
71	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
72	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
73	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
74	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
75	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
76	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
77	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
78	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
79	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
80	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
81	10/16/00	REVISED TO ADD 110VAC VALVE OPTION
82	10/16/00	REVISED TO ADD 110VAC VALVE OPTION

RAPID-AIR CORPORATION
Rockford, IL • Madison, SD
FSCIS CUTTER W/PNP SENSOR FOR SERVO C-T-L

DATE: 10/16/00
DRAWN BY: SWS
CHECKED BY: SWS
DESIGNED BY: SWS
PART NO: 11300380

115		
114 2	65908112	SHCS #8-32 X 1 1/8
113 1	64230010	BLACK POLY TUBE
112 4	67100121	MALE CONNECTOR 1/4 NPT 1/4 TUBE
111 1	67200001	MUFFLER
110 2	65920225	SHCS 1/4-20 X 2 1/4
109 1	34100338	SPACER
108 2	66612037	66612037
107 2	60108206	1/2" RING
106 3	65906150	SHCS #6-32 X 1 1/2
105 1	39900175	INLET LABEL
104 2	65920125	SHCS 1/4-20 X 1 1/4
103 1	60108014	1/2" RING
102 1	28900446	CONTROL ASSEMBLY
101 1	32500045	TAPER PIN INSTALLATION
100 2	60900185	RETAINING RING
99 2	60910098	RETAINING RING
98 2	60910112	RETAINING RING
97 1	60910087	RETAINING RING
96 1	60910050	RETAINING RING
95 1	60108230	1/2" RING
94 1	60108228	1/2" RING
93 1	60108212	1/2" RING
92 2	61300050	LOCK WASHER 1/2
91 2	61200034	FLAT WASHER 1/2
90 3	62425100	ROLL PIN
89 8	62337100	DOWEL PIN 3/8 X 1
88 2	62137150	SPIRAL PIN
87 1	62500006	TAPER PIN
86 1	36800013	KEY
85 1	36800006	KEY
84 1	36800021	KEY
83 1	37500117	SPRING
82 2	63130250	PIPE PLUG
81 1	66700072	SET SCREW
80 4	66220037	SET SCREW
ITEM QTY	PART NO.	DESCRIPTION

DRAWING



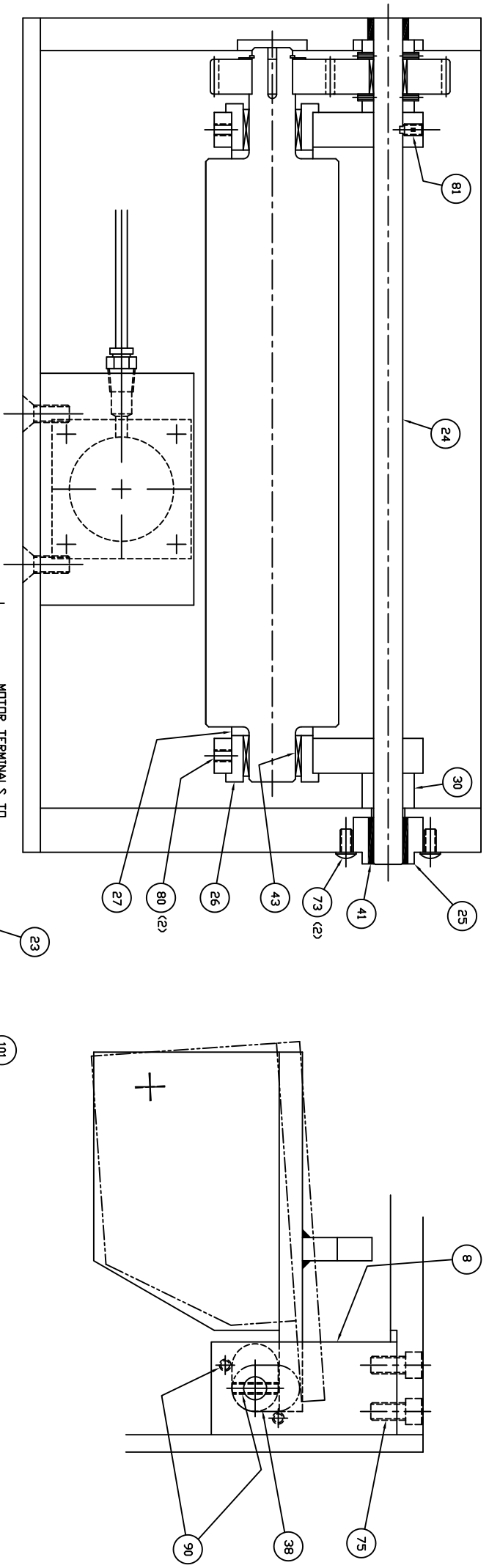
79 1	66162200	SHOULDER SCREW
78 4	66137075	SHOULDER SCREW
77 1	36300004	GAUGE FITTING
76 2	65931075	SHCS 5/16-18 X 3/4
75 2	65936075	SHCS 3/8-16 X 3/4
74 4	66536100	BHSCS 3/8-16 X 1
73 16	66620050	BHSCS 1/4-20 X 1/2
72 6	66620075	BHSCS 1/4-20 X 3/4
71 1	69200032	VALVE
70 4	65920075	SHCS 1/4-20 X 3/4
69 4	66520062	FHSCS 1/4-20 X 5/8
68 4	65931100	SHCS 5/16-18 X 1
67 2	65853150	HEX BOLT 1/2-13 X 1 1/2
66 12	65936100	SHCS 3/8-16 X 1
65 4	66520050	FHSCS 1/4-20 X 1/2
64 2	66300250	DRIVE SCREW
63 1	39900051	S/N TAG
62 1	39900246	RAPID-AIR LOGG
61 1	68000024	REGULATOR
60 1	31500497	ENTRANCE GUIDE
59 1	31500496	EXIT GUIDE
58 1	68000026	GAUGE
57 1	31702137	REGULATOR RETAINING PLATE
56 1	34100236	GAUGE SPACER
55 1	31702113	GAUGE & REGULATOR PLATE
54 1	10900507	CASCADE ASSEMBLY
53 4	65102520	HEX NUT 1/4-20
52 1	65117516	JAM NUT 3/4-16
51 1	36200031	ADJUSTING SCREW LOCKNUT
50 1	36100104	ADJUSTING SCREW
49 1	64520022	THRUST WASHER
48 1	64520025	THRUST WASHER
47 2	64520025	THRUST WASHER
46 8	64520008	THRUST WASHER
45 4	64510002	THRUST BEARING
44 2	64500057	NEEDLE BEARING
43 2	64500066	NEEDLE BEARING
42 2	64600049	BALL BEARING
41 1	64100046	DILITE BUSHING
40 1	64100075	DILITE BUSHING
39 1	69000044	MOTOR
38 1	36500045	CAM
37 1	36600036	CAM HANDLE
36 1	35500231	PISTON
35 1	31702112	MANIFOLD PLATE
34 1	31400550	PISTON COVER
33 1	31500495	ENTRANCE GUARD
32 1	31500494	LOWER EXIT GUARD
31 1	34100325	SPACER
30 1	34100381	SPACER
29 1	34100323	SPACER
28 2	34100322	SPACER
27 2	34100321	ROLLER SPACER
26 2	33902655	BEARING SLEEVE
25 1	32900858	ECCENTRIC SHAFT
24 1	32900857	PIVOT SHAFT
23 1	31500489	BELT COVER
22 1	32500046	TIMING BELT
21 1	32500036	BUSHING (FOR 32500029)
20 1	32500029	PULLEY (LOWER ROLL)
19 1	32500044	MOTOR PULLEY
18 2	32600233	UPPER IDLER SPUR GEAR
17 2	32600232	UPPER IDLER SPUR GEAR
16 1	32600292	UPPER ROLLER SPUR GEAR
15 1	32600235	LOWER ROLLER SPUR GEAR
14 1	34200383	UPPER ROLLER
13 1	34200382	LOWER ROLLER
12 1	30100290	BEARING HOUSING
11 1	30100292	PISTON HOUSING
10 1	31702489	PISTON HOUSING MOUNTING PLATE
9 1	31702115	GEAR SUPPORT PLATE
8 1	31702111	CAM PIVOT PLATE
7 1	21900254	ROLLER TOP PLATE ASSEMBLY
6 2	31702106	ROLLER SIDE PLATE
5 1	31702473	MOTOR MOUNTING PLATE
4 1	31702488	TOP PLATE
3 1	31702471	L.H. SIDE PLATE
2 1	31702470	R.H. SIDE PLATE
1 1	31702487	BOTTOM PLATE
ITEM QTY	PART NO.	DESCRIPTION

SHEET 1 OF 5

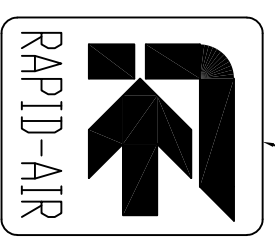
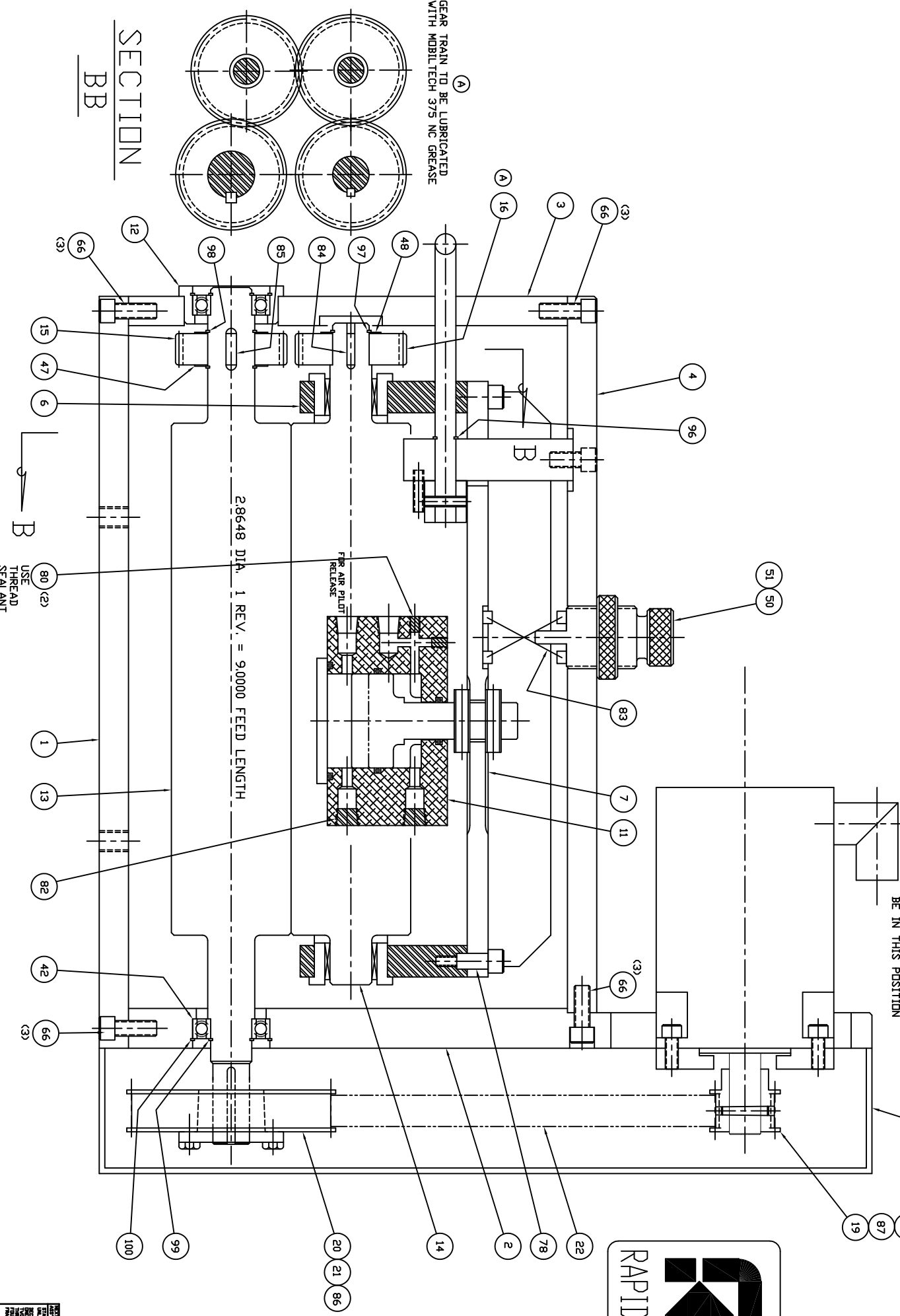
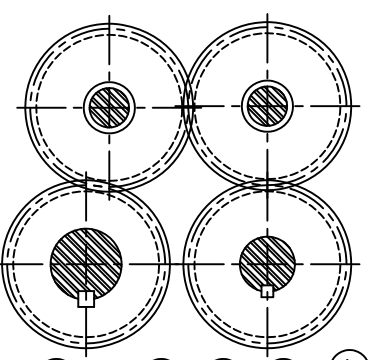
RAPID-AIR CORPORATION
ROCKFORD, IL • MADISON, SD
2121 W/AIR PILOT RELEASE
& AIR DIVAN

REV	DATE	BY	CHKD	DESCRIPTION
A	9-4-14	ECN 85724		
B	9-4-14			
C				
D				
E				

13000608



(A) GEAR TRAIN TO BE LUBRICATED WITH MOBILTECH 375 NC GREASE



REV.	DATE	BY	CHKD.	DESCRIPTION
A	9-2-14			ECN #3724

DATE	BY	CHKD.	DESCRIPTION
9-2-14			ECN #3724

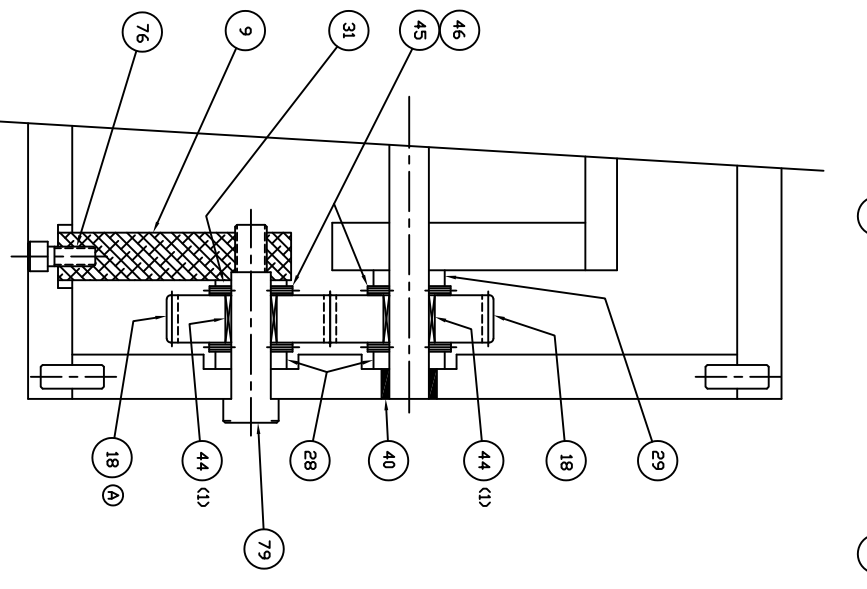
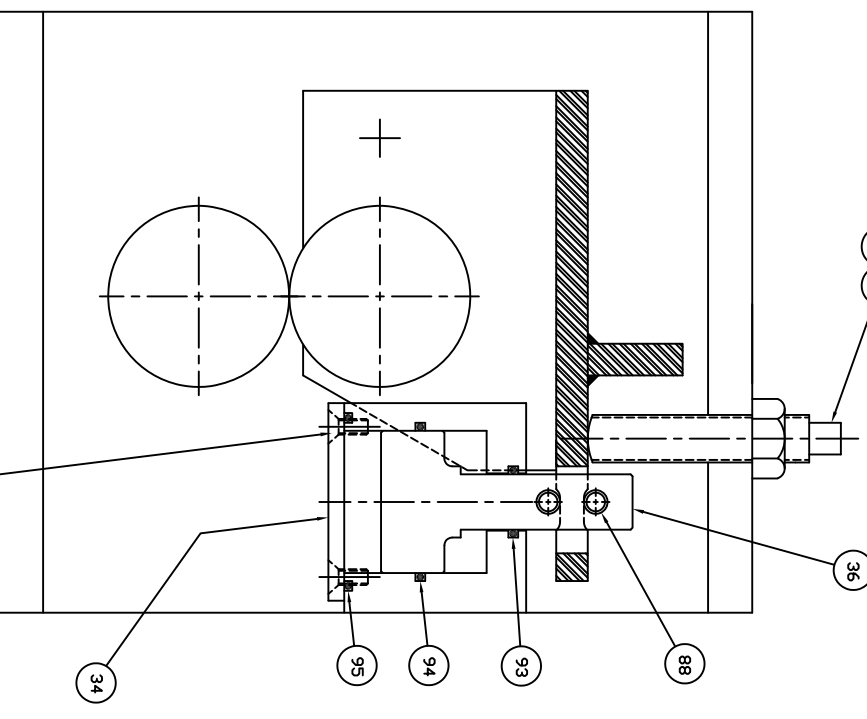
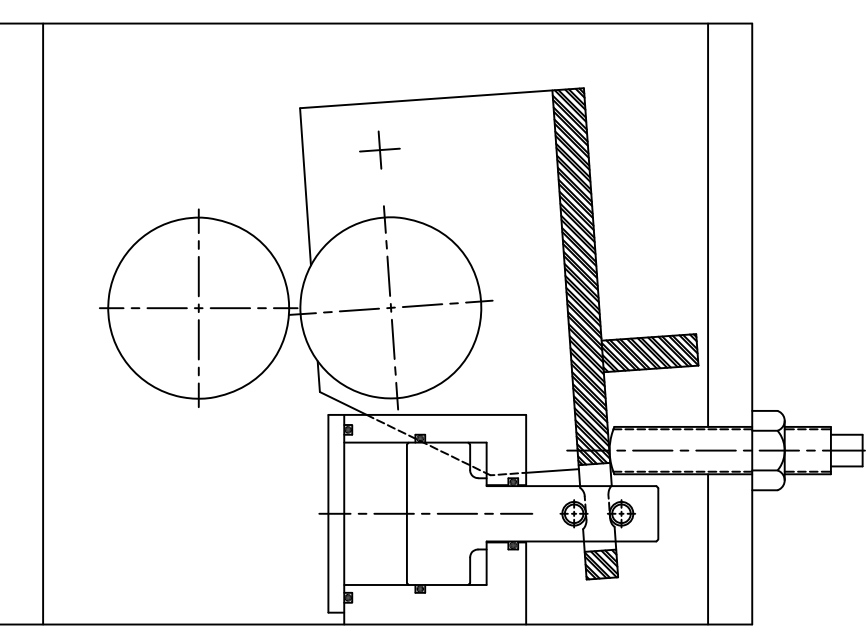
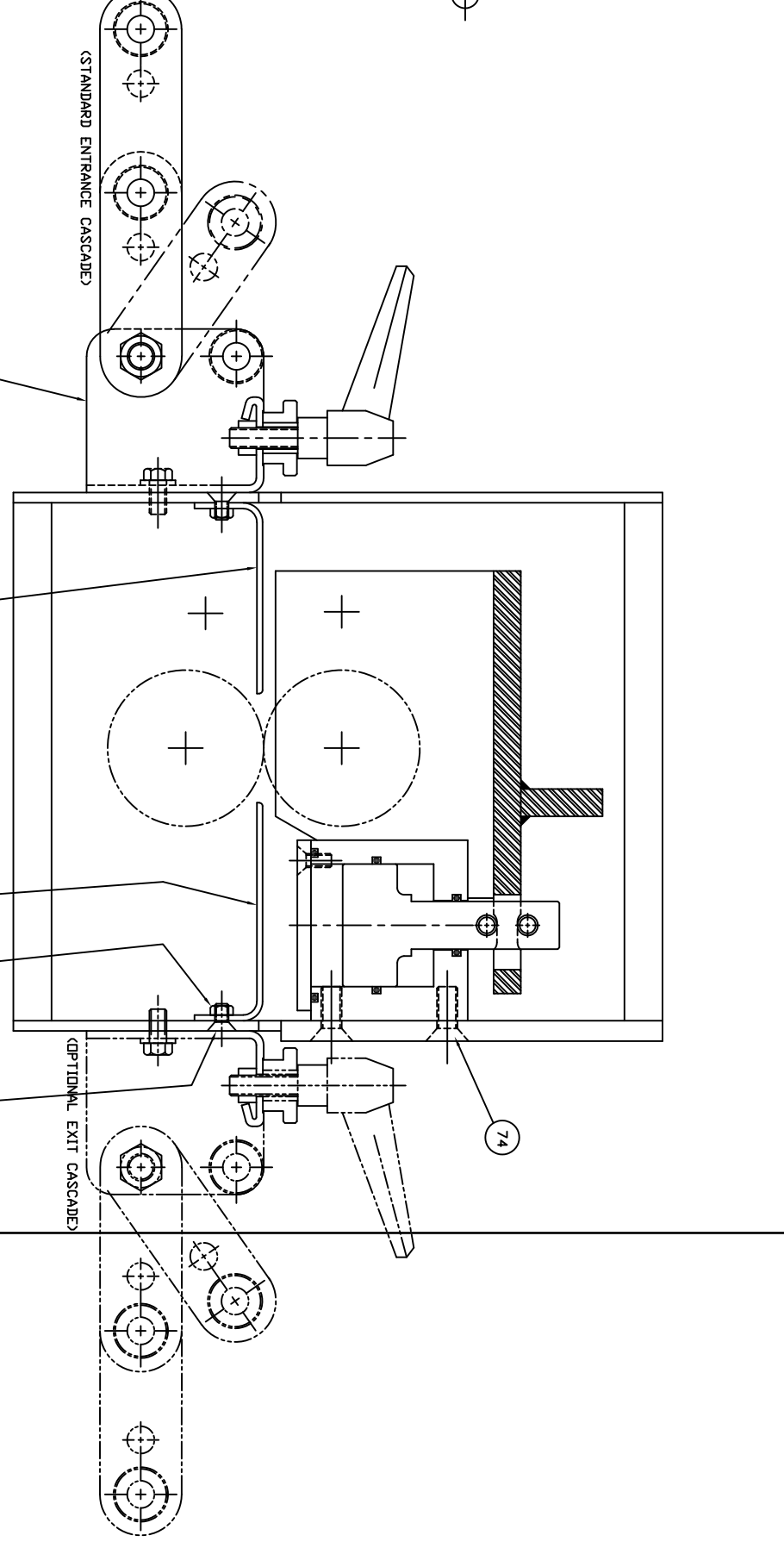
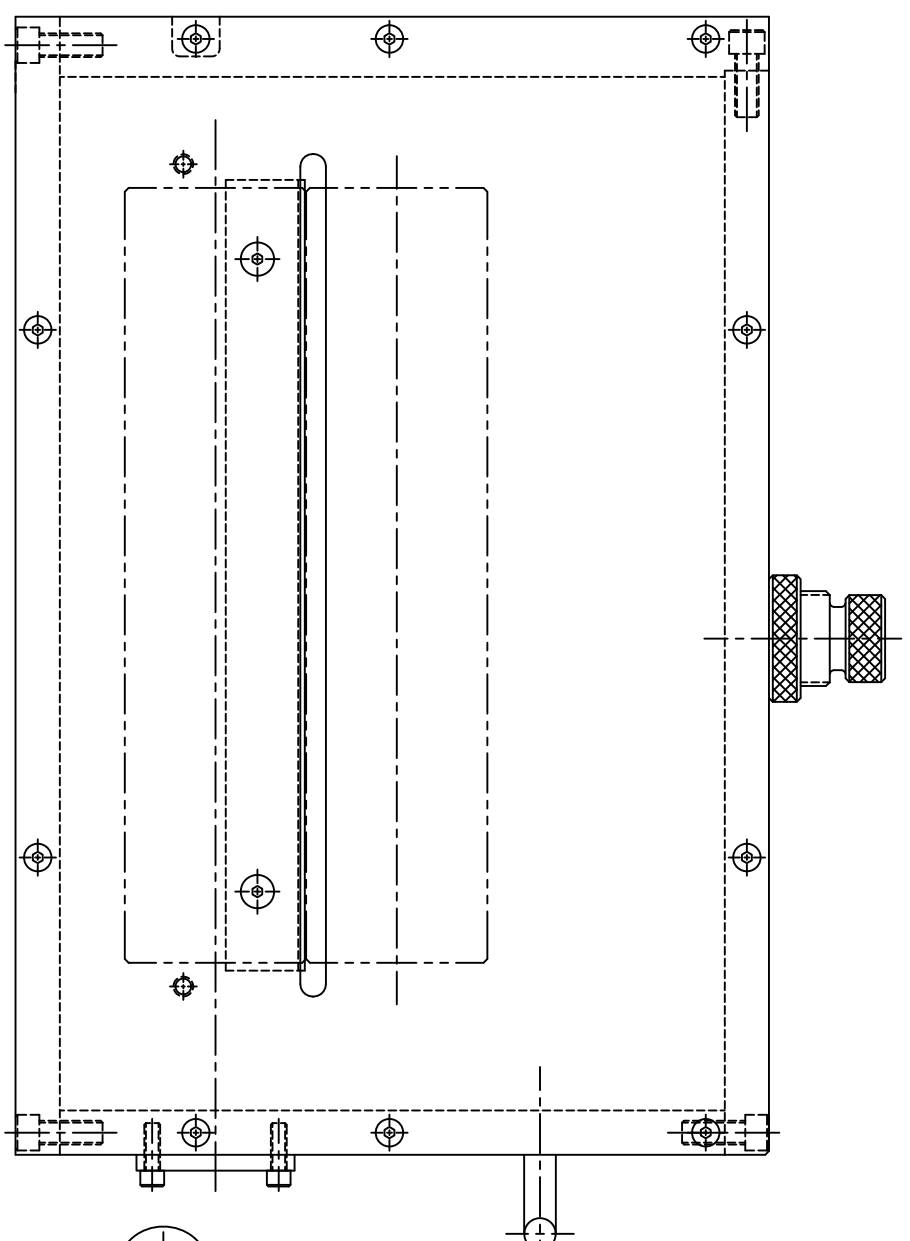
DATE	BY	CHKD.	DESCRIPTION
9-2-14			ECN #3724

SHEET 2 OF 5

RAPID-AIR CORPORATION
ROCKFORD, IL • WADSWORTH, SD
212T V/AIR PILOT RELEASE
& AIR DIVN

DATE: 9-2-14
DRAWN BY: DJU
CHECKED BY: [blank]
PART NUMBER: 13000608

E



ROLLERS OPEN

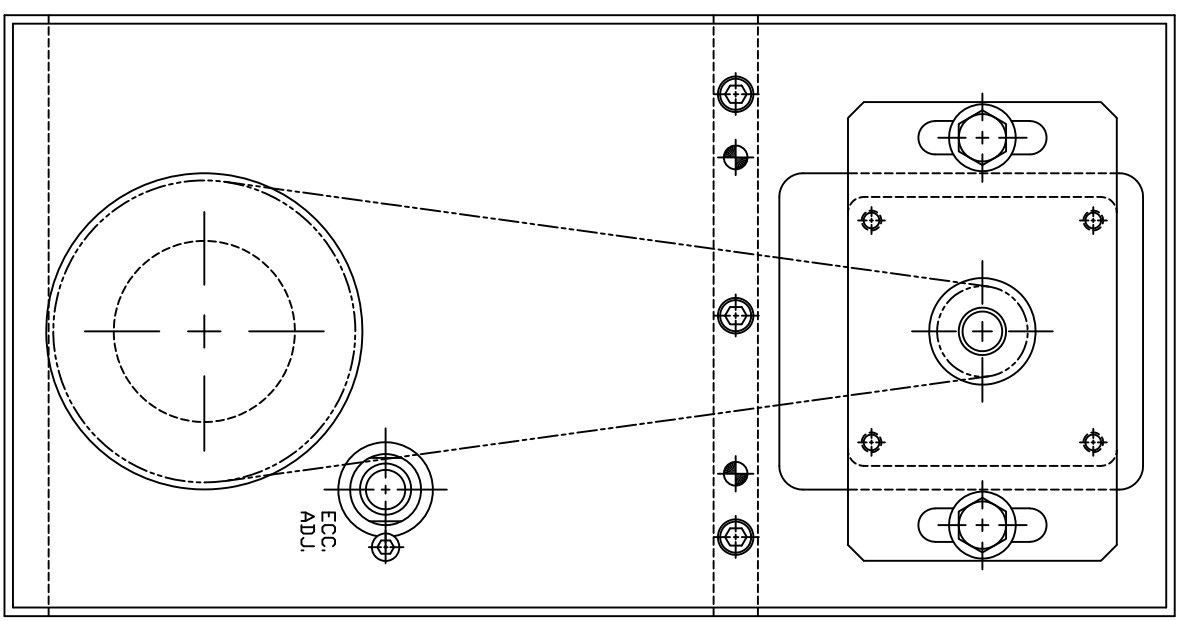
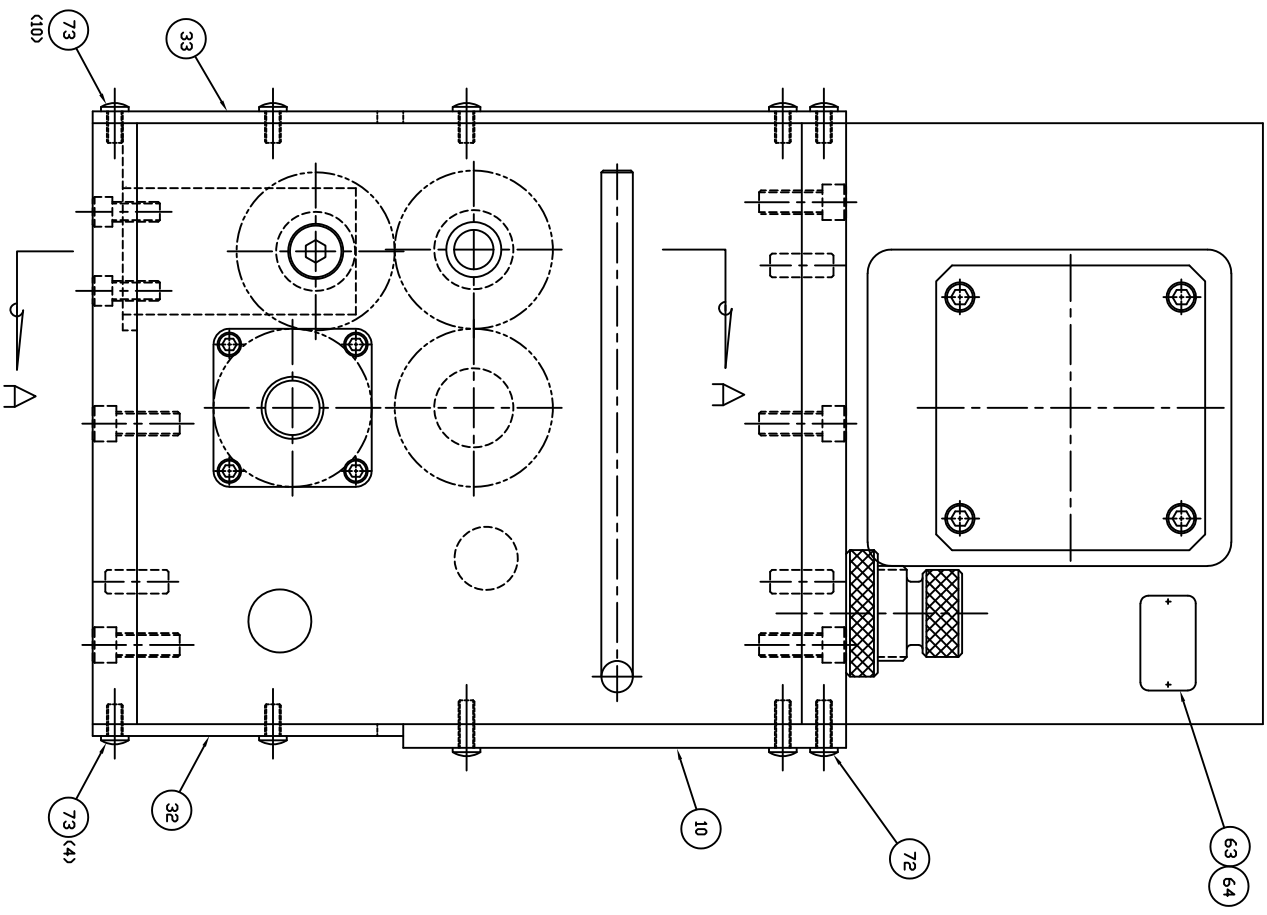
ROLLERS CLOSED

SECTION
AA

REV	DATE	BY	CHKD	DESCRIPTION
1	3/19/74	DU	SD	ECN #3724
2	3/19/74	DU	SD	212T V/AIR PILOT RELEASE & AIR DOWN
3	3/19/74	DU	SD	13000608

SHEET 3 OF 5

RAPID-AIR CORPORATION
 ROCKFORD, ILL. MADISON, SD
 212T V/AIR PILOT RELEASE
 & AIR DOWN

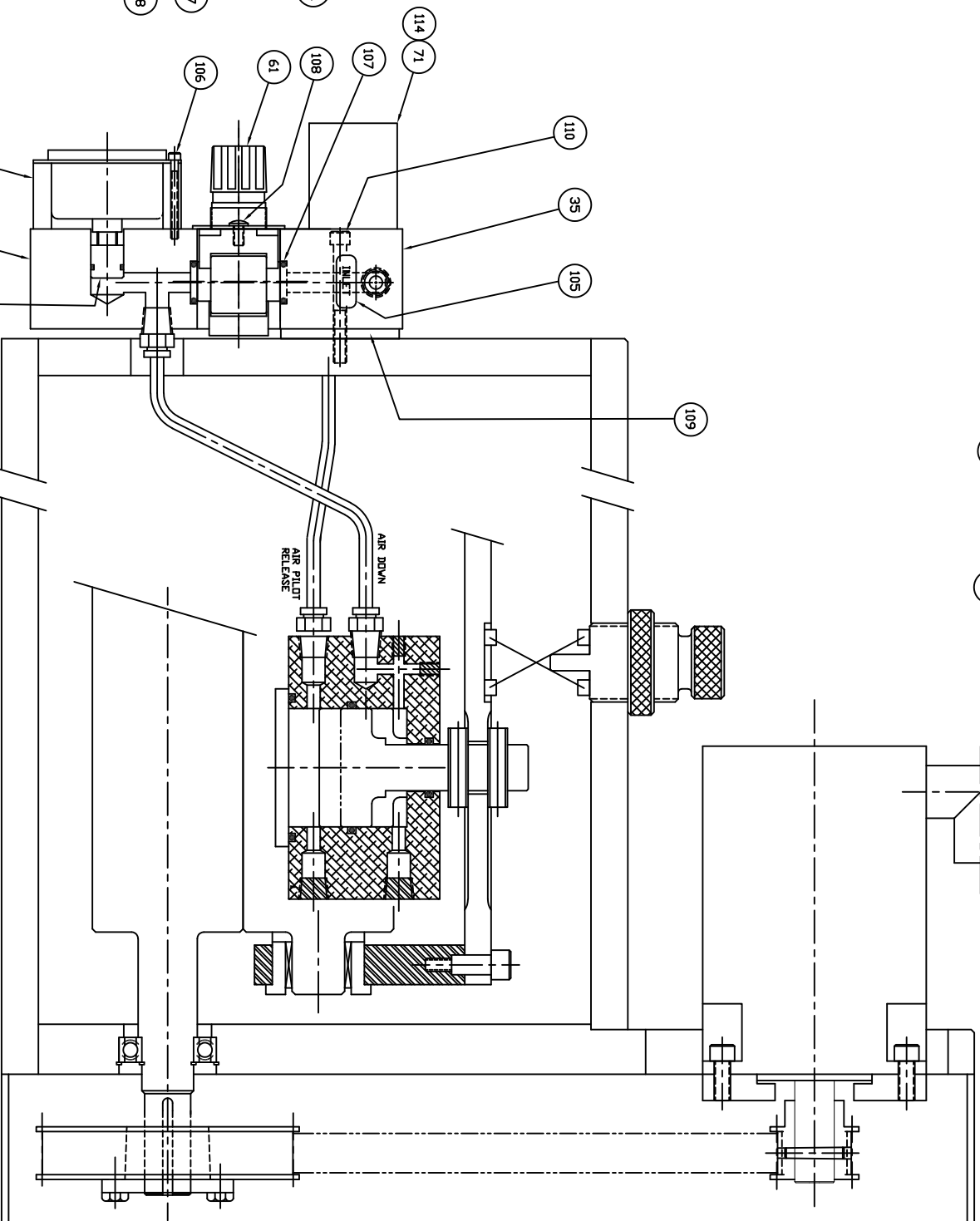
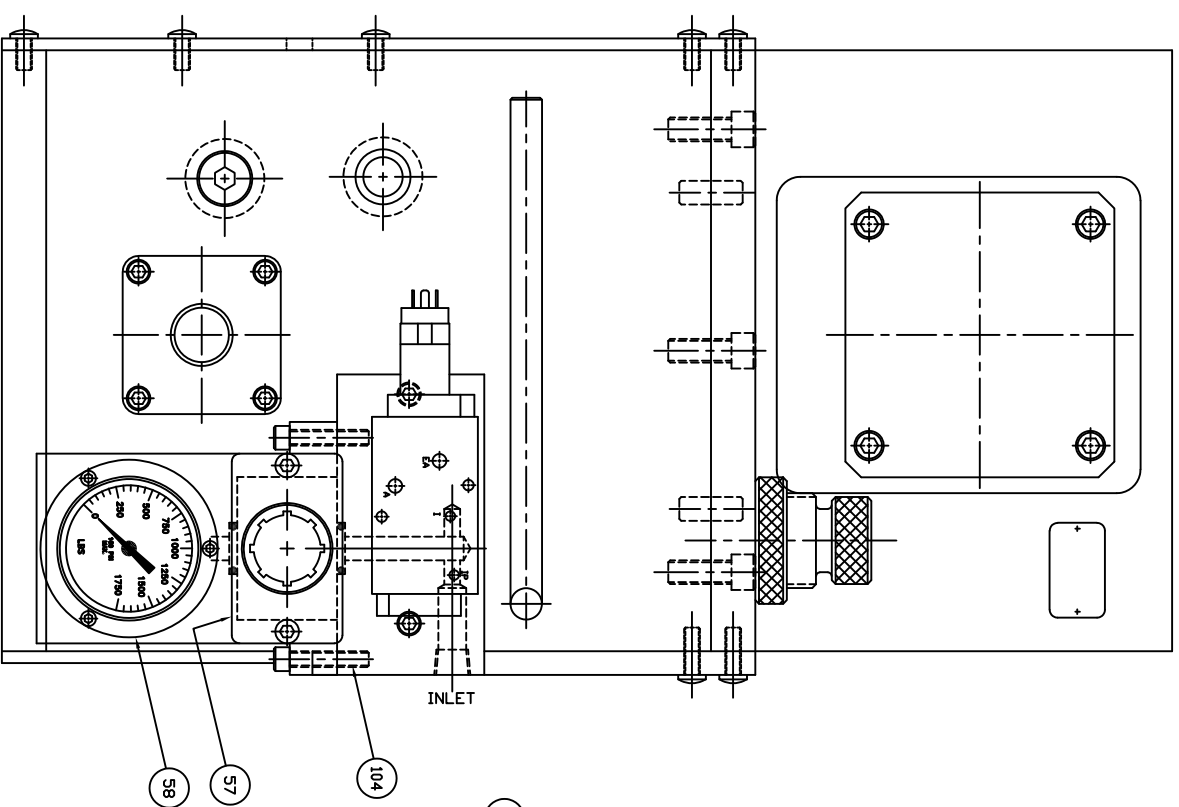
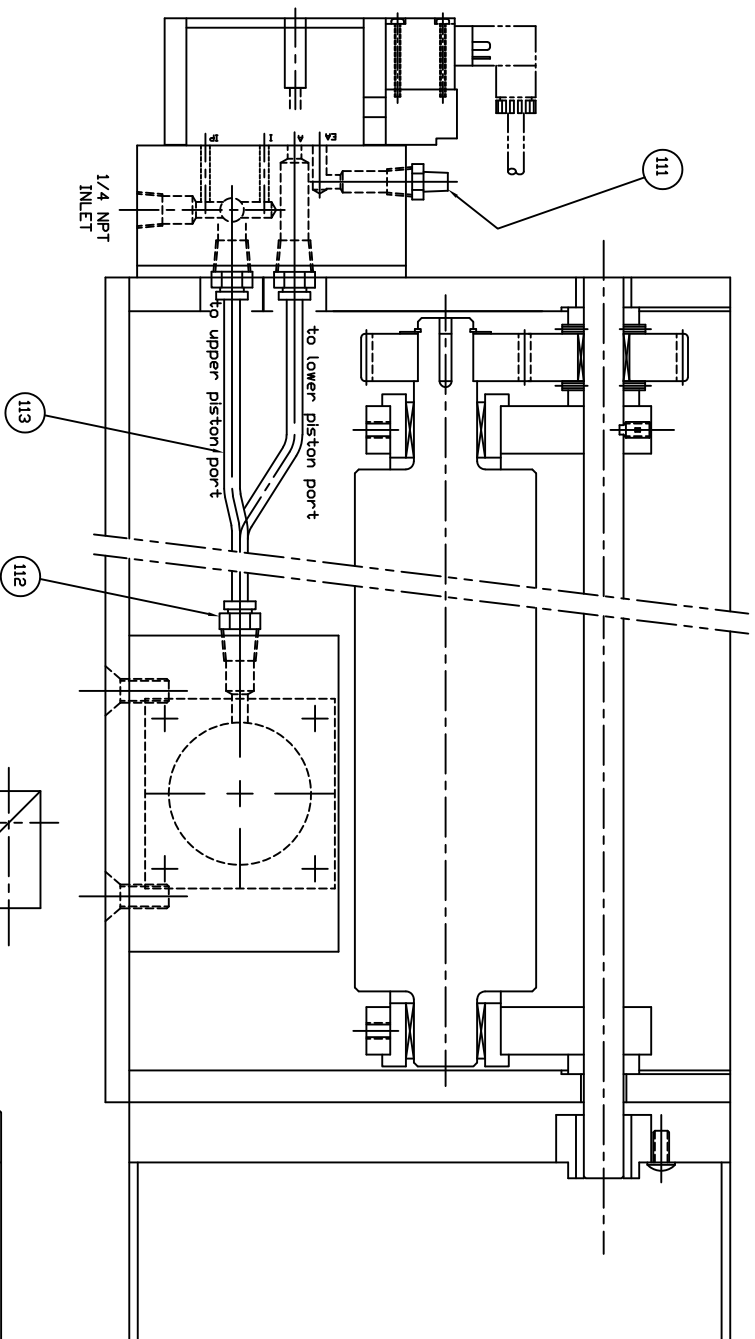


SHEET 4 OF 5

DATE	1/28/58	BY	WJL
REVISION		BY	
REV. 1	1/28/58	WJL	
REV. 2	2/10/58	WJL	
REV. 3	2/10/58	WJL	
REV. 4	2/10/58	WJL	
REV. 5	2/10/58	WJL	
REV. 6	2/10/58	WJL	
REV. 7	2/10/58	WJL	
REV. 8	2/10/58	WJL	
REV. 9	2/10/58	WJL	
REV. 10	2/10/58	WJL	
REV. 11	2/10/58	WJL	
REV. 12	2/10/58	WJL	
REV. 13	2/10/58	WJL	
REV. 14	2/10/58	WJL	
REV. 15	2/10/58	WJL	
REV. 16	2/10/58	WJL	
REV. 17	2/10/58	WJL	
REV. 18	2/10/58	WJL	
REV. 19	2/10/58	WJL	
REV. 20	2/10/58	WJL	
REV. 21	2/10/58	WJL	
REV. 22	2/10/58	WJL	
REV. 23	2/10/58	WJL	
REV. 24	2/10/58	WJL	
REV. 25	2/10/58	WJL	
REV. 26	2/10/58	WJL	
REV. 27	2/10/58	WJL	
REV. 28	2/10/58	WJL	
REV. 29	2/10/58	WJL	
REV. 30	2/10/58	WJL	
REV. 31	2/10/58	WJL	
REV. 32	2/10/58	WJL	
REV. 33	2/10/58	WJL	
REV. 34	2/10/58	WJL	
REV. 35	2/10/58	WJL	
REV. 36	2/10/58	WJL	
REV. 37	2/10/58	WJL	
REV. 38	2/10/58	WJL	
REV. 39	2/10/58	WJL	
REV. 40	2/10/58	WJL	
REV. 41	2/10/58	WJL	
REV. 42	2/10/58	WJL	
REV. 43	2/10/58	WJL	
REV. 44	2/10/58	WJL	
REV. 45	2/10/58	WJL	
REV. 46	2/10/58	WJL	
REV. 47	2/10/58	WJL	
REV. 48	2/10/58	WJL	
REV. 49	2/10/58	WJL	
REV. 50	2/10/58	WJL	
REV. 51	2/10/58	WJL	
REV. 52	2/10/58	WJL	
REV. 53	2/10/58	WJL	
REV. 54	2/10/58	WJL	
REV. 55	2/10/58	WJL	
REV. 56	2/10/58	WJL	
REV. 57	2/10/58	WJL	
REV. 58	2/10/58	WJL	
REV. 59	2/10/58	WJL	
REV. 60	2/10/58	WJL	
REV. 61	2/10/58	WJL	
REV. 62	2/10/58	WJL	
REV. 63	2/10/58	WJL	
REV. 64	2/10/58	WJL	
REV. 65	2/10/58	WJL	
REV. 66	2/10/58	WJL	
REV. 67	2/10/58	WJL	
REV. 68	2/10/58	WJL	
REV. 69	2/10/58	WJL	
REV. 70	2/10/58	WJL	
REV. 71	2/10/58	WJL	
REV. 72	2/10/58	WJL	
REV. 73	2/10/58	WJL	
REV. 74	2/10/58	WJL	
REV. 75	2/10/58	WJL	
REV. 76	2/10/58	WJL	
REV. 77	2/10/58	WJL	
REV. 78	2/10/58	WJL	
REV. 79	2/10/58	WJL	
REV. 80	2/10/58	WJL	
REV. 81	2/10/58	WJL	
REV. 82	2/10/58	WJL	
REV. 83	2/10/58	WJL	
REV. 84	2/10/58	WJL	
REV. 85	2/10/58	WJL	
REV. 86	2/10/58	WJL	
REV. 87	2/10/58	WJL	
REV. 88	2/10/58	WJL	
REV. 89	2/10/58	WJL	
REV. 90	2/10/58	WJL	
REV. 91	2/10/58	WJL	
REV. 92	2/10/58	WJL	
REV. 93	2/10/58	WJL	
REV. 94	2/10/58	WJL	
REV. 95	2/10/58	WJL	
REV. 96	2/10/58	WJL	
REV. 97	2/10/58	WJL	
REV. 98	2/10/58	WJL	
REV. 99	2/10/58	WJL	
REV. 100	2/10/58	WJL	

E

RAPID-AIR CORPORATION
 ROCKFORD, ILL. & MADISON, SD
 PART NAME: 212T V/AIR PILOT RELEASE
 & AIR DIVN



SHEET 5 OF 5

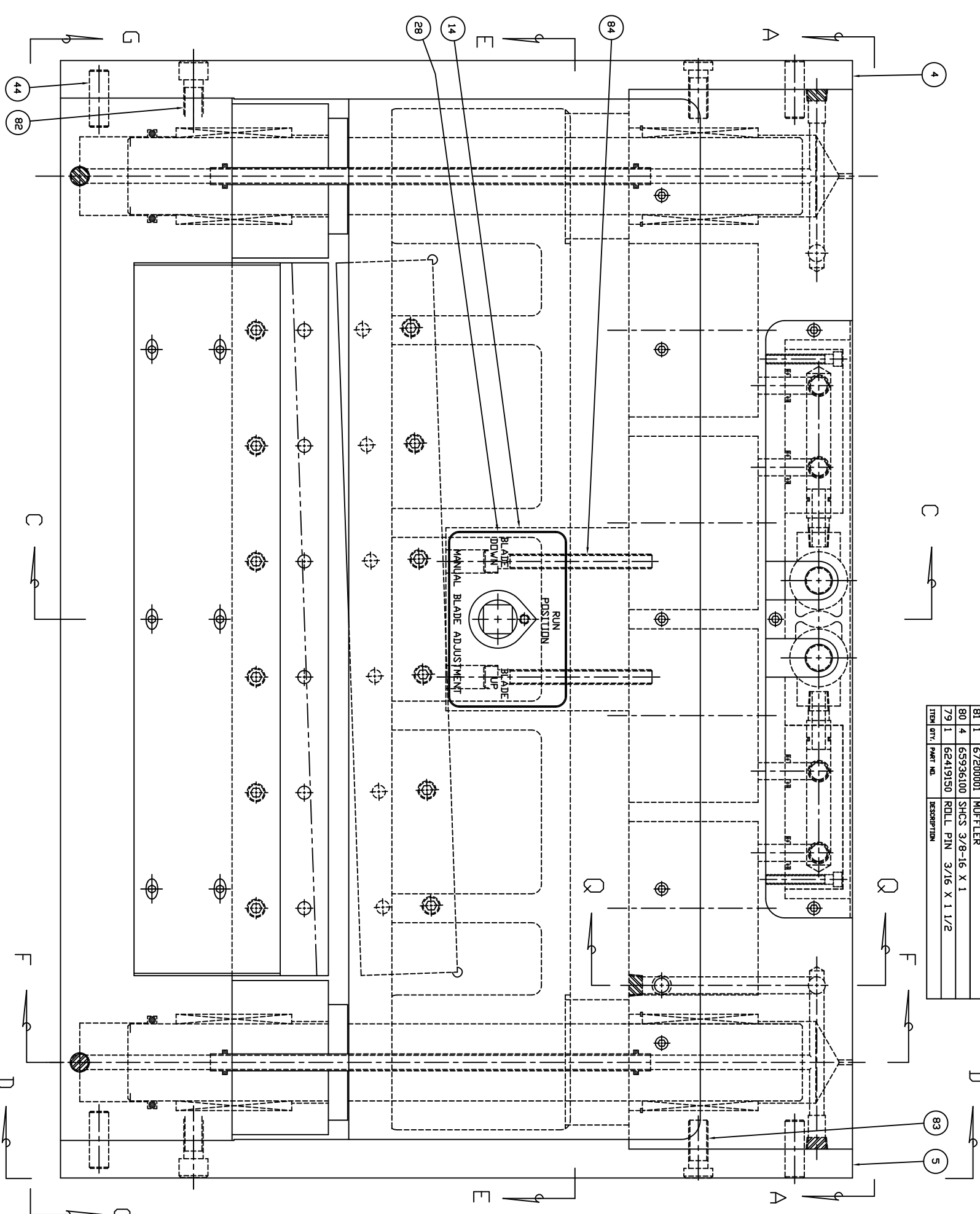
REV.	DATE	BY	CHKD.	DESCRIPTION
A	9-4-2014	CON	SD	CON #3724
B	9-4-2014	CON	SD	CON #3724
C	9-4-2014	CON	SD	CON #3724
D	9-4-2014	CON	SD	CON #3724
E	9-4-2014	CON	SD	CON #3724

RAPID-AIR CORPORATION
 ROCKFORD, IL • MADISON, SD
 & AIR DOWN
 PART NAME: 2121 W/AIR PILOT RELEASE
 PART NUMBER: 13000608

NOTE: FSC18S FOR SERVO C-T-L, CONTROL
VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

95	4	65920200	SHCS 1/4-20 X 2"
94	2	65908112	SHCS #8-32 X 1 1/8
93	8	65936675	SHCS 3/8-16 X 2 3/4
92	2	37500124	SPRING
91	2	60108109	"O" RING
90	2	64520017	THRUST WASHER
89	4	60108207	"O" RING
88	4	66520125	FHSCS 1/4-20 X 1 1/4
87	4	65936150	SHCS 3/8-16 X 1 1/2
86	4	65961500	SHCS 5/8-11 X 5
85	3	65953275	SHCS 1/2-13 X 2 3/4
84	2	65936400	SHCS 3/8-16 X 4
83	8	66700054	L.D.W. SHCS 1/2-13 X 1 1/4
82	8	65953150	SHCS 1/2-13 X 1 1/2
81	1	67200001	MUFFLER
80	4	65936100	SHCS 3/8-16 X 1
79	1	62419150	ROLL PIN 3/16 X 1 1/2
			DESCRIPTION

78	12	65931150	SHCS 5/16-18 X 1 1/2
77	6	66520050	FHSCS 1/4-20 X 1/2
76	25	66642037	BHSCS #10-32 X 3/8
75	2	66300250	DRIVE SCREW
74	6	65920175	SHCS 1/4-20 X 1 3/4
73	3	65500006	T-SLOT NUT
72	4	37500013	SPRING
71	2	67200007	MUFFLER
70	2	67100141	PIPE NIPPLE
69	2	67100142	90° EL.BDV
68	1	31702186	QUICK EXHAUST MANIFOLD RH.
67	1	31702185	QUICK EXHAUST MANIFOLD LH.
66	1	31500440	QUICK EXHAUST COVER
65	4	36300009	QUICK EXHAUST FITTING
64	2	68000000	QUICK EXHAUST
63	2	31900641	QUICK EXHAUST MTG. BRKT.
62	2	63130375	PIPE PLUG 3/8 NPT
61	12	63130250	PIPE PLUG 1/4 NPT
60	1	63130750	PIPE PLUG 3/4 NPT
59	1	64230011	TUBING
58	2	67100122	MALE CONNECTOR
57	2	67100118	90° EL.BDV
56	4	60108014	"O" RING
55	1	69200032	MAC VALVE 24 V.D.C.
54	1	69280240	VALVE PLUG
53	1	69100348	PROX SWITCH PNP
52	2	36200023	STOCK GUIDE NUT
51	2	34200159	STOCK GUIDE ROLLER
50	2	33900237	ROLLER SLEEVE
49	1	33900238	PIINTER SLEEVE
48	2	65600005	INSERT
47	2	32000010	BLADE
46	2	62418100	ROLL PIN
45	4	62337075	DOWEL PIN
44	12	62250150	PULL DOWEL
43	1	62437150	ROLL PIN
42	4	62150200	SPIRAL PIN
41			
40	1	31701623	SWITCH MOUNTING PLATE
39	2	60108329	"O" RING
38	5	60108111	"O" RING
37	4	60108349	"O" RING
36	2	60910050	RETAINING RING
35	2	60900250	RETAINING RING
34	2	65912300	SHCS #10-32 X 3
33	4	64100052	BUSHING
32	2	36600020	HANDLE
31	2	36700038	KNDB
30	2	39900175	INLET LABEL
29	1	39900051	NAMEPLATE
28	1	39900235	BLADE ADJUST. LABEL
27	1	62325050	DOWEL PIN
26	2	34400315	AIR TUBE
25	1	32900533	CAM SHAFT
24	2	32900532	ADJUSTING SHAFT
23	2	32900531	GUIDE SHAFT
22	1	36500032	CAM
21	4	25500073	PISTON
20	1	21900138	REAR GUARD ASSEMBLY
19	1	21900137	FRONT GUARD ASSEMBLY
18	1	31500361	SCRAP CHUTE
17	2	35900042	LOWER BUMPER
16	2	35900041	UPPER BUMPER
15	1	69400052	SPRING PLUNGER
14	1	31701444	CAM SHAFT MOUNTING PLATE
13	1	31701443	CAM ACTUATING PLATE
12	1	31702184	MANIFOLD PLATE
11	4	31701441	PISTON WEAR PLATE
10	1	31701606	STRIPPER PLATE
9	1	31701605	TEE SLOT PLATE
8	1	31701604	BLADE SUPPORT PLATE
7	1	31701437	RH BEARING PLATE
6	1	31701436	LH BEARING PLATE
5	1	31701435	RH SIDE PLATE
4	1	31701434	LH SIDE PLATE
3	1	30100300	PISTON HOUSING
2	1	30100180	BLADE HOUSING
1	1	30100179	BASE HOUSING
			DESCRIPTION



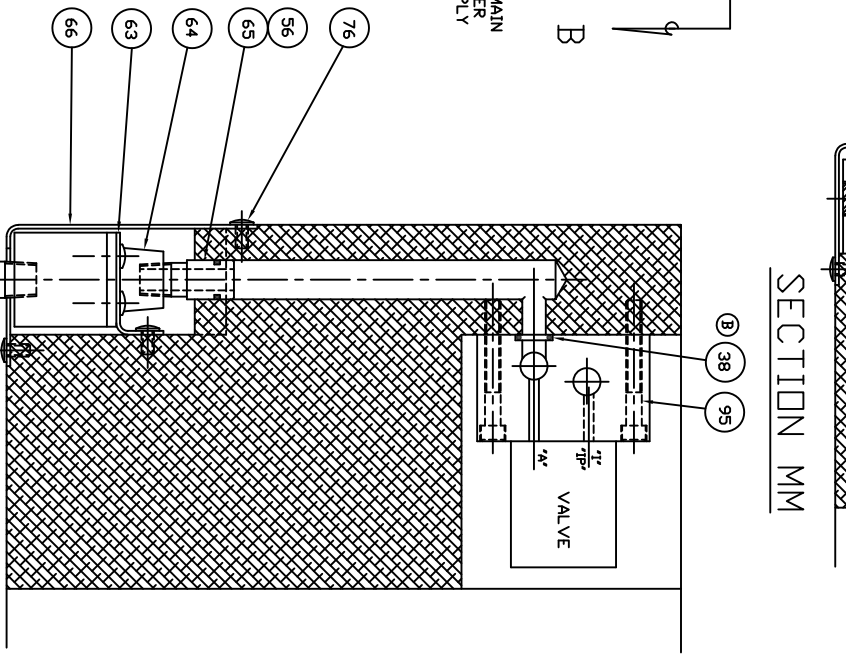
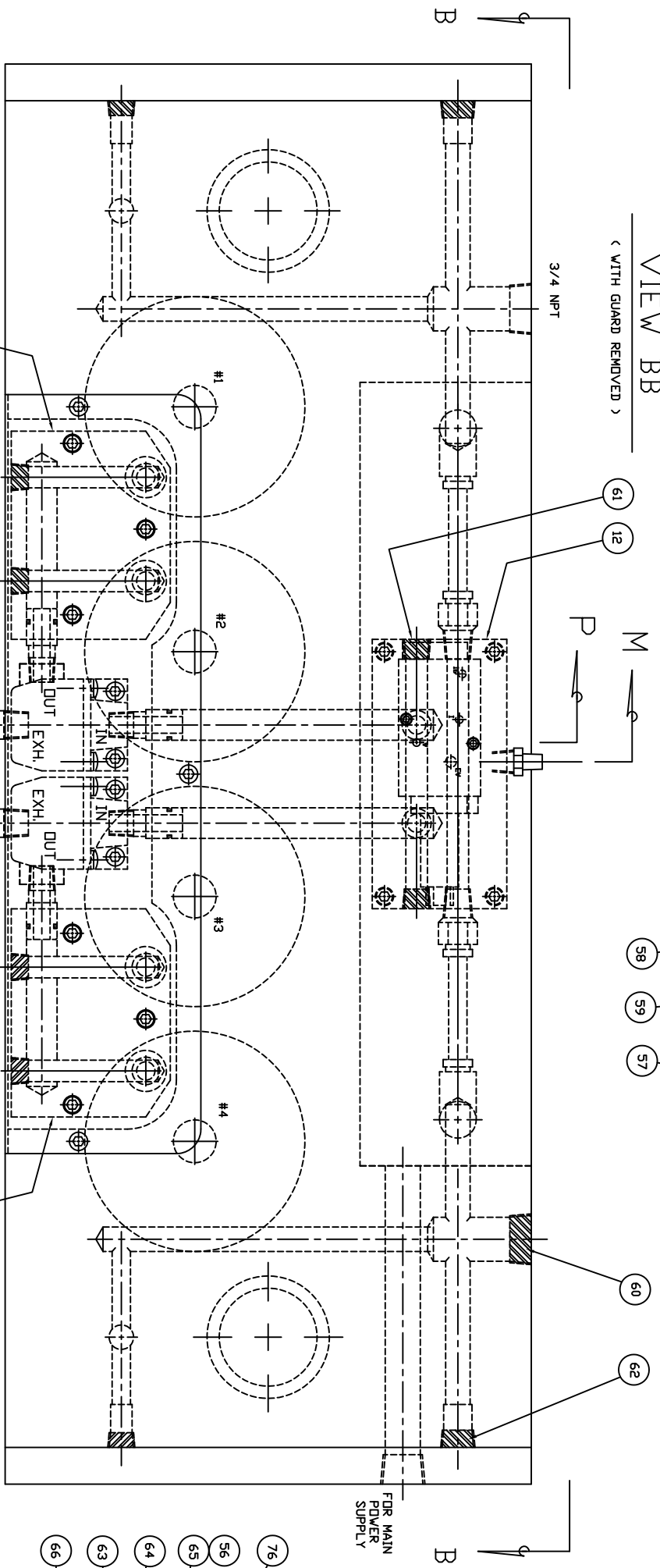
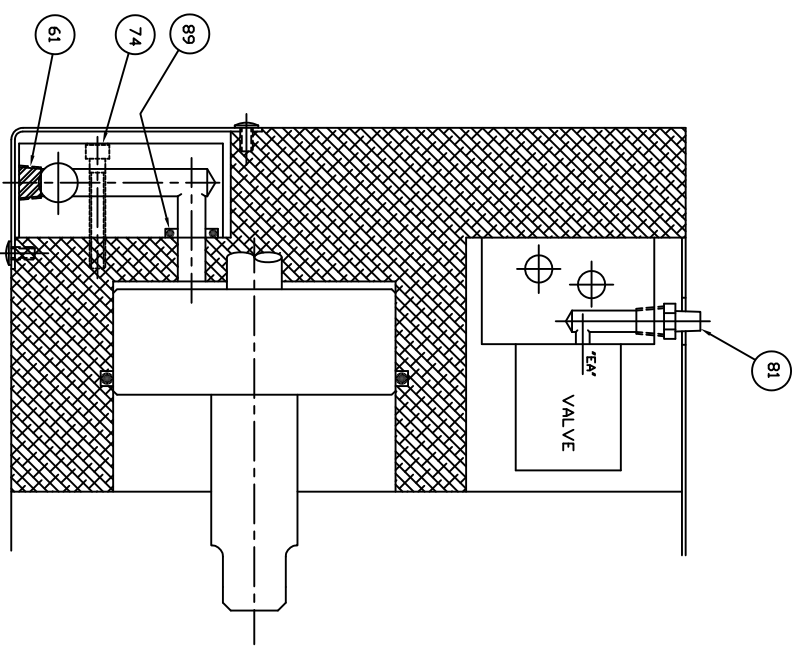
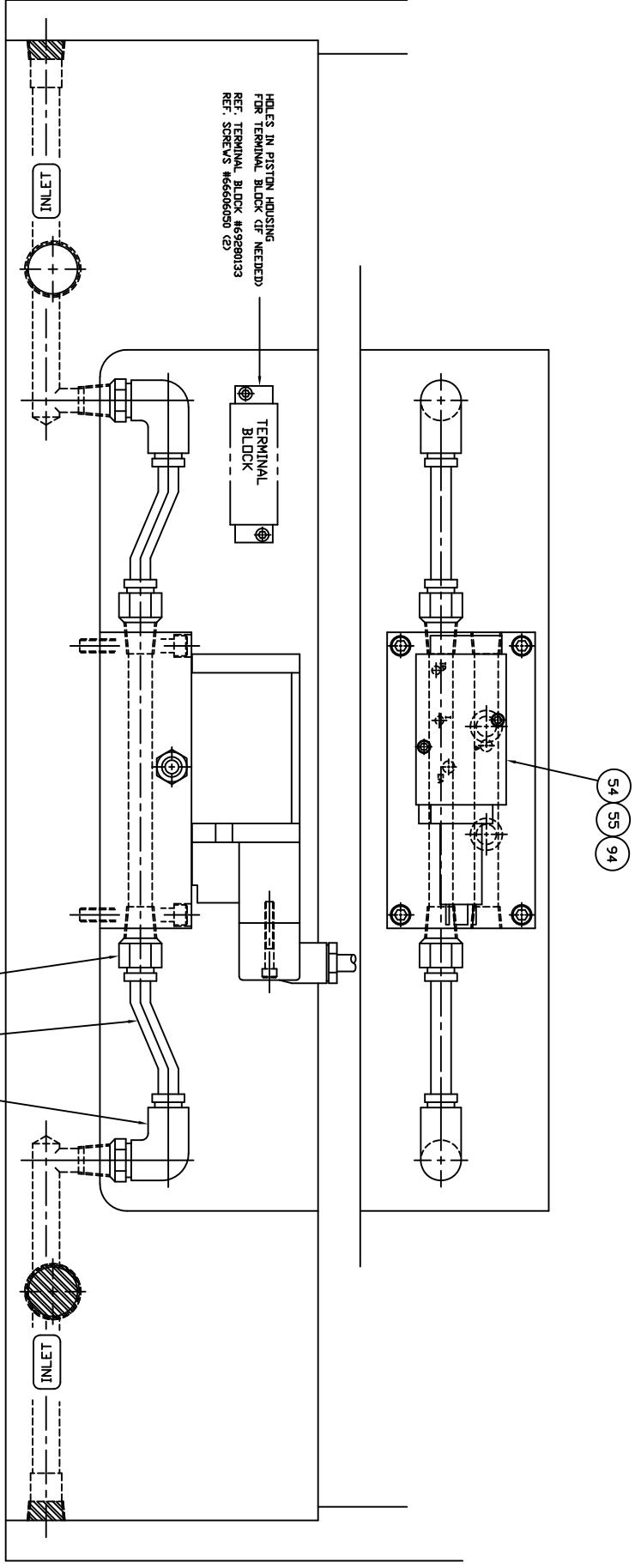
SHEET 1 OF 5

RAPID-AIR CORPORATION
Rockwood, IL • Madison, SD

Part Name: FSC18S CUTTER W/PNP SENSOR FOR SERVO C-T-L

REV	DATE	BY	CHKD	DESCRIPTION
1	08/06/03	ECN #3557	WJ	REVISED TO ADD PARTS LIST
2	08/06/03	ECN #3557	WJ	REVISED TO ADD PARTS LIST
3	08/06/03	ECN #3557	WJ	REVISED TO ADD PARTS LIST

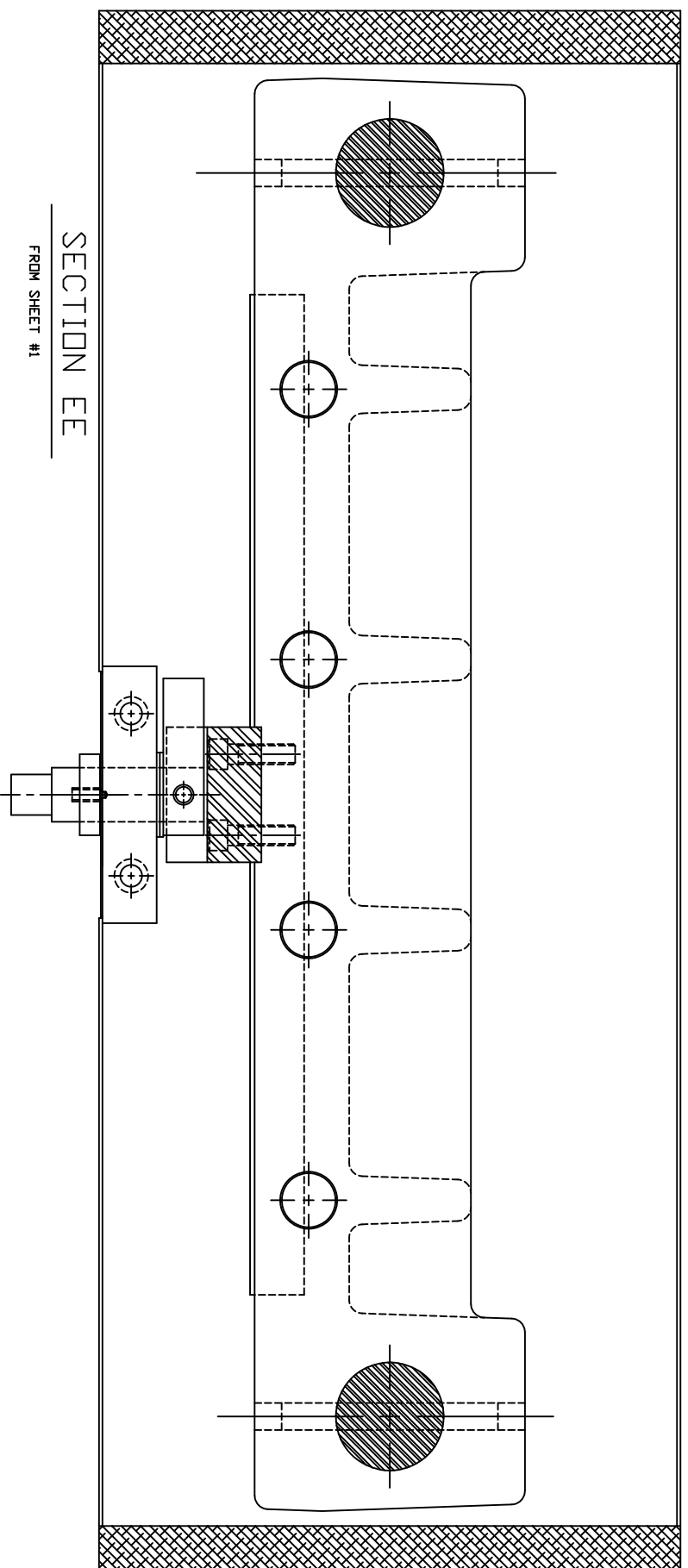
11300357-358



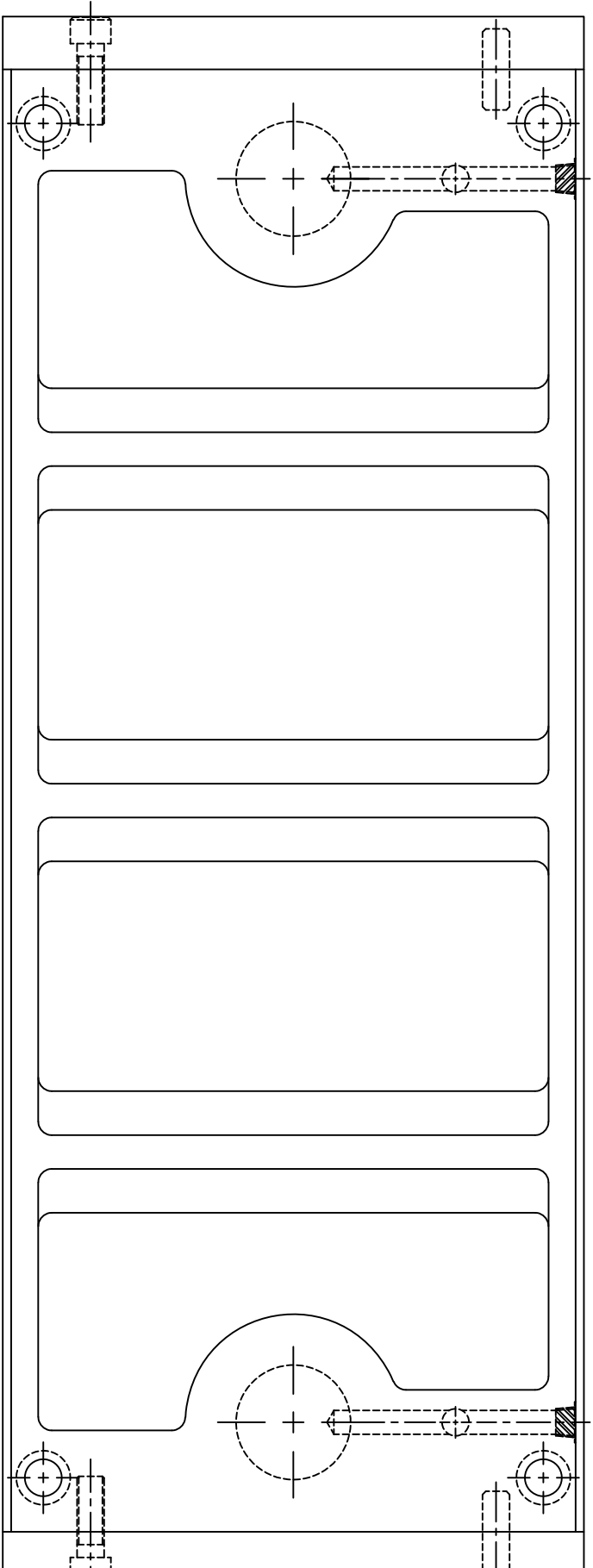
NOTE: FSC18S FOR SERVO C-T-L, CONTROL VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

REV	DATE	BY	CHKD	DESCRIPTION
1				ISSUED FOR MANUFACTURE
2				REVISED TO ADD PNP SENSOR OPTION
3				REVISED TO ADD VALVE OPTION
4				REVISED TO ADD VALVE OPTION
5				REVISED TO ADD VALVE OPTION
6				REVISED TO ADD VALVE OPTION
7				REVISED TO ADD VALVE OPTION
8				REVISED TO ADD VALVE OPTION
9				REVISED TO ADD VALVE OPTION
10				REVISED TO ADD VALVE OPTION

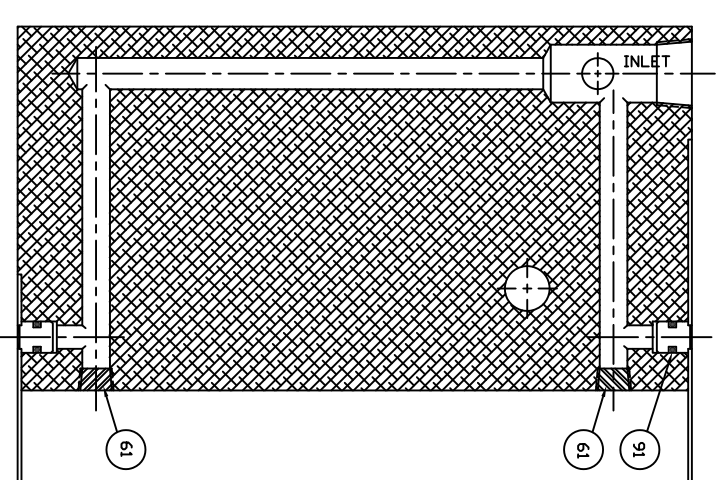
REV	DATE	BY	CHKD	DESCRIPTION
1				ISSUED FOR MANUFACTURE
2				REVISED TO ADD PNP SENSOR OPTION
3				REVISED TO ADD VALVE OPTION
4				REVISED TO ADD VALVE OPTION
5				REVISED TO ADD VALVE OPTION
6				REVISED TO ADD VALVE OPTION
7				REVISED TO ADD VALVE OPTION
8				REVISED TO ADD VALVE OPTION
9				REVISED TO ADD VALVE OPTION
10				REVISED TO ADD VALVE OPTION



SECTION EE
FROM SHEET #1



VIEW GG
FROM SHEET #1



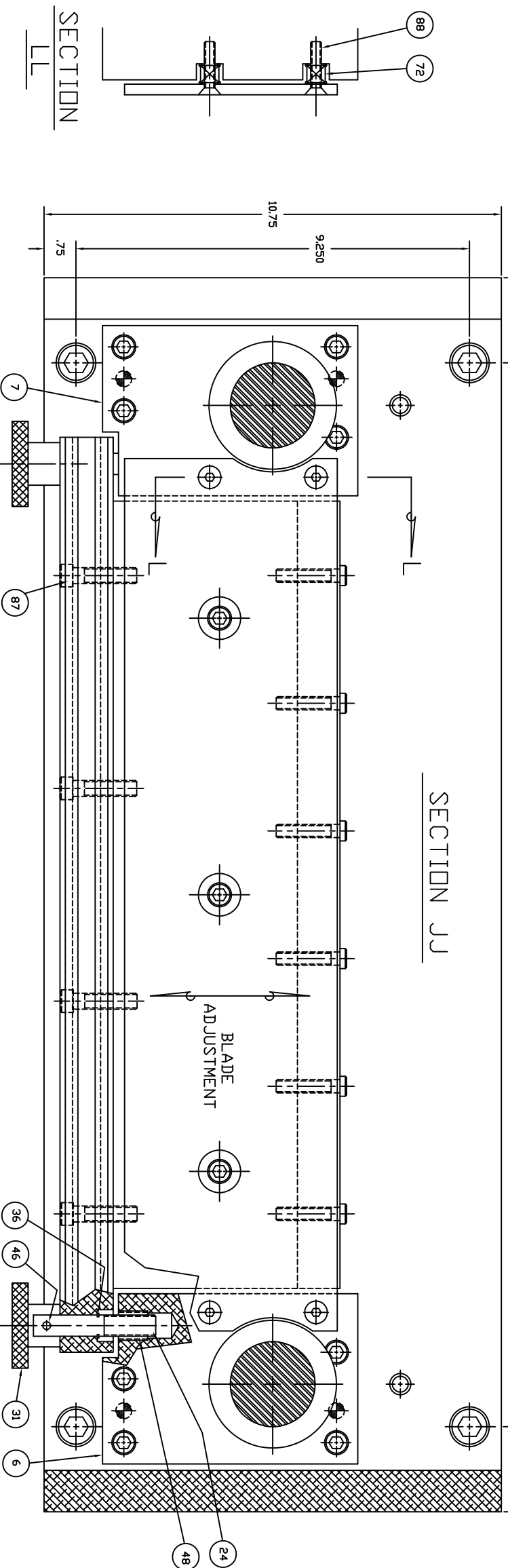
SECTION QQ

NOTE: FSC18S FDR SERVO C-T-L, CONTROL
VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

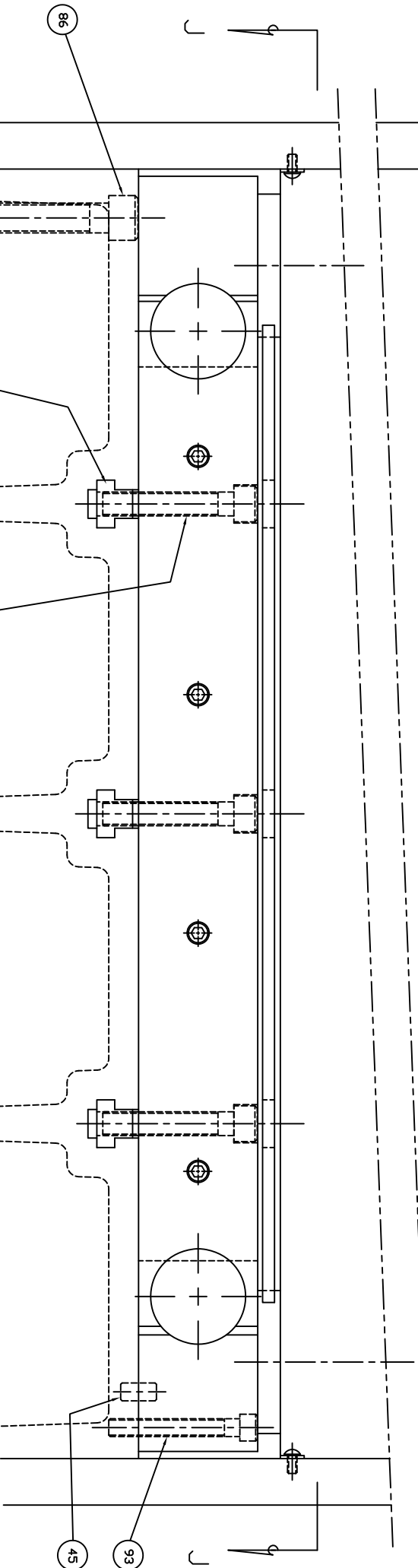
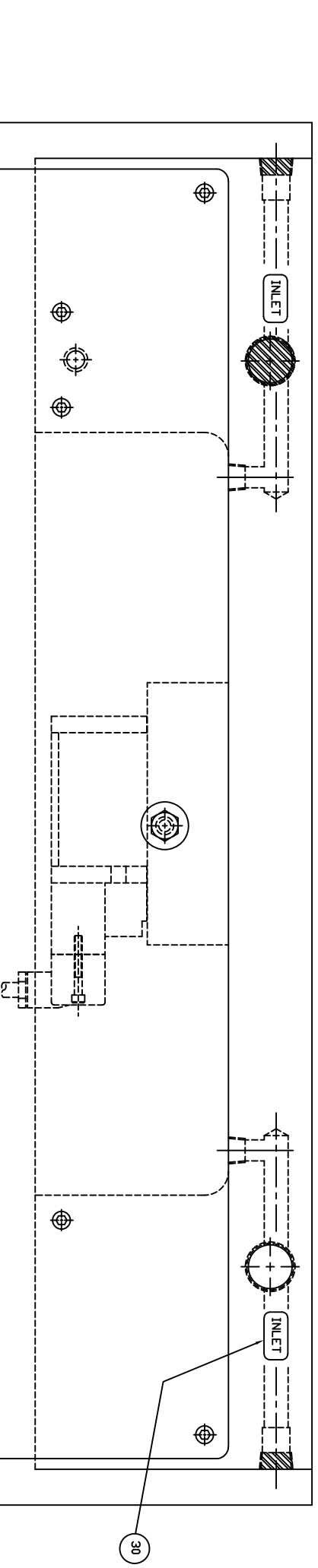
RAPID-AIR CORPORATION ROCKFORD, IL • MADISON, SD	
PART NAME: FSC18S CUTTER W/PNP SENSOR FOR SERVO C-T-L	
PART NO. 11300381 REV. 1 DATE 11/13/03	DRAWN BY: J. L. WILSON CHECKED BY: J. L. WILSON DATE 11/13/03
PART NO. 11300381 REV. 1 DATE 11/13/03	PART NO. 11300381 REV. 1 DATE 11/13/03

29.00
25.00

SECTION JJ



SECTION LL



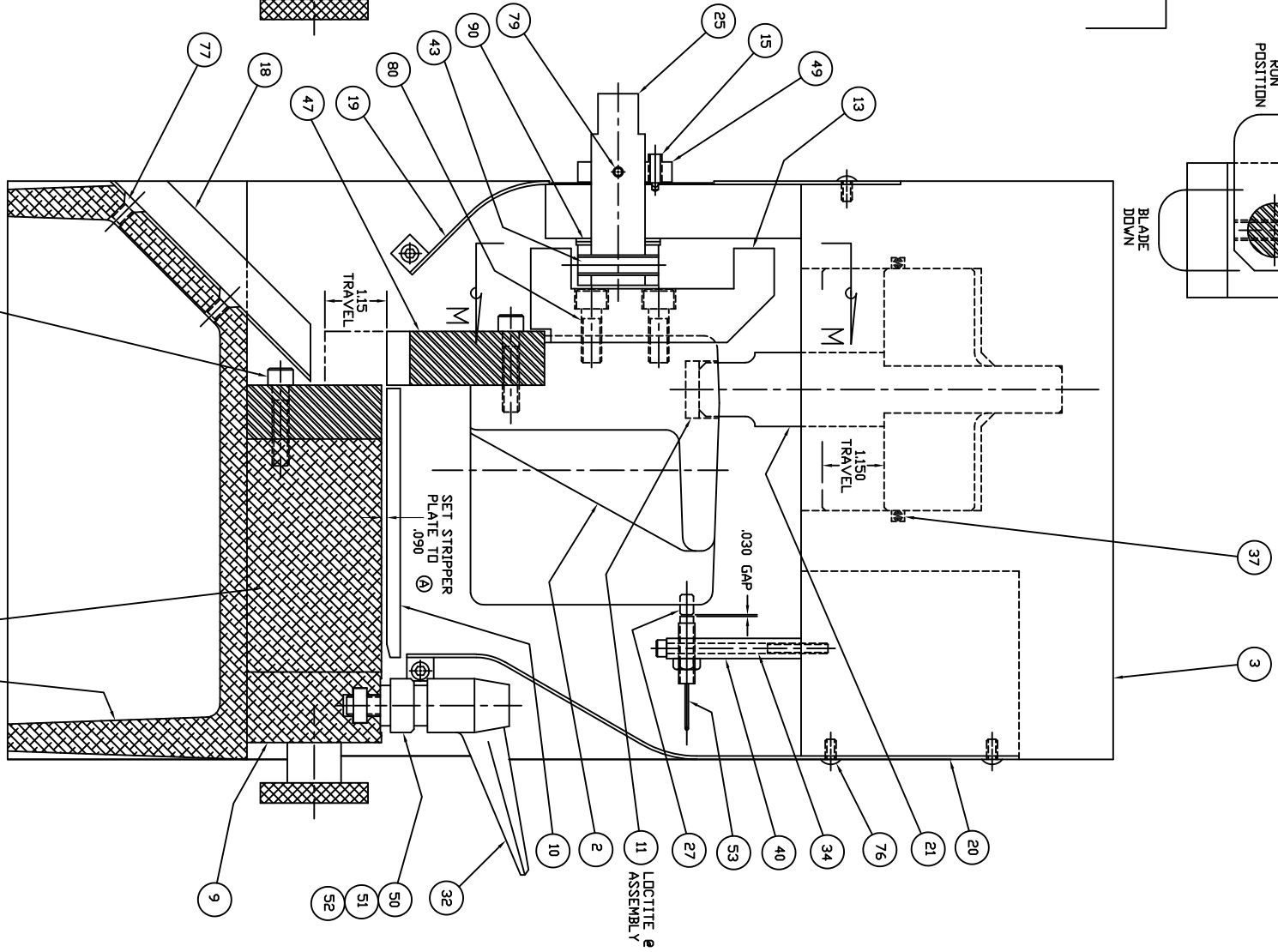
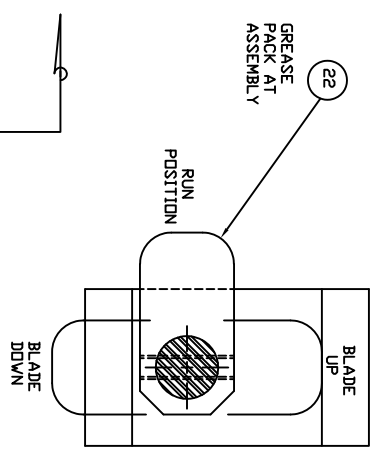
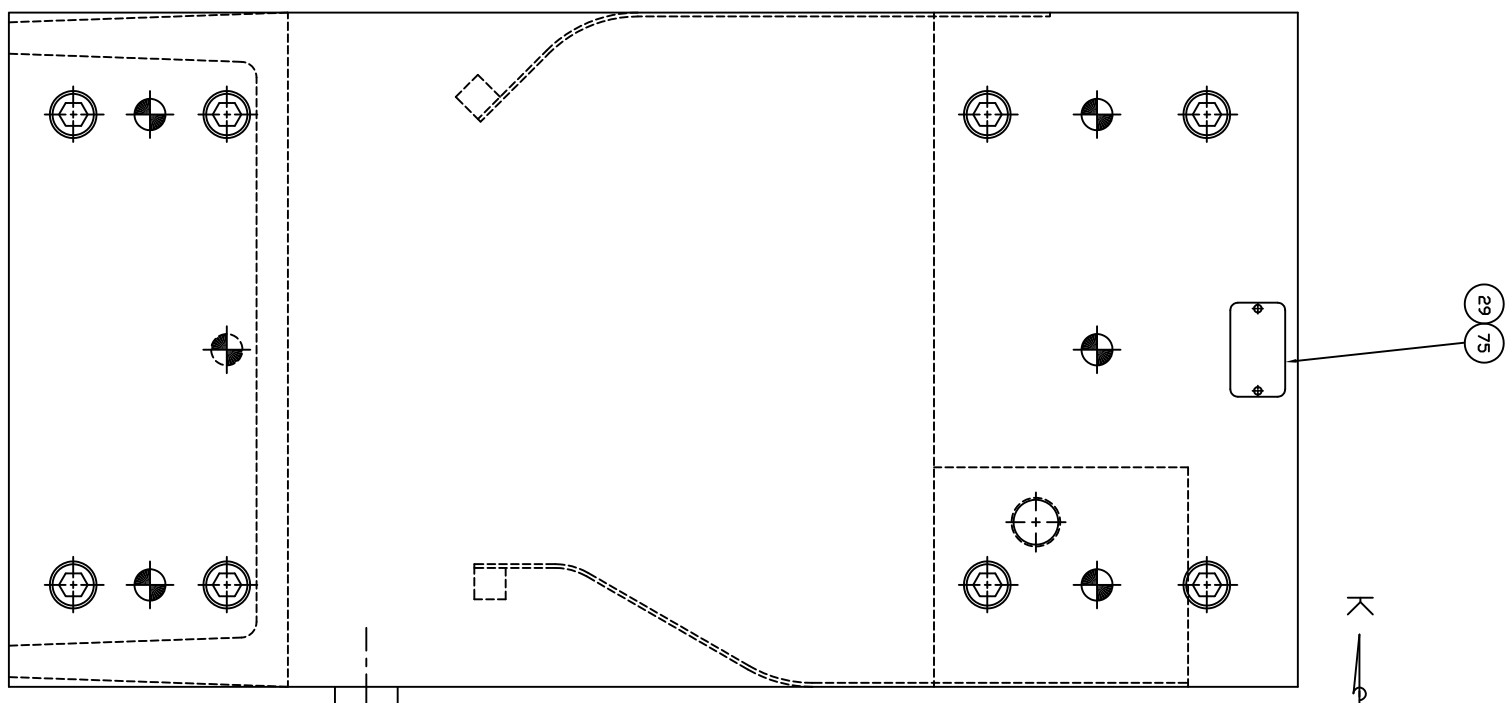
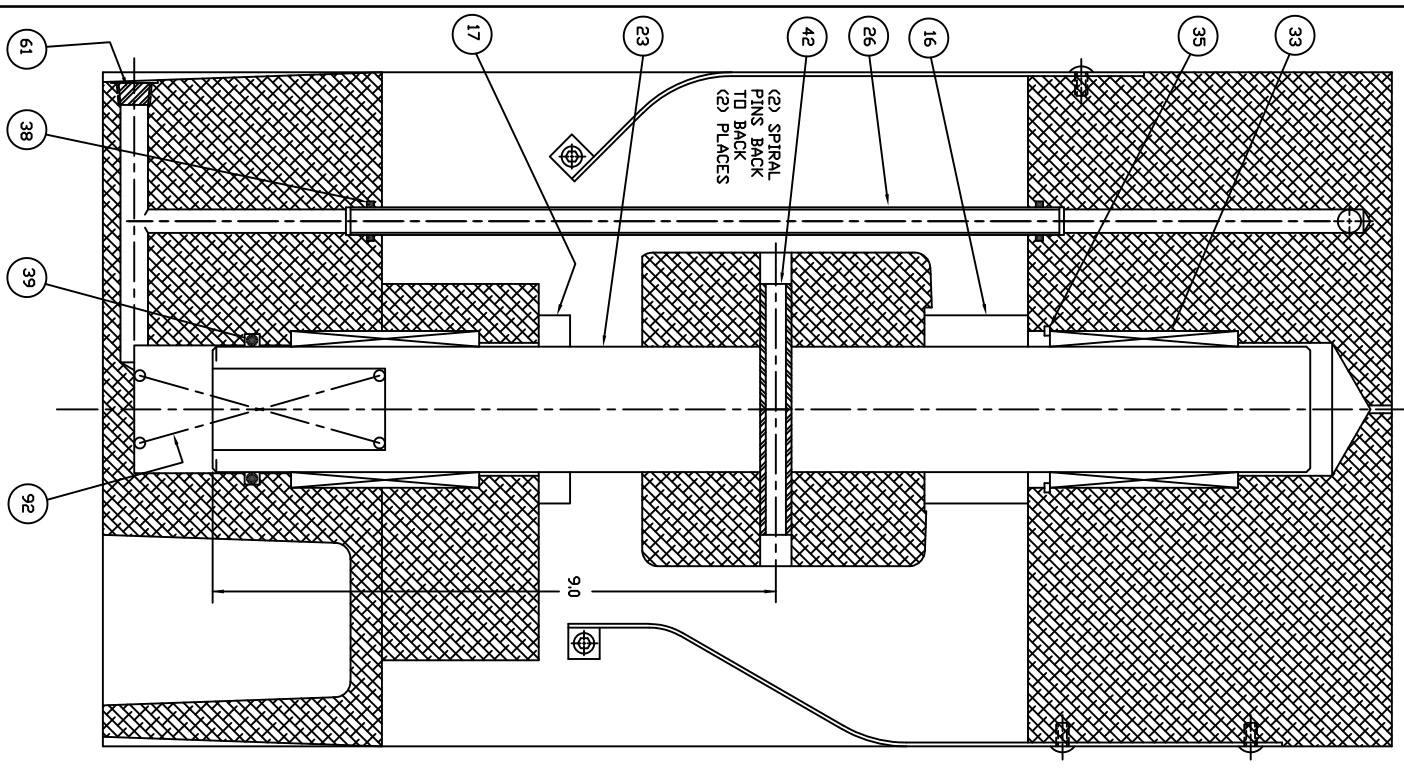
VIEW KK

NOTE: FSC18S FDR SERVD C-T-L, CONTROL VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

SHEET 4 OF 5

RAPID-AIR CORPORATION Rockford, IL • Madison, SD	
PART NAME: FSC18S CUTTER W/PNP SENSOR FOR SERVD C-T-L	PART NUMBER: 11300381
DRAWN BY: S.M.S.	CHECKED BY: S.M.S.
DATE: 03/01/13	SCALE: FULL
PART NUMBER: 11300381	PART NUMBER: 11300381
PART NAME: FSC18S CUTTER W/PNP SENSOR FOR SERVD C-T-L	PART NUMBER: 11300381
DRAWN BY: S.M.S.	CHECKED BY: S.M.S.
DATE: 03/01/13	SCALE: FULL
PART NUMBER: 11300381	PART NUMBER: 11300381

11300357-358



SECTION FF

FROM SHEET #1

VIEW DD

FROM SHEET #1

SECTION MM

SECTION CC

FROM SHEET #1

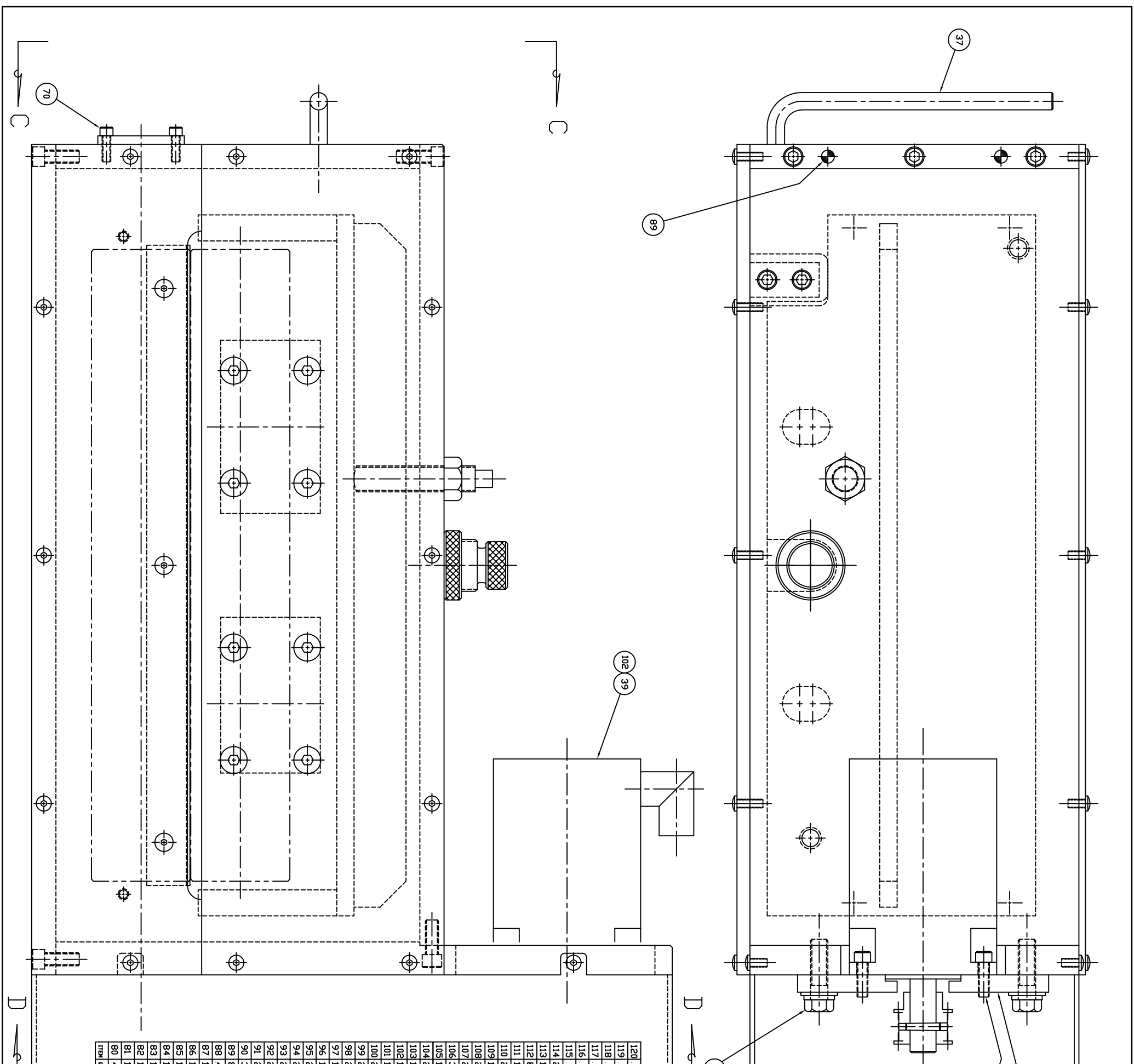
NOTE: FSC18S FOR SERVO C-T-L, CONTROL VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

SHEET 5 OF 5

REVISION		DATE		BY		CHKD	
1	REVISED						
2	REVISED						
3	REVISED						
4	REVISED						
5	REVISED						
6	REVISED						
7	REVISED						
8	REVISED						
9	REVISED						
10	REVISED						
11	REVISED						
12	REVISED						
13	REVISED						
14	REVISED						
15	REVISED						
16	REVISED						
17	REVISED						
18	REVISED						
19	REVISED						
20	REVISED						
21	REVISED						
22	REVISED						
23	REVISED						
24	REVISED						
25	REVISED						
26	REVISED						
27	REVISED						
28	REVISED						
29	REVISED						
30	REVISED						
31	REVISED						
32	REVISED						
33	REVISED						
34	REVISED						
35	REVISED						
36	REVISED						
37	REVISED						
38	REVISED						
39	REVISED						
40	REVISED						
41	REVISED						
42	REVISED						
43	REVISED						
44	REVISED						
45	REVISED						
46	REVISED						
47	REVISED						
48	REVISED						
49	REVISED						
50	REVISED						
51	REVISED						
52	REVISED						
53	REVISED						
54	REVISED						
55	REVISED						
56	REVISED						
57	REVISED						
58	REVISED						
59	REVISED						
60	REVISED						
61	REVISED						

11300357-358

E



ITEM QTY.	PART NO.	DESCRIPTION
120		
119		
118		
117		
116		
115		
114	65908112	SHCS #8-32 X 1 1/8
113	64230010	BLACK POLY TUBE 1/4"
112	67100121	MALE CONNECTOR 1/4 WPT OD 1/4 TUBE
111	67200001	MUFFLER
110	65920225	SHCS 1/4-20 X 2 1/4
109	34100338	SPACER
108	66612037	BHSCS #10-32 X 3/8
107	60108206	OT RING
106	65906150	SHCS #6-32 X 1 1/2
105	39900175	INLET LABEL
104	65920125	SHCS 1/4-20 X 1 1/4
103	60108014	OT RING
102	28900446	CONTROL ASSEMBLY
101	32500045	TAPER PIN INSTALLATION DRAWING
100	60900185	RETAINING RING
99	60910098	RETAINING RING
98	60910112	RETAINING RING
97	60910087	RETAINING RING
96	60910050	RETAINING RING
95	60108230	OT RING
94	60108228	OT RING
93	60108212	OT RING
92	61300050	LOCK WASHER 1/2
91	61200034	FLAT WASHER 1/2
90	62425100	ROLL PIN
89	62337100	DMWEL PIN 3/8 X 1
88	62137150	SPIRAL PIN
87	62500006	TAPER PIN
86	36800013	KEY
85	36800006	KEY
84	36800021	KEY
83	37500117	SPRING
82	30100289	PISTON HOUSING
81	65700072	SET SCREW
80	66220037	SET SCREW

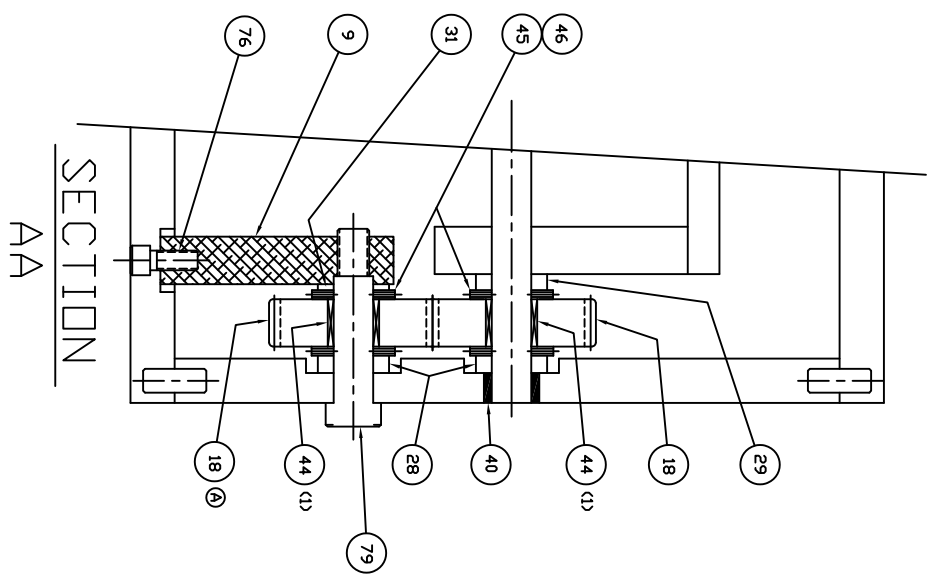
ITEM QTY.	PART NO.	DESCRIPTION
79	66162200	SHOULDER SCREW
78	66137075	SHOULDER SCREW
77	36300004	GAUGE FITTING
76	65931075	SHCS 5/16-18 X 3/4
75	65936075	SHCS 3/8-16 X 3/4
74	66536100	BHSCS 3/8-16 X 1
73	66620050	BHSCS 1/4-20 X 1/2
72	66620075	BHSCS 1/4-20 X 3/4
71	69200032	VALVE
70	65920075	SHCS 1/4-20 X 3/4
69	66520062	FHSCS 1/4-20 X 5/8
68	65931100	SHCS 5/16-18 X 1
67	65853150	HEX BOLT 1/2-13 X 1 1/2
66	65936100	SHCS 3/8-16 X 1
65	66520050	FHSCS 1/4-20 X 1/2
64	66300250	DRIVE SCREW
63	39900051	S/N TAG
62	39900246	RAPID-AIR LOGO
61	68000024	REGULATOR
60	31500501	ENTRANCE GUIDE
59	31500500	EXIT GUIDE
58	68000026	GAUGE
57	31702137	REGULATOR RETAINING PLATE
56	34100236	GAUGE SPACER
55	31702113	GAUGE & REGULATOR PLATE
54	10900508	CASCADE ASSEMBLY
53	65102520	HEX NUT 1/4-20
52	65117516	JAM NUT 3/4-16
51	36200031	ADJUSTING SCREW LOCKNUT
50	36100078	ADJUSTING SCREW
49	36100104	POSITIVE STOP SCREW
48	64520022	THRUST WASHER
47	64520025	THRUST WASHER
46	64520008	THRUST WASHER
45	64510002	THRUST BEARING
44	64500057	NEEDLE BEARING
43	64500066	NEEDLE BEARING
42	64500049	BALL BEARING
41	64100046	DILITE BUSHING
40	64100075	DILITE BUSHING
39	69000044	MOTOR
38	36500045	CAM
37	36500036	CAM HANDLE
36	35500231	PISTON
35	31702112	MANIFOLD PLATE
34	31400550	PISTON COVER
33	31500499	ENTRANCE GUARD
32	31500498	LOWER EXIT GUARD
31	34100325	SPACER
30	34100381	SPACER
29	34100323	SPACER
28	34100322	SPACER
27	34100321	ROLLER SPACER
26	33900265	BEARING SLEEVE
25	32900858	ECCENTRIC SHAFT
24	32900861	PIVOT SHAFT
23	31500489	BELT COVER
22	32500046	TIMING BELT
21	32500036	BUSHING (FOR 32500029)
20	32500029	PULLEY (LOWER ROLL)
19	32500044	MOTOR PULLEY
18	32600233	UPPER IDLER SPUR GEAR
17		
16	32600292	UPPER ROLLER SPUR GEAR
15	32600235	LOWER ROLLER SPUR GEAR
14	34200389	UPPER ROLLER
13	34200388	LOWER ROLLER
12	30100290	BEARING HOUSING
11	30100292	PISTON HOUSING
10	31702500	PISTON HOUSING MOUNTING PLATE
9	31702115	GEAR SUPPORT PLATE
8	31702111	CAM PIVOT PLATE
7	21900262	ROLLER TOP PLATE ASSEMBLY
6	31702106	ROLLER SIDE PLATE
5	31702473	MOTOR MOUNTING PLATE
4	31702499	TOP PLATE
3	31702471	L.H. SIDE PLATE
2	31702470	R.H. SIDE PLATE
1	31702498	BOTTOM PLATE

SHEET 1 OF 5

RAPID-AIR CORPORATION
ROCKFORD, IL & MADISON, SD

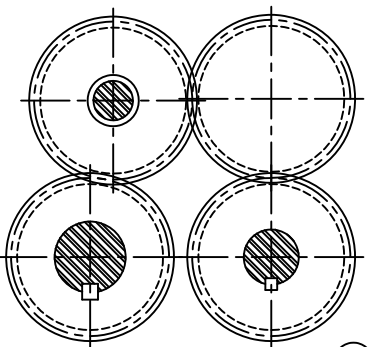
PART NO. 218T W/AIR PILOT RELEASE & AIR DOWN

DATE	1978
REV.	1
ECN #	3724
DATE	9-10-74
REV.	1
DATE	13000609

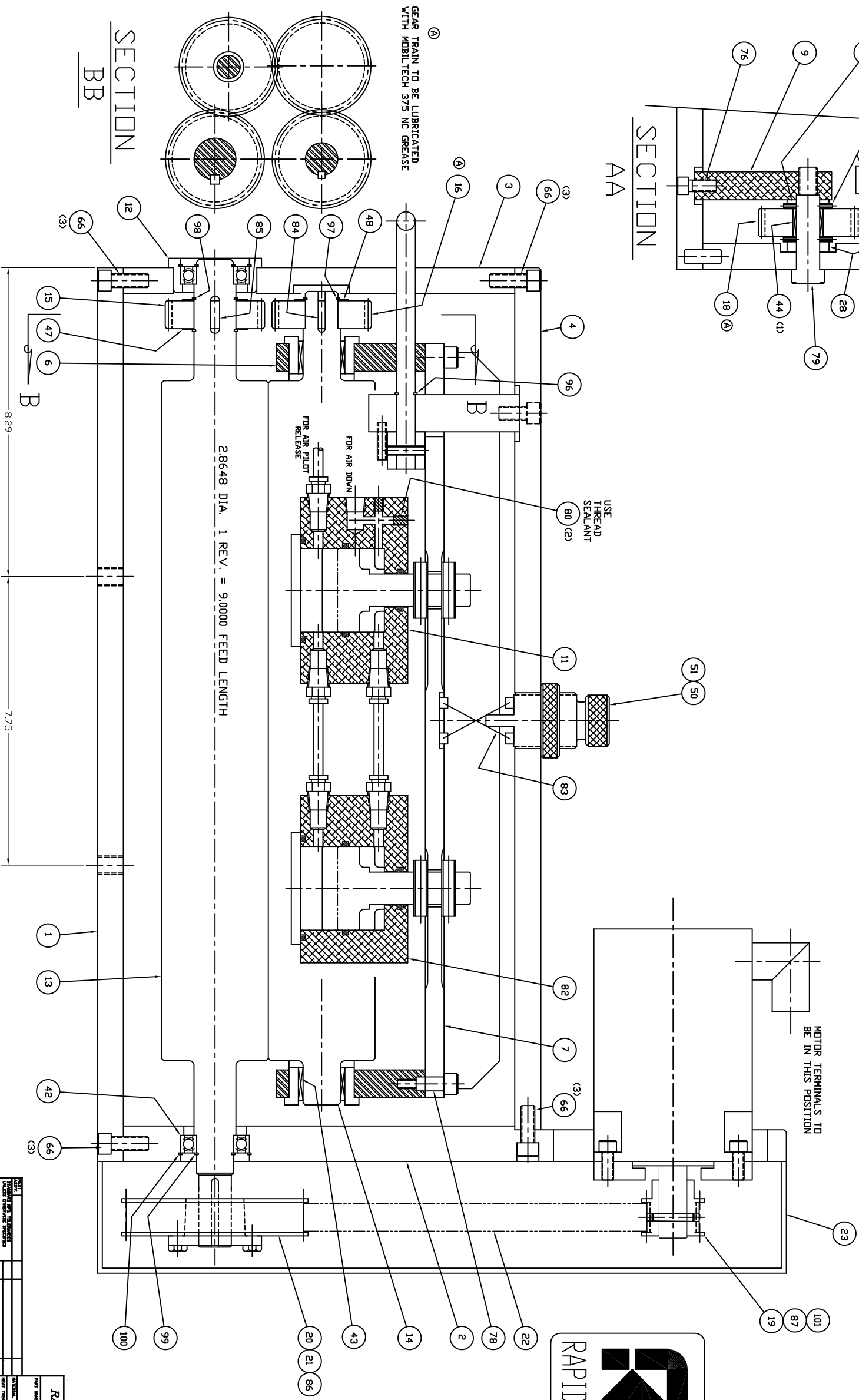


SECTION
AA

ⓐ GEAR TRAIN TO BE LUBRICATED
WITH MOBILTECH 375 NC GREASE

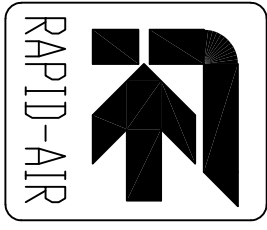


SECTION
BB



2.8648 DIA. 1 REV. = 9.0000 FEED LENGTH

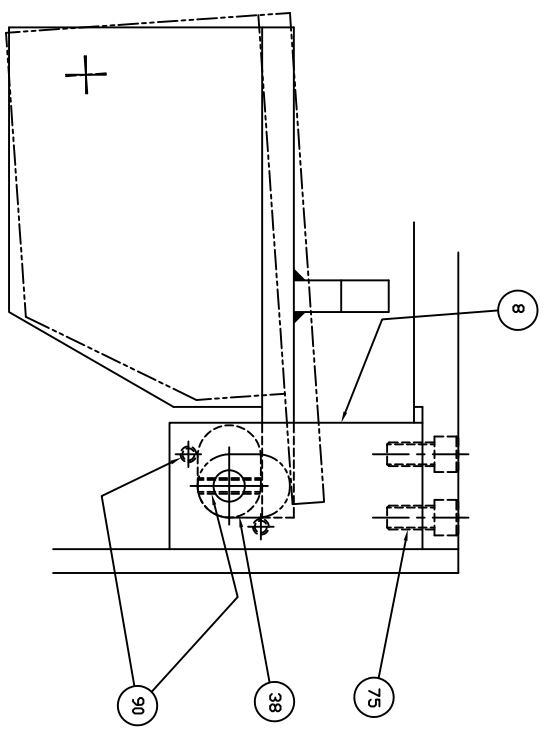
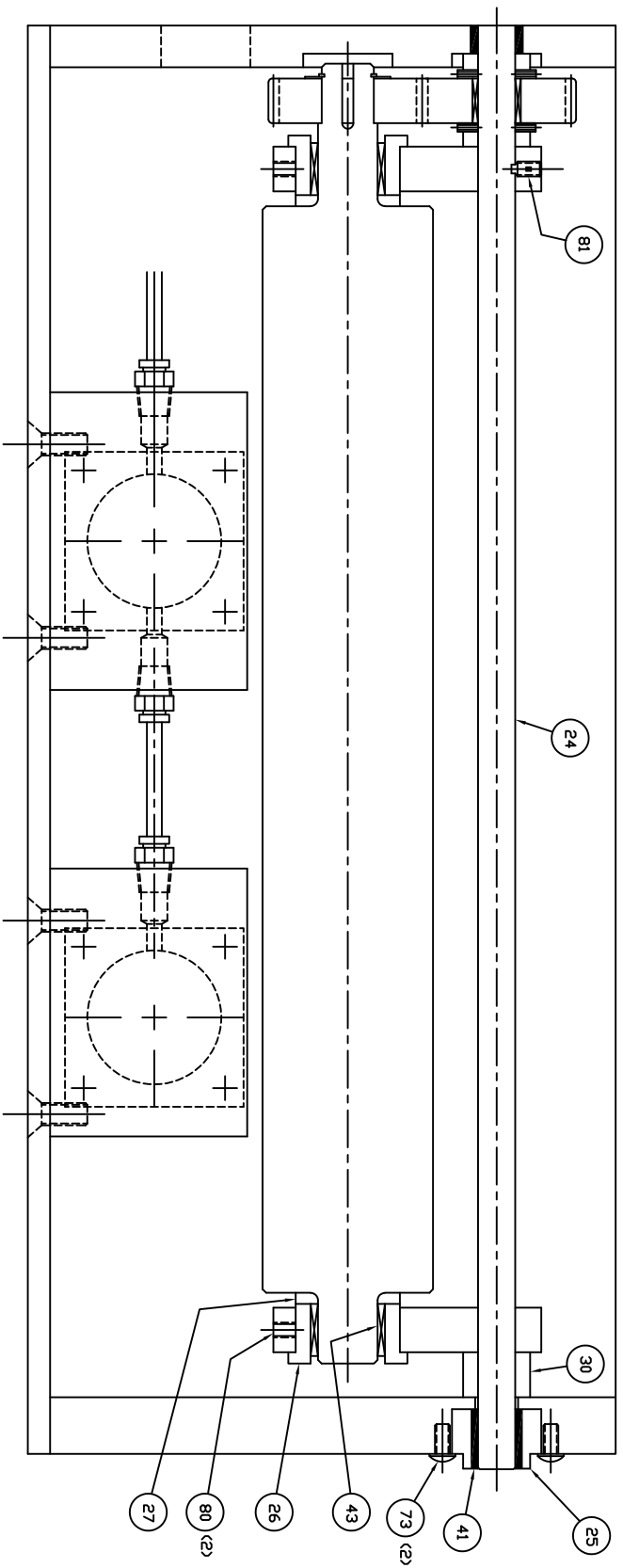
MOTOR TERMINALS TO
BE IN THIS POSITION



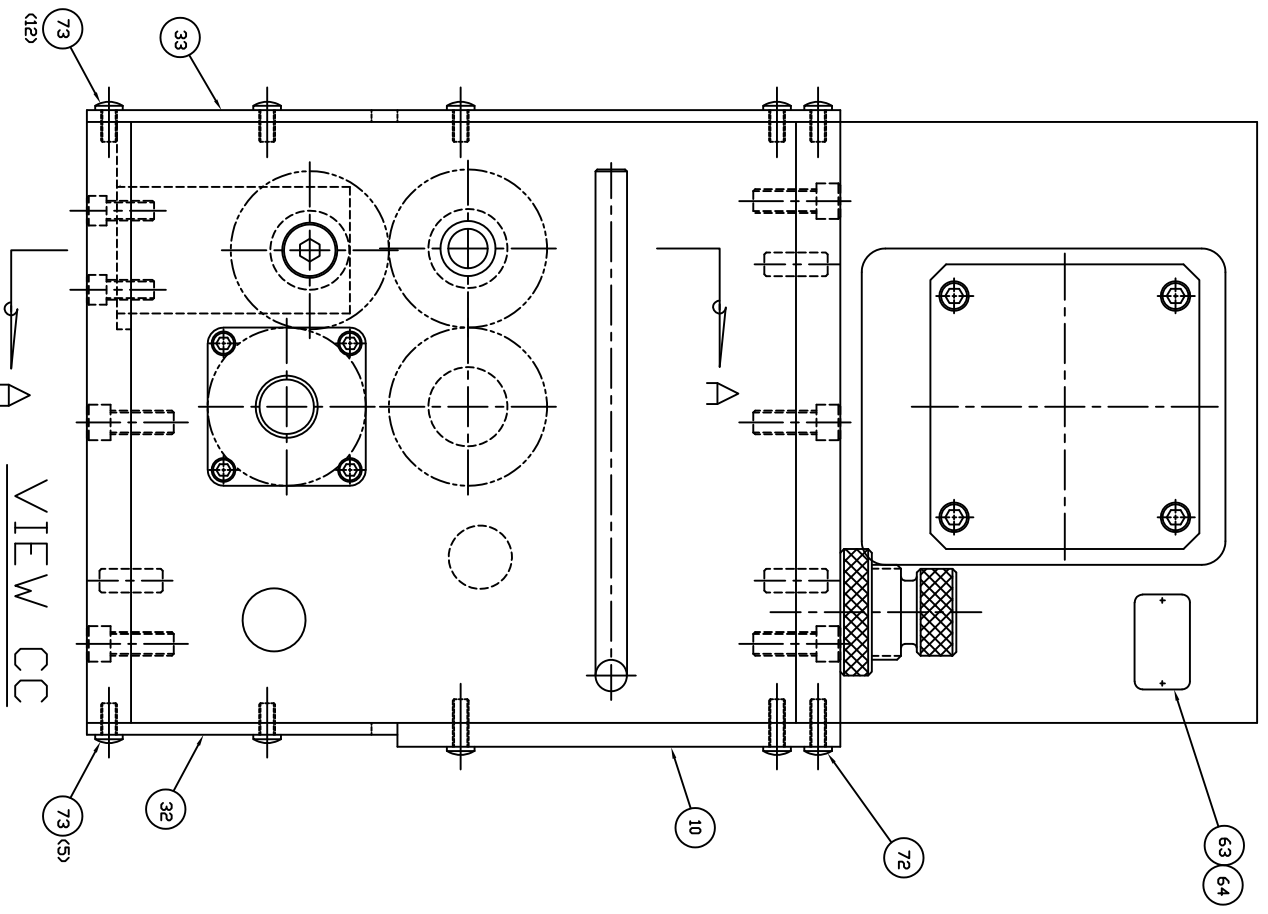
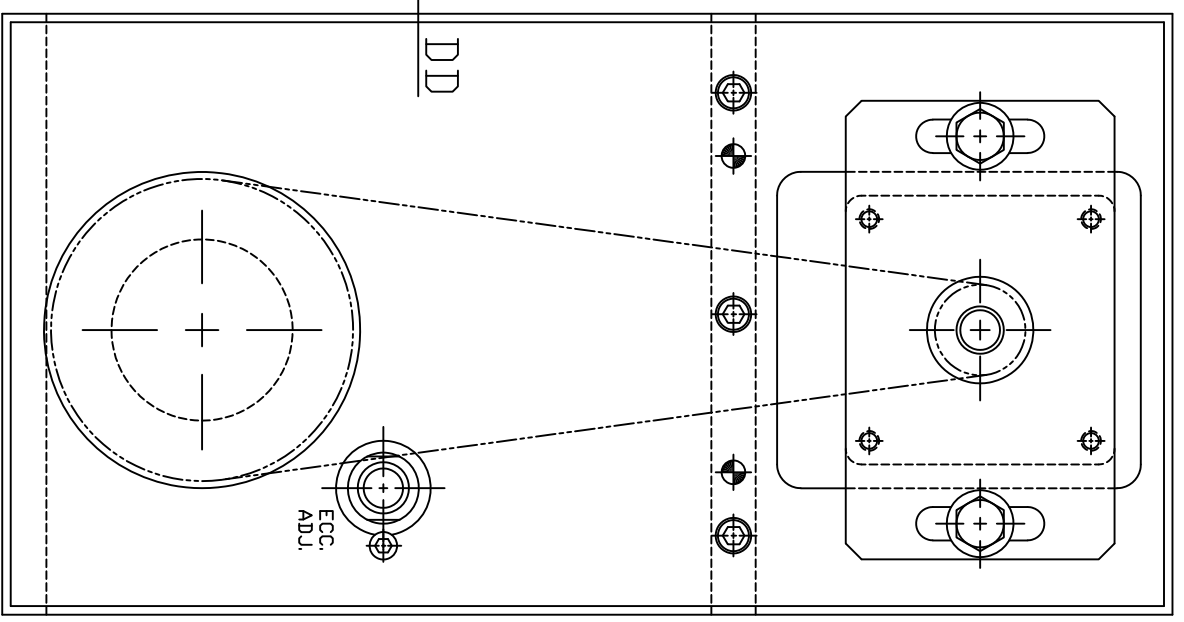
REV.	DATE	BY	CHKD.	DESCRIPTION
1	10-14-98	JLU	SD	ISSUED FOR PRODUCTION
2	10-14-98	JLU	SD	REVISIONS

APPROVED BY:	DATE:
DESIGNED BY:	DATE:
CHECKED BY:	DATE:
DRAWN BY:	DATE:

RAPID-AIR CORPORATION
ROCKFORD, IL • WADSWORTH, SD
PART NAME: 21BT W/AIR PILOT RELEASE
& AIR DOWN



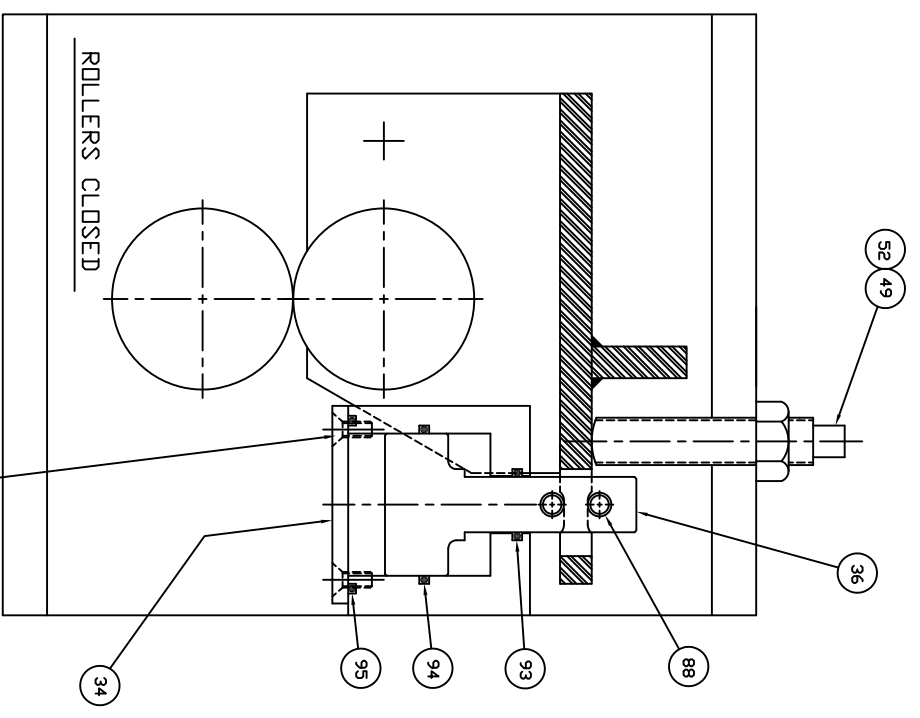
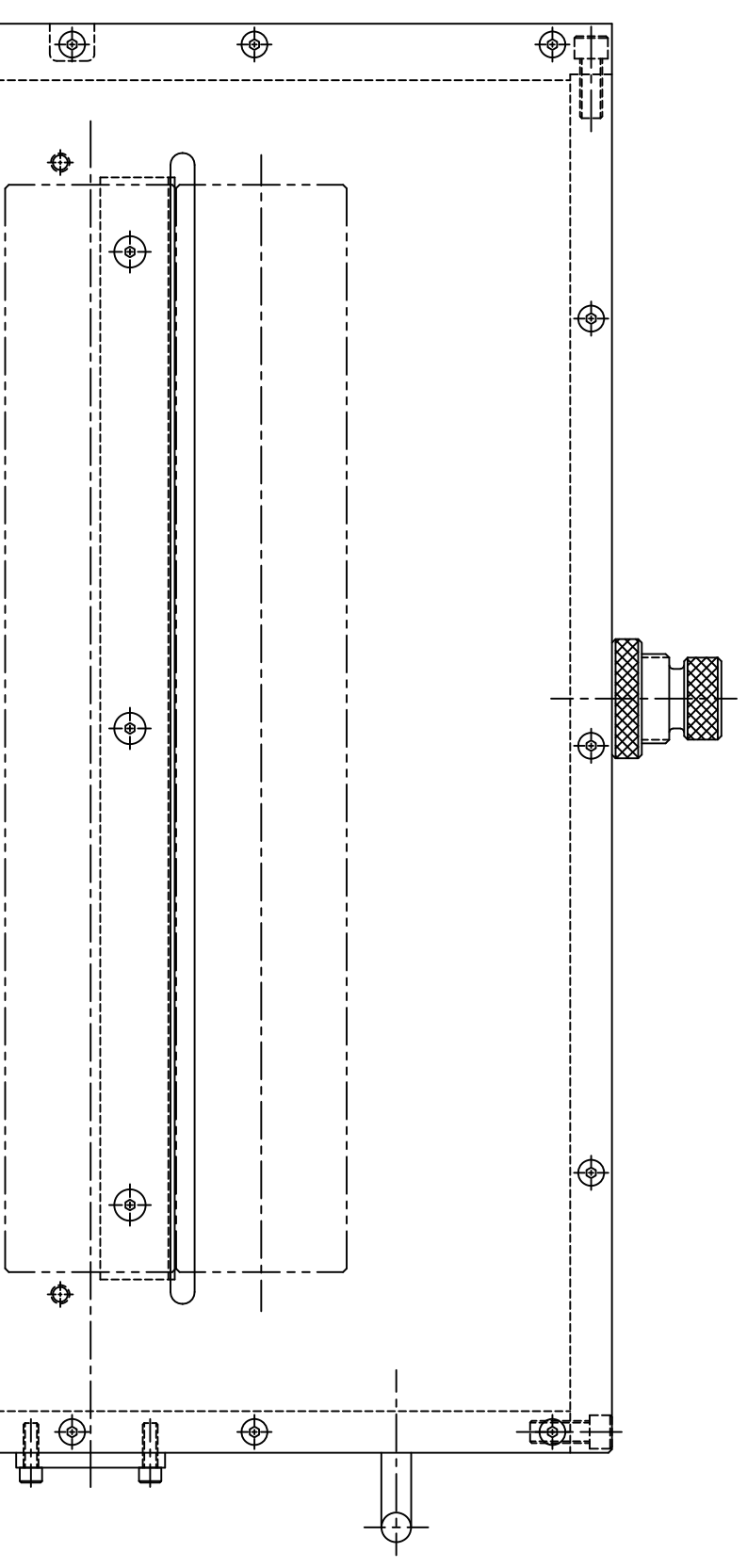
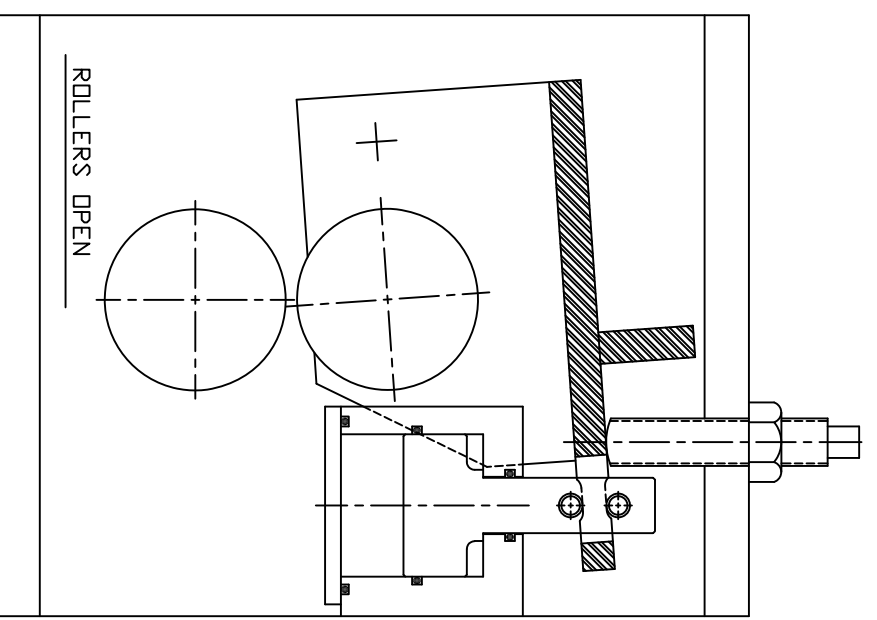
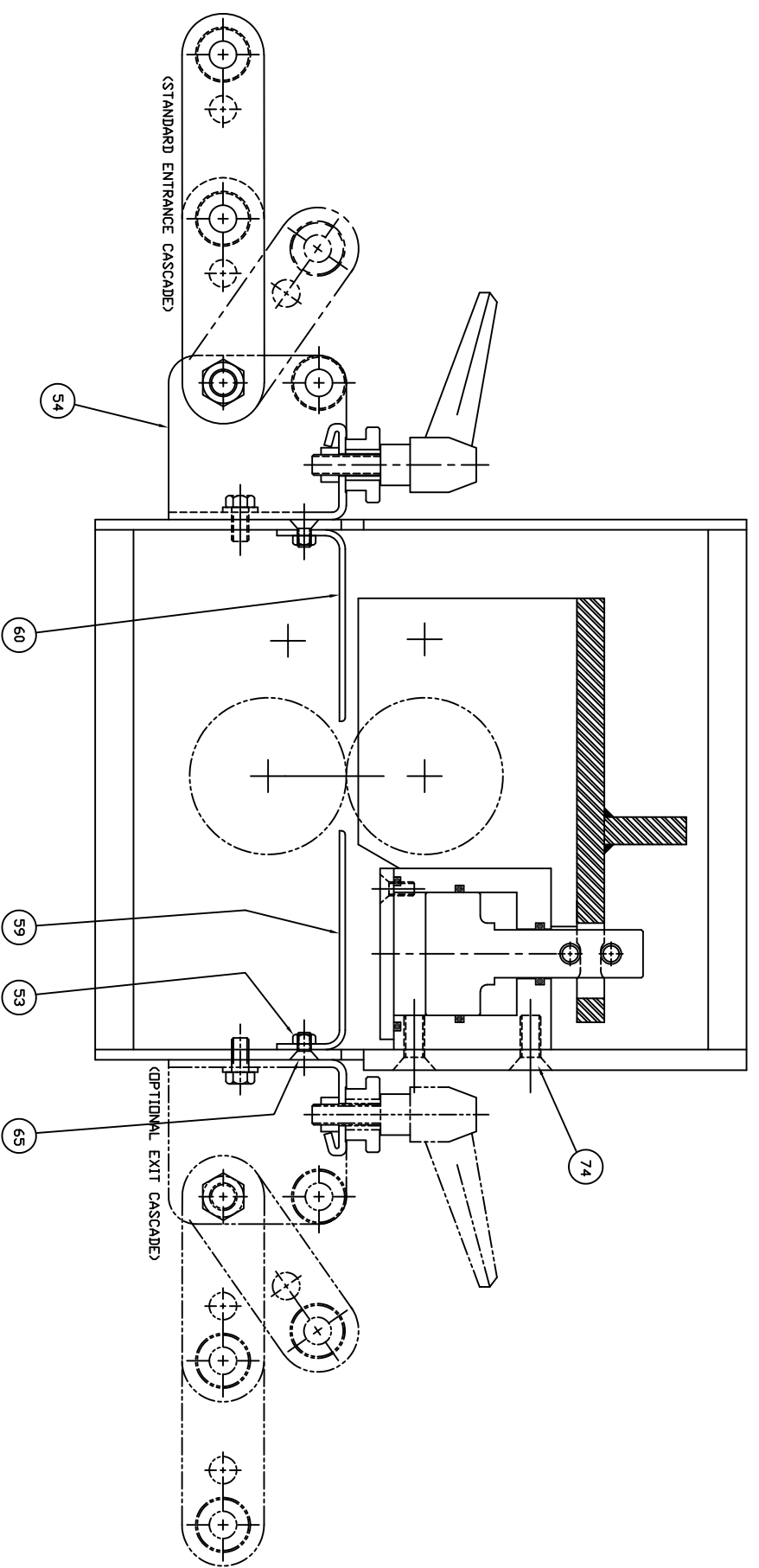
VIEW DD



SHEET 3 OF 5

REV	DATE	BY	CHKD	DESCRIPTION
A	9-10-74	DUU		21BT W/AIR PILOT RELEASE & AIR DOWN
PART NAME: 21BT W/AIR PILOT RELEASE & AIR DOWN DRAWN BY: DUU CHECKED BY: TFM, KRM PART NO: EGN #3724 DATE: 9-10-74 SCALE: FULL 13000609				

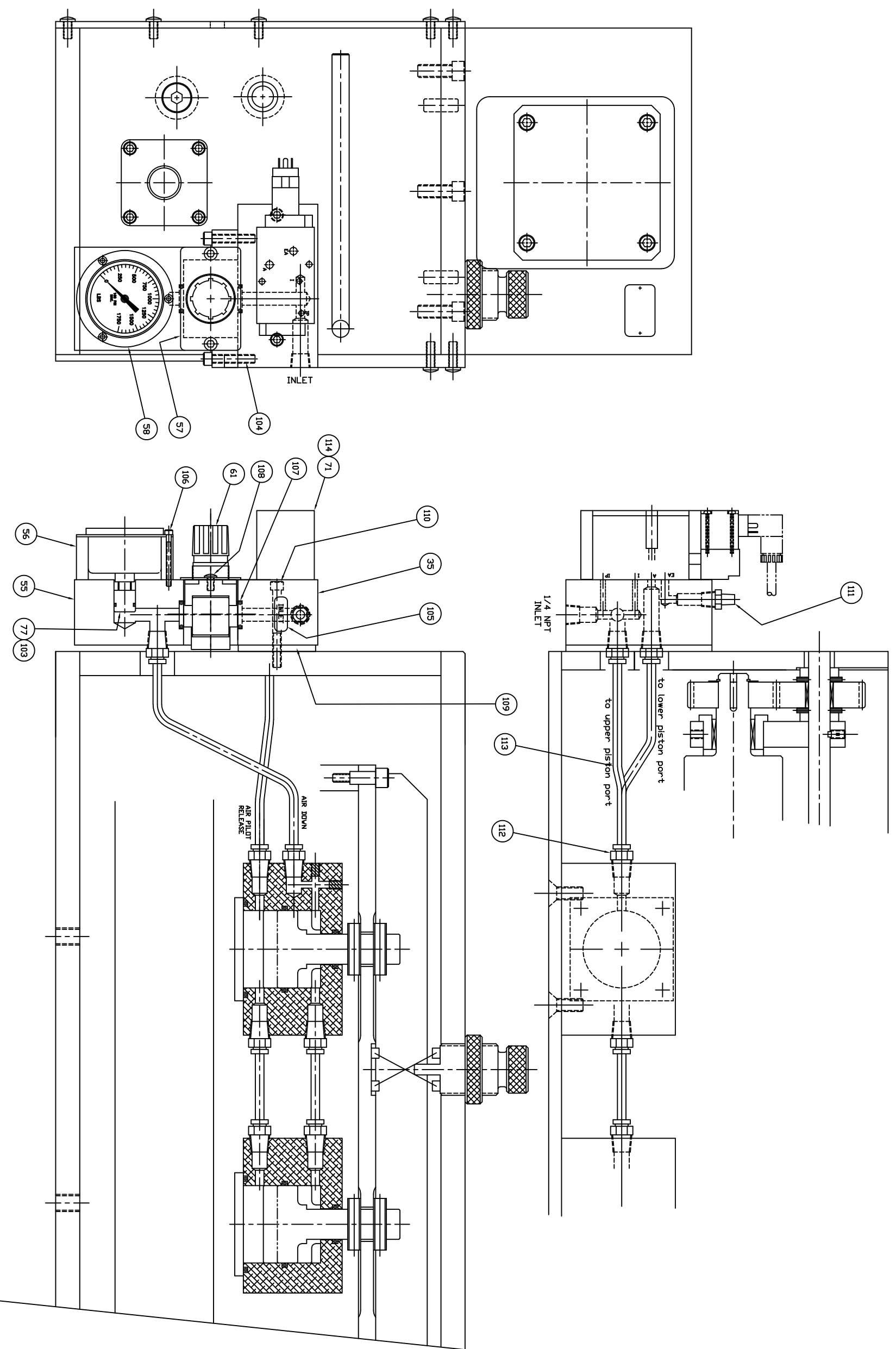
E



REV	DATE	BY	CHKD	DESCRIPTION
1				ISSUED FOR PRODUCTION
2				REVISION
3				REVISION
4				REVISION
5				REVISION
6				REVISION
7				REVISION
8				REVISION
9				REVISION
10				REVISION

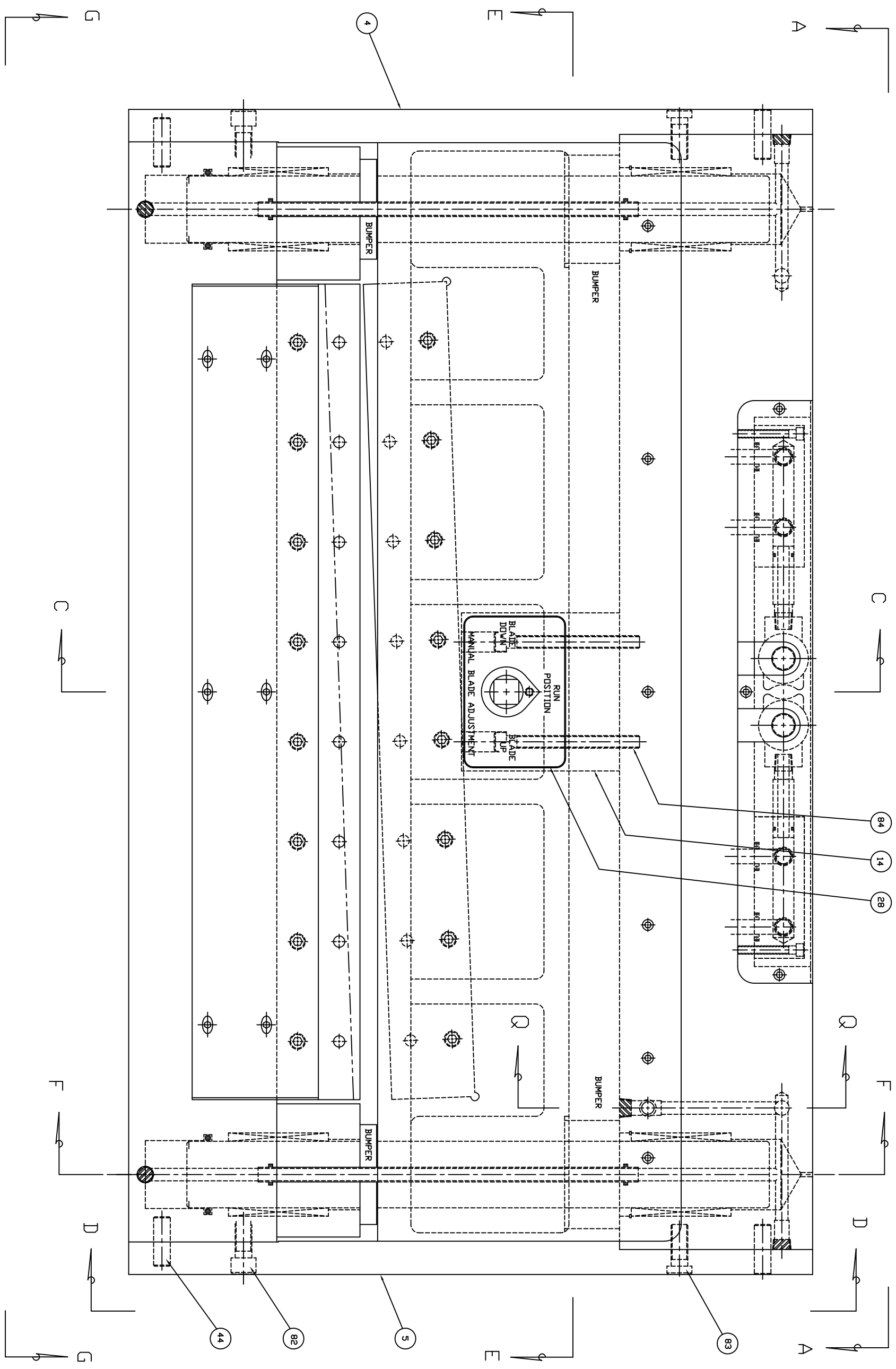
RAPID-AIR CORPORATION
 ROCKFORD, IL • WADSWORTH, SD
 PART NAME: 218T W/AIR PILOT RELEASE
 & AIR DOWN

DESIGNED BY: DJU | CHECKED BY: []
 DRAWN BY: DJU | DATE: 9-10-74
 PART NUMBER: 13000609



REV.	DATE	BY	CHKD.	DESCRIPTION
1	10-14	DU	SD	ISSUED FOR PRODUCTION
2	10-14	DU	SD	REVISION

RAPID-AIR CORPORATION
 ROCKFORD, ILL. • WADSWORTH, SD
 PART NAME: 281T W/AIR PILOT RELEASE
 & AIR DOWN



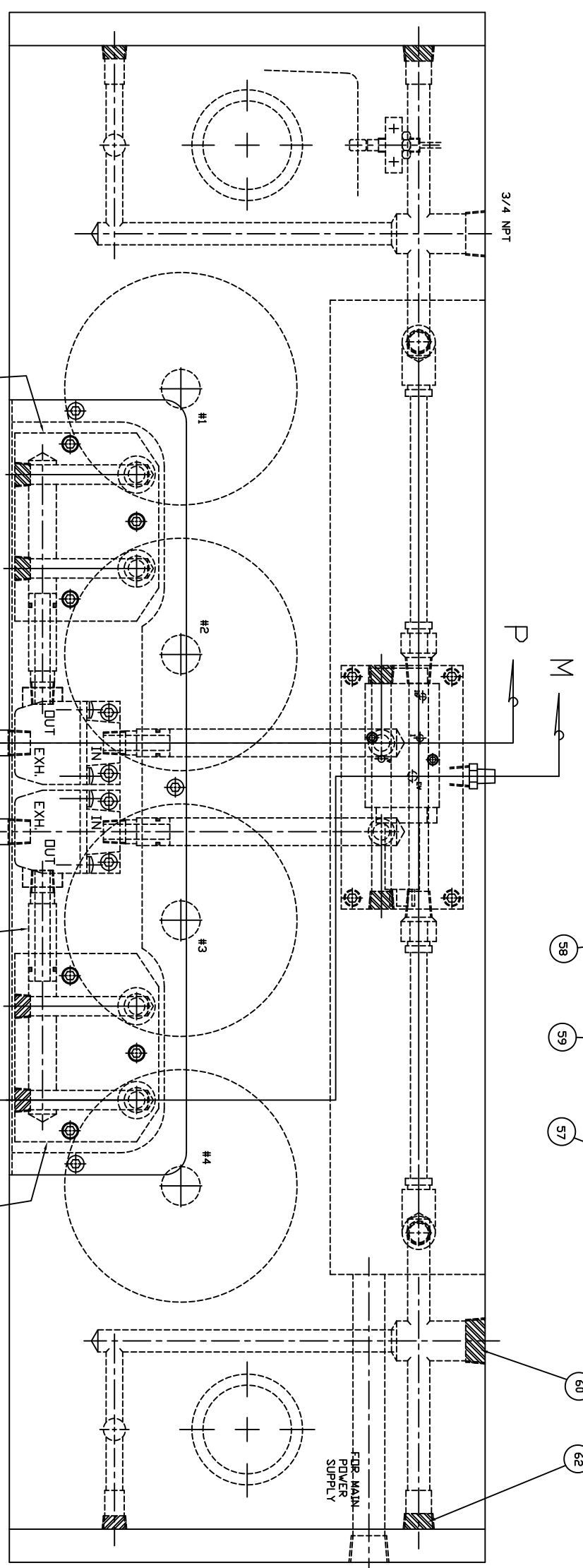
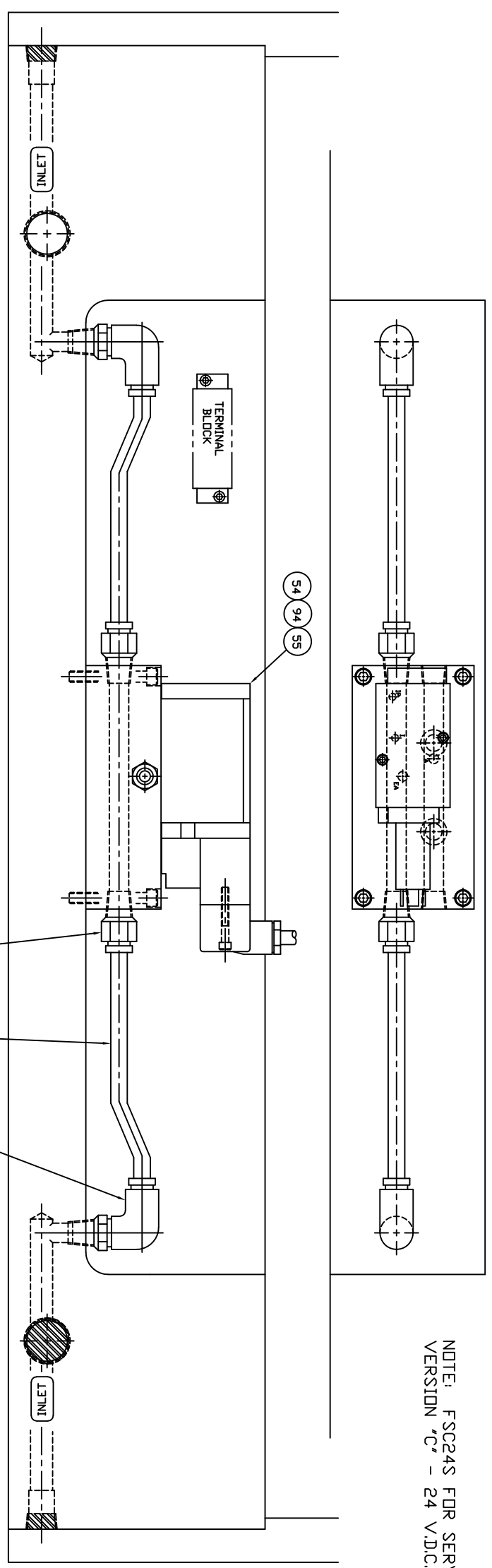
NOTE: FSC24S FOR SERV0 C-T-L, CONTROL
 VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

SHEET 1 OF 6

RAPID-AIR CORPORATION ROCKFORD, IL • MADISON, SD	
FSC24S CUTTER W/PNP SENSOR FOR SERV0 C-T-L	
PART NO. 11300382 REV. 01 DATE 11/13/03	DRAWN BY: J. FULLER CHECKED BY: J. FULLER ENGINEER BY: J. FULLER
PROJECT NO. 11300359-360 PART NO. 11300382 REV. 01 DATE 11/13/03	DRAWN BY: J. FULLER CHECKED BY: J. FULLER ENGINEER BY: J. FULLER

11300359-360

NOTE: FSC24S FOR SERV0 C-T-L, CONTROL
 VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

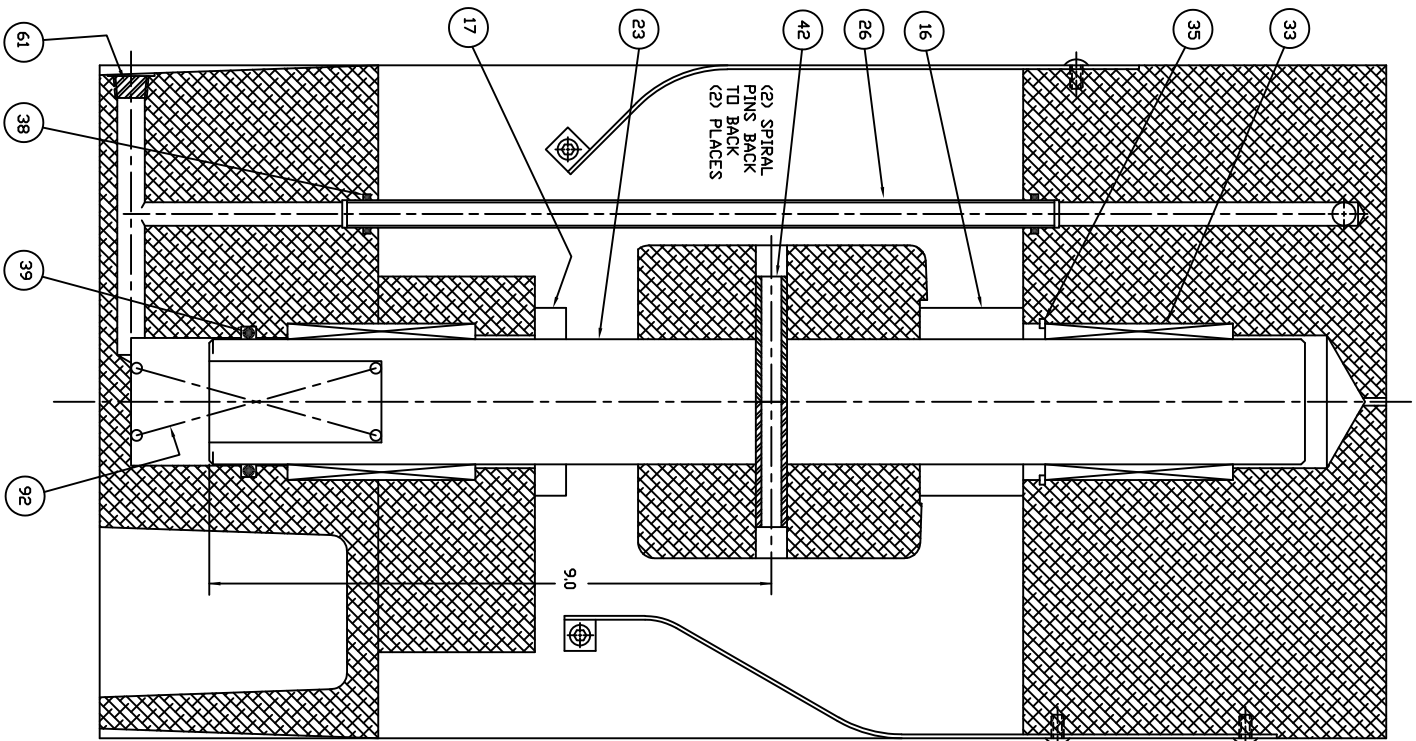


VIEW AA
 FROM SHEET #1

REV	DATE	BY	CHKD	DESCRIPTION
1	10/16/06	SM	SM	ISSUED FOR MANUFACTURE
2	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
3	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
4	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
5	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
6	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
7	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
8	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
9	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
10	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
11	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
12	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
13	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
14	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
15	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
16	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
17	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
18	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
19	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
20	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
21	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
22	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
23	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
24	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
25	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
26	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
27	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
28	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
29	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
30	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
31	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
32	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
33	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
34	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
35	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
36	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
37	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
38	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
39	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
40	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
41	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
42	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
43	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
44	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
45	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
46	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
47	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
48	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
49	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
50	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
51	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
52	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
53	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
54	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
55	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
56	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
57	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
58	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
59	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
60	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
61	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
62	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
63	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
64	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
65	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
66	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
67	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
68	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
69	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
70	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
71	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
72	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
73	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
74	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
75	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
76	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
77	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
78	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
79	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
80	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
81	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
82	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
83	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
84	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
85	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
86	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
87	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
88	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
89	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
90	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
91	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
92	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
93	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
94	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
95	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
96	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
97	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
98	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
99	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR
100	11/13/06	SM	SM	REVISED TO ADD PNP SENSOR

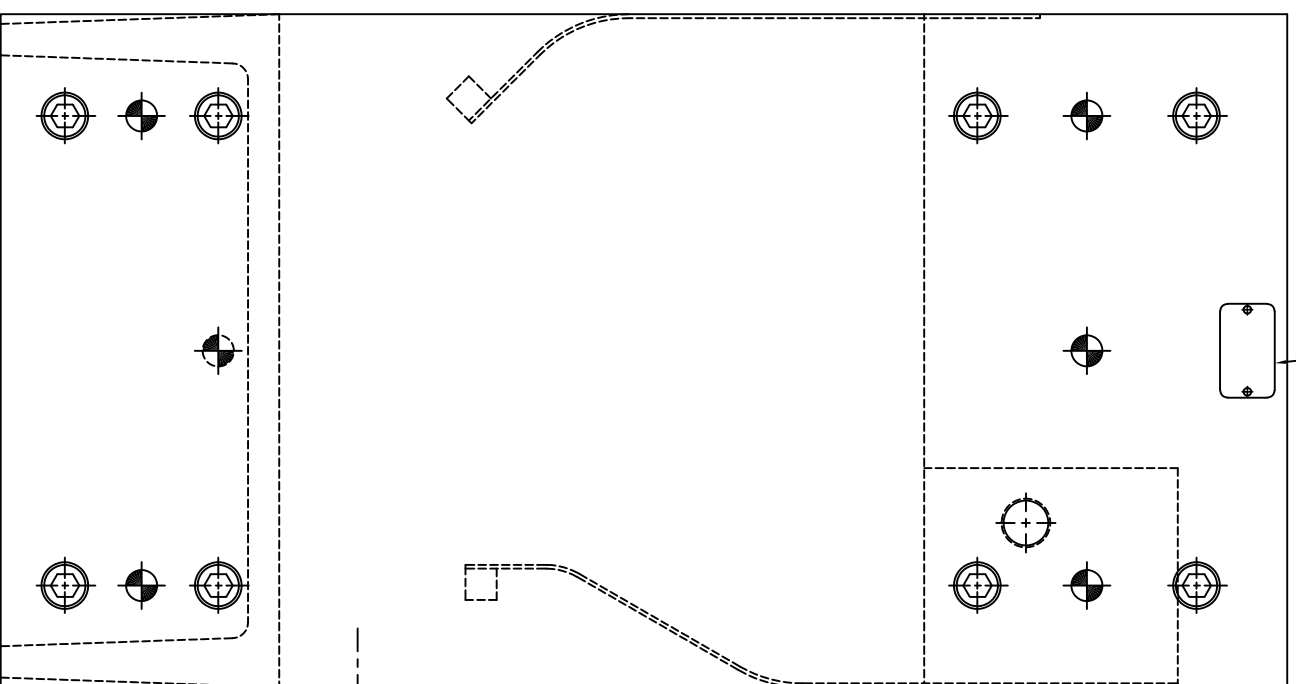
RAPID-AIR CORPORATION
 ROCKFORD, IL • MADISON, SD
 FSC24S CUTTER V/PNP
 SENSOR FOR SERV0 C-T-L
 PART NO. 11300392
 DATE 11/13/06
 DRAWN BY SM
 CHECKED BY SM
 APPROVED BY SM
 11300392-360

NOTE: FSC24S FOR SERVO C-T-L, CONTROL
VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR



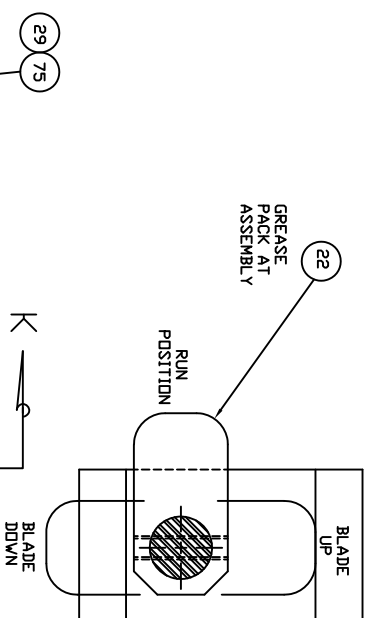
SECTION FF

FROM SHEET #1

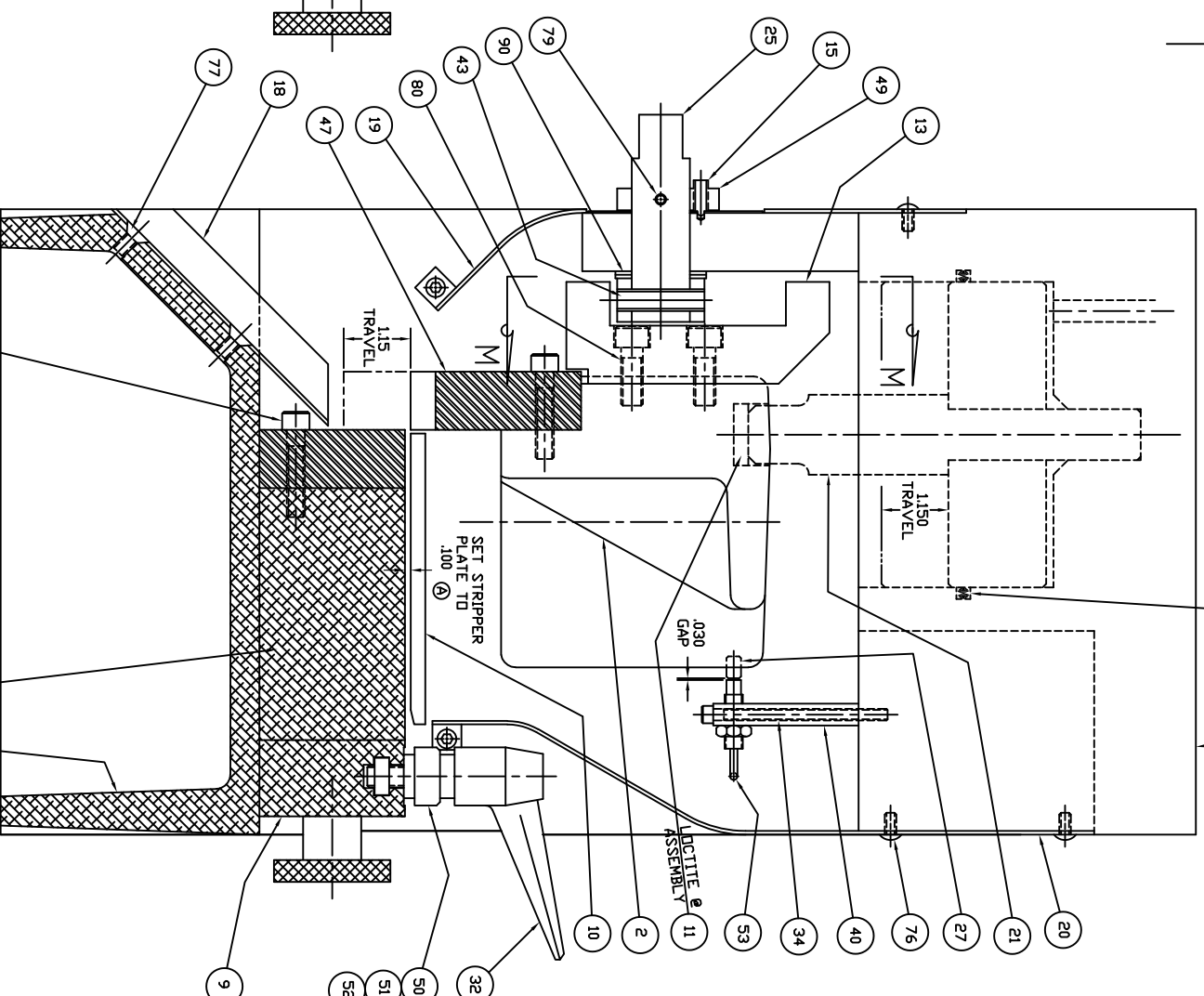


VIEW DD

FROM SHEET #1



SECTION MM



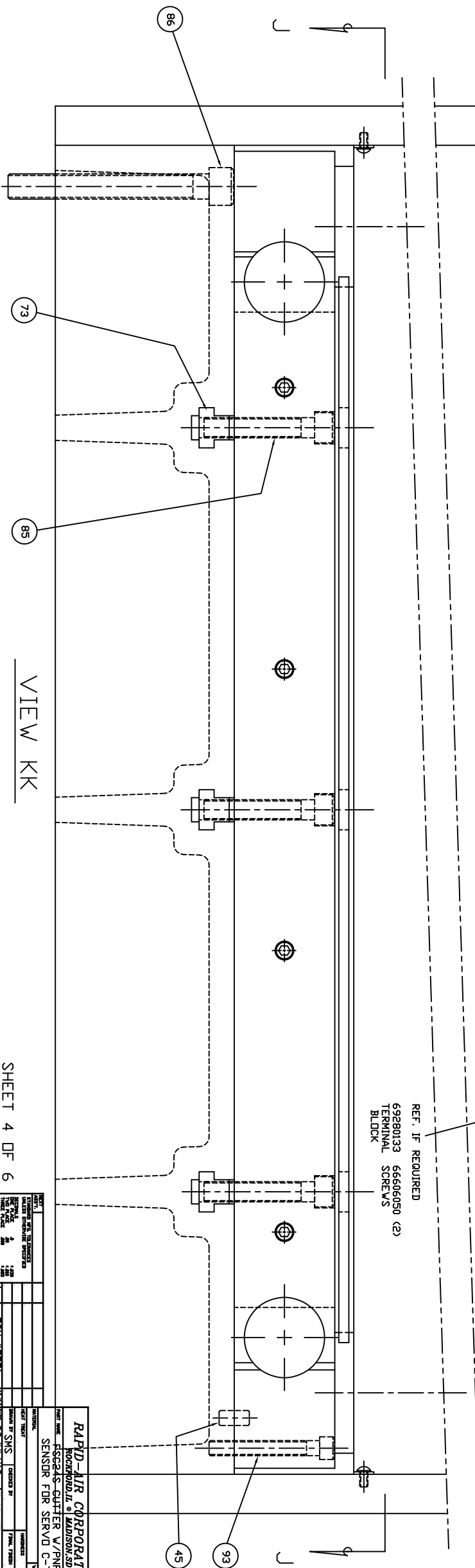
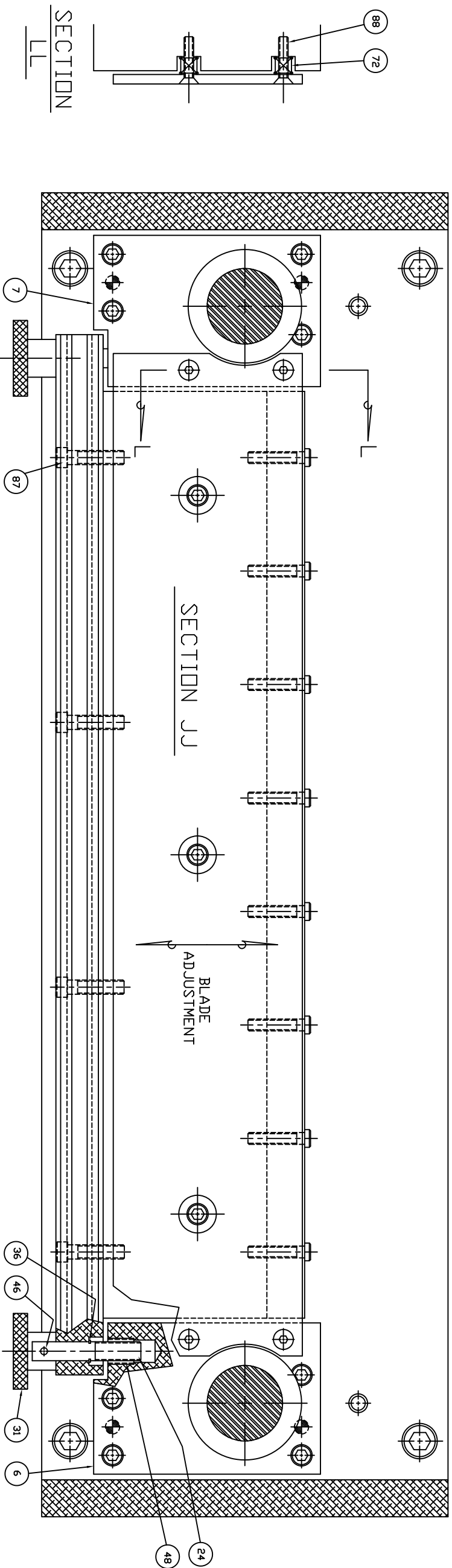
SECTION CC

FROM SHEET #1

SHEET 3 OF 6

RAPID-AIR CORPORATION ROCKFORD, ILL. • MADISON, SD	
PART NAME: FSC24S CUTTER W/PNP SENSOR FOR SERVO C-T-L	
DRAWN BY: SMS CHECKED BY:	DATE: 23 JUL 73 SHEET FULL
PART NUMBER:	QUANTITY:
REV. 1	11300382

NOTE: FSC24S FOR SERVO C-T-L, CONTROL
VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR



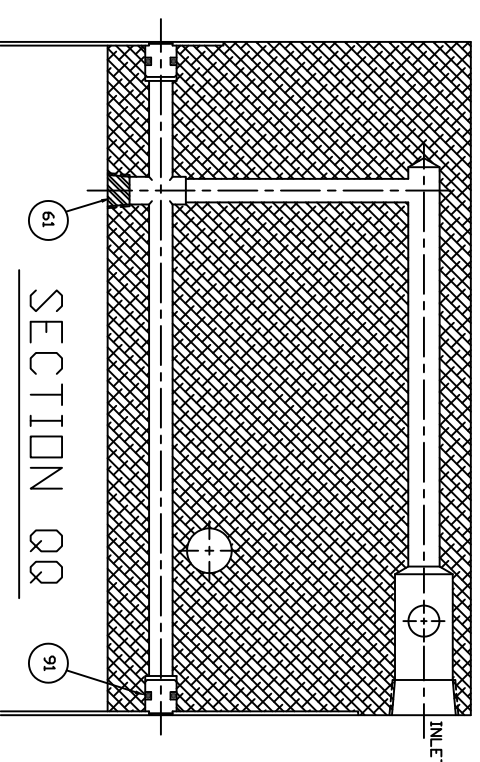
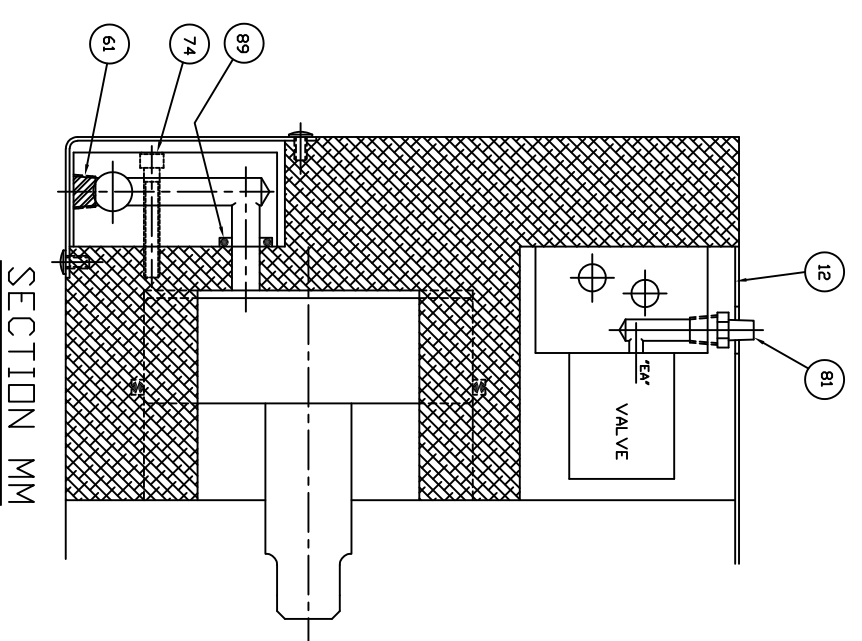
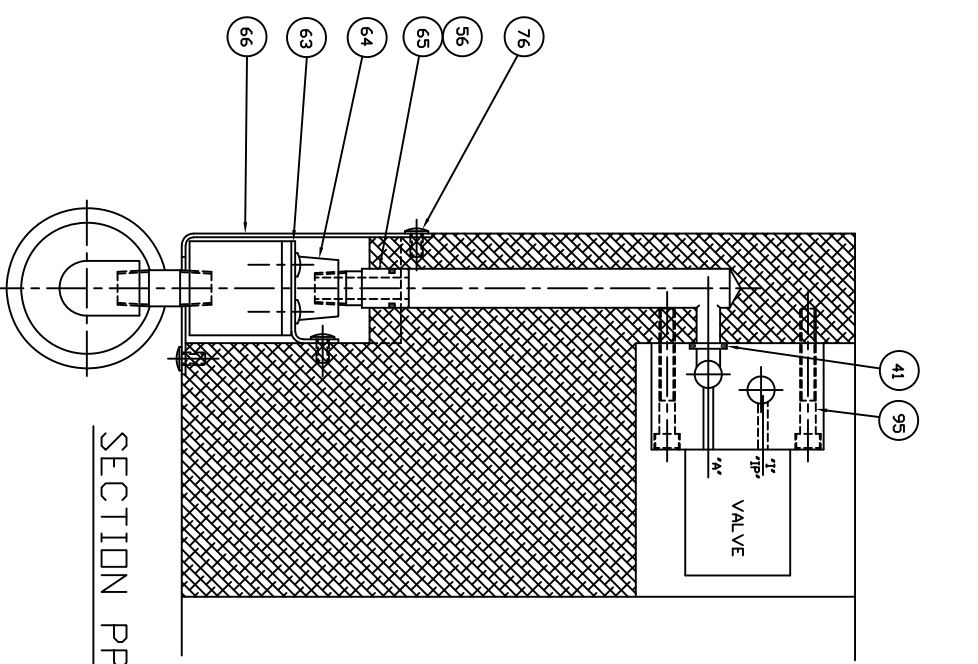
SHEET 4 OF 6

RAPID-AIR CORPORATION Rockford, IL • Madison, SD	
FSC24S QUARTER V/PNP SENSOR FOR SERVO C-T-L	
DATE: 01/15/82 DRAWN BY: SMS CHECKED BY: [blank] ENGINEER: [blank]	PART NUMBER: 11300382 REV: 001 DATE: 01/15/82

11300359-360

80	4	65936100	SHCS 3/8-16 X 1
79	1	62419150	ROLL PIN 3/16 X 1 1/2
78	16	65931150	SHCS 5/16-18 X 1 1/2
77	6	66520050	FHSCS 1/4-20 X 1/2
76	25	66612037	BHSCS #10-32 X 3/8
75	2	66300250	DRIVE SCREW
74	6	65920175	SHCS 1/4-20 X 1 3/4
73	3	65500006	T-SLOT NUT
72	4	37500013	SPRING
71	2	67200007	MUFFLER
70	2	67100141	PIPE NIPPLE
69	2	67100142	90° ELBOW
68	1	31702186	QUICK EXHAUST MANIFOLD RH
67	1	31702185	QUICK EXHAUST MANIFOLD L.H.
66	1	31500441	QUICK EXHAUST COVER
65	2	36300009	QUICK EXHAUST FITTING
64	2	68000000	QUICK EXHAUST
63	2	31900641	QUICK EXH. MTG. BRACKET
62	2	63130375	PIPE PLUG 3/8 NPT
61	10	63130250	PIPE PLUG 1/4 NPT
60	1	63130750	PIPE PLUG 3/4 NPT
59	1	64230011	TUBING
58	2	67100122	MALE CONNECTOR
57	2	67100118	90° ELBOW
56	4	60108014	*O ^r RING
55	2	69200032	MAC VALVE 24 V.D.C.
54	2	69280240	VALVE PLUG
53	1	69100348	PROX. SW. PNP
52	2	36200023	STOCK GUIDE NUT
51	2	34200159	STOCK GUIDE ROLLER
50	2	33900237	ROLLER SLEEVE
49	1	33900238	POINTER SLEEVE
48	2	65600005	INSERT
47	2	32000009	BLADE
46	2	62418100	ROLL PIN
45	4	62337075	DDVEL PIN
44	12	62250150	PULL DDVEL
43	1	62437150	ROLL PIN
42	4	62150200	SPIRAL PIN
41	2	60108110	*O ^r RING
40	1	31701623	SWITCH MOUNTING PLATE
39	2	60108329	*O ^r RING
38	4	60108111	*O ^r RING
37	4	60108355	*O ^r RING
36	2	60910050	RETAINING RING
35	2	60900250	RETAINING RING
34	2	65912300	SHCS #10-32 X 3
33	4	64100052	BUSHING
32	2	36600020	HANDLE
31	2	36700038	KNOB
30	2	39900175	INLET LABEL
29	1	39900051	NAMEPLATE
28	1	39900239	BLADE ADJUST LABEL
27	1	62325050	DDVEL PIN
26	2	34400315	AIR TUBE
25	1	32900533	CAM SHAFT
24	2	32900532	ADJUSTING SHAFT
23	2	32900531	GUIDE SHAFT
22	1	36500032	CAM
21	4	25500074	PISTON
20	1	21900127	REAR GUARD ASSEMBLY
19	1	21900126	FRONT GUARD ASSEMBLY
18	1	31500343	SCRAP CHUTE
17	2	35900042	LOWER BUMPER
16	2	35900041	UPPER BUMPER
15	1	69400052	SPRING PLUNGER
14	1	31701444	CAM SHAFT MOUNTING PLATE
13	1	31701443	CAM ACTUATING PLATE
12	1	31702184	MANIFOLD PLATE
11	4	31701441	PISTON WEAR PLATE
10	1	31701440	STRIPPER PLATE
9	1	31701439	TEE SLOT PLATE
8	1	31701438	BLADE SUPPORT PLATE
7	1	31701437	RH BEARING PLATE
6	1	31701436	LH BEARING PLATE
5	1	31701435	RH SIDE PLATE
4	1	31701434	LH SIDE PLATE
3	1	30100301	PISTON HOUSING
2	1	30100148	BLADE HOUSING
1	1	30100147	BASE HOUSING

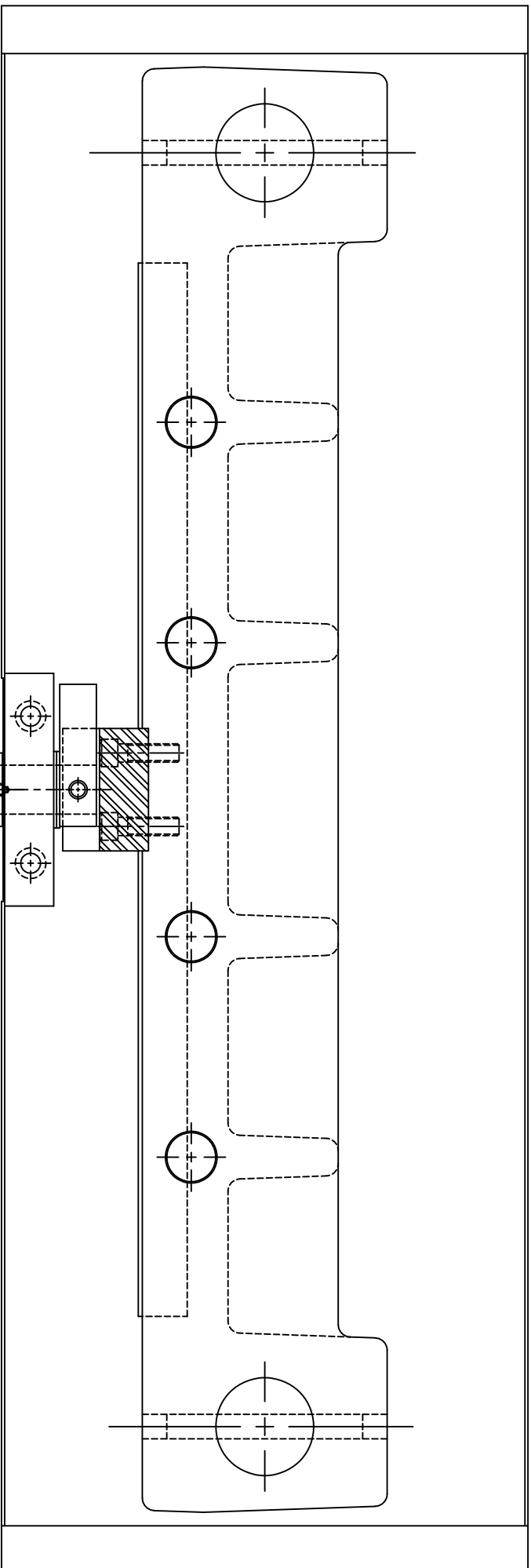
97			
96	2	36300011	QUICK EXHAUST FITTING
95	4	65920200	SHCS 1/4-20 X 2
94	2	65908112	SHCS #8-32 X 1 1/8
93	8	65936275	SHCS 3/8-16 X 2 3/4
92	2	37500124	SPRING
91	2	60108109	*O ^r RING
90	2	64520017	THRUST WASHER
89	4	60108207	*O ^r RING
88	4	66520125	FHSCS 1/4-20 X 1 1/4
87	4	65936150	SHCS 3/8-16 X 1 1/2
86	4	65961500	SHCS 5/8-11 X 5
85	3	65953275	SHCS 1/2-13 X 2 3/4
84	2	65936400	SHCS 3/8-16 X 4
83	8	66700054	LDW SHCS 1/2-13 X 1 1/4
82	8	65953150	SHCS 1/2-13 X 1 1/2
81	1	67200001	MUFFLER



NOTE: FSC24S FOR SERVO C-T-L, CONTROL
VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

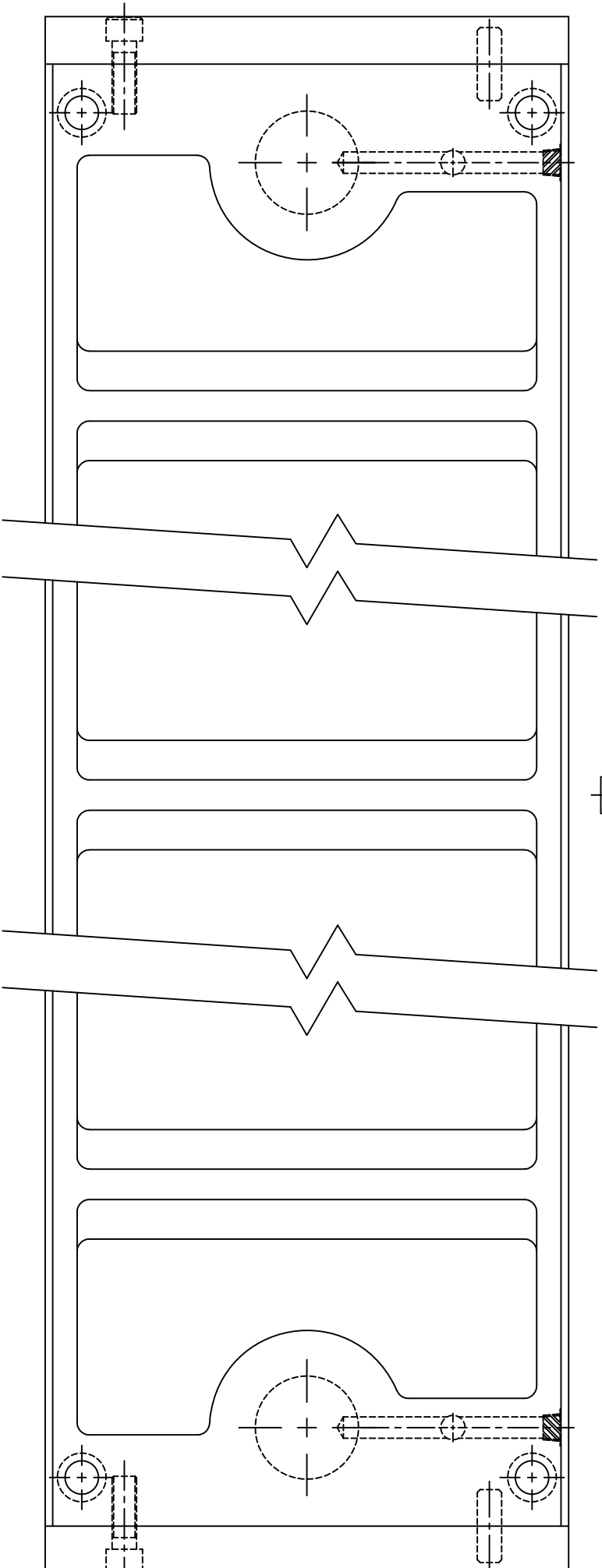
REV	DATE	BY	CHKD	DESCRIPTION
1				ISSUED FOR MANUFACTURE
2				REVISED TO ADD PNP SENSOR
3				REVISED TO ADD C-T-L CONTROL
4				REVISED TO ADD SERVO MOTOR
5				REVISED TO ADD VALVE
6				REVISED TO ADD MUFFLER
7				REVISED TO ADD INLET
8				REVISED TO ADD AIR TUBE
9				REVISED TO ADD PROX. SW.
10				REVISED TO ADD SPRING
11				REVISED TO ADD GUIDE SHAFT
12				REVISED TO ADD CAM
13				REVISED TO ADD ADJUSTING SHAFT
14				REVISED TO ADD CAM SHAFT
15				REVISED TO ADD AIR TUBE
16				REVISED TO ADD DDVEL PIN
17				REVISED TO ADD ROLL PIN
18				REVISED TO ADD SPIRAL PIN
19				REVISED TO ADD SWITCH MOUNTING PLATE
20				REVISED TO ADD O-RING
21				REVISED TO ADD O-RING
22				REVISED TO ADD O-RING
23				REVISED TO ADD O-RING
24				REVISED TO ADD RETAINING RING
25				REVISED TO ADD RETAINING RING
26				REVISED TO ADD SHCS #10-32 X 3
27				REVISED TO ADD BUSHING
28				REVISED TO ADD HANDLE
29				REVISED TO ADD KNOB
30				REVISED TO ADD INLET LABEL
31				REVISED TO ADD NAMEPLATE
32				REVISED TO ADD BLADE ADJUST LABEL
33				REVISED TO ADD DDVEL PIN
34				REVISED TO ADD AIR TUBE
35				REVISED TO ADD CAM SHAFT
36				REVISED TO ADD ADJUSTING SHAFT
37				REVISED TO ADD GUIDE SHAFT
38				REVISED TO ADD CAM
39				REVISED TO ADD PISTON
40				REVISED TO ADD REAR GUARD ASSEMBLY
41				REVISED TO ADD FRONT GUARD ASSEMBLY
42				REVISED TO ADD SCRAP CHUTE
43				REVISED TO ADD LOWER BUMPER
44				REVISED TO ADD UPPER BUMPER
45				REVISED TO ADD SPRING PLUNGER
46				REVISED TO ADD CAM SHAFT MOUNTING PLATE
47				REVISED TO ADD CAM ACTUATING PLATE
48				REVISED TO ADD MANIFOLD PLATE
49				REVISED TO ADD PISTON WEAR PLATE
50				REVISED TO ADD STRIPPER PLATE
51				REVISED TO ADD TEE SLOT PLATE
52				REVISED TO ADD BLADE SUPPORT PLATE
53				REVISED TO ADD RH BEARING PLATE
54				REVISED TO ADD LH BEARING PLATE
55				REVISED TO ADD RH SIDE PLATE
56				REVISED TO ADD LH SIDE PLATE
57				REVISED TO ADD PISTON HOUSING
58				REVISED TO ADD BLADE HOUSING
59				REVISED TO ADD BASE HOUSING
60				REVISED TO ADD MUFFLER

RAPID-AIR CORPORATION
ROCKFORD, IL • MADISON, WI
FSC24S CUTTER V/PNP
SENSOR FOR SERVO C-T-L



SECTION EE

FROM SHEET #1



VIEW GG

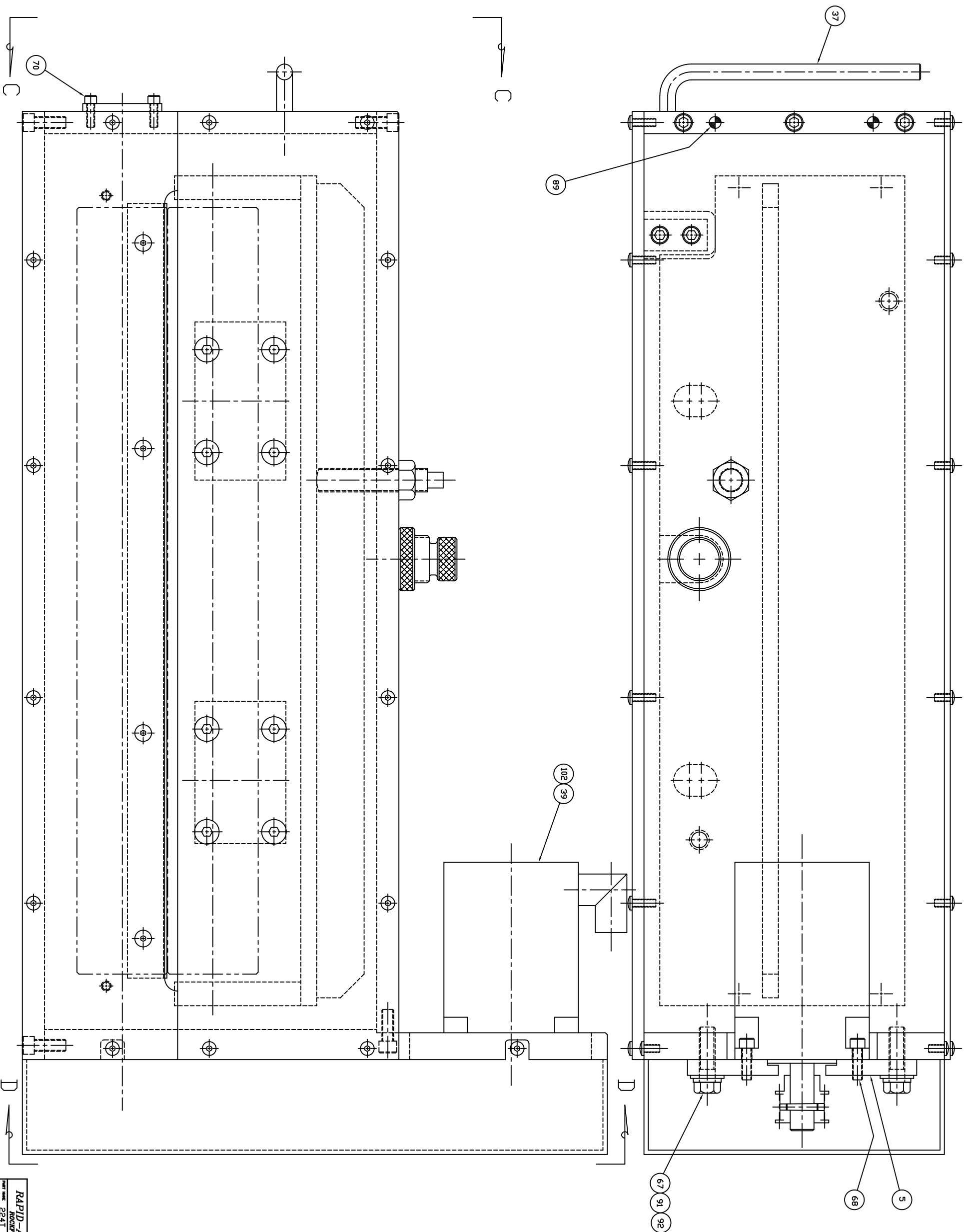
FROM SHEET #1

NOTE: FSC24S FOR SERVVO C-T-L, CONTRDL
VERSION 'C' - 24 V.D.C. VALVE, PNP SENSOR

SHEET 6 OF 6

REV.	DESCRIPTION	DATE	BY	CHKD.
A	ECN #5571	10/18/06	SMS	Y13
B	REV. F011	11/30/08		

RAPID-AIR CORPORATION
 4000 WILSON AVENUE
 WILSON, NJ 07094
 FSC24S CUTTER V/PNP
 SENSOR FOR SERVVO C-T-L

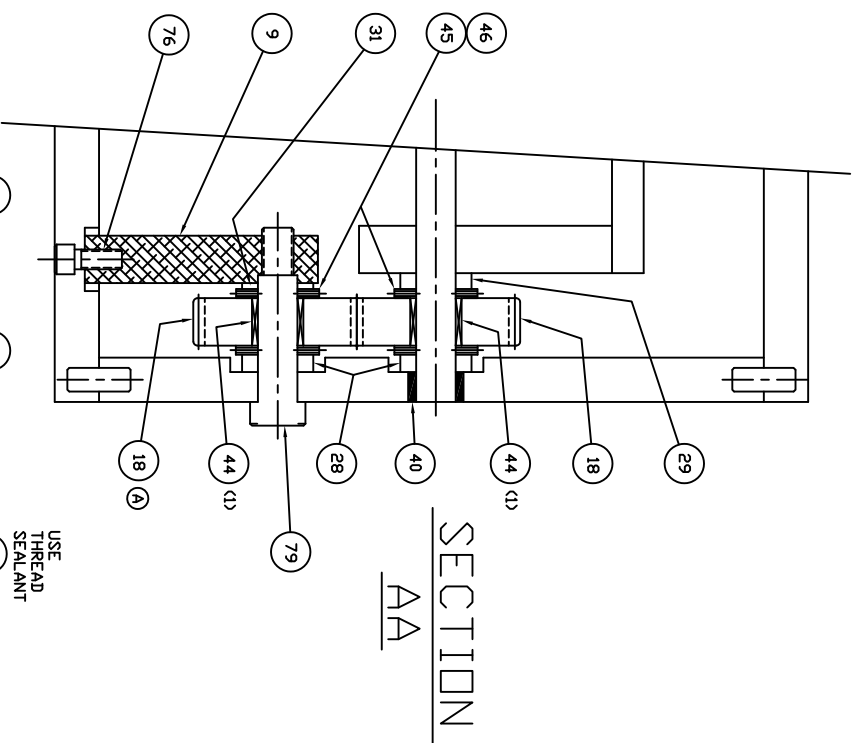


SHEET 1 OF 5

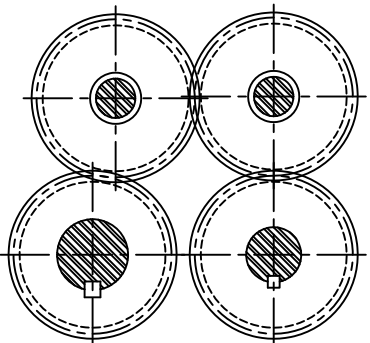
REV	DATE	BY	CHKD	DESCRIPTION
A	10-9-74	CON		CON #3724
B	10-9-74			
C				
D				
E				

RAPID-AIR CORPORATION
 ROCKFORD, ILL. • MADISON, SD
 PART NAME: 224T W/AIR PILOT RELEASE
 & AIR DOWN

E

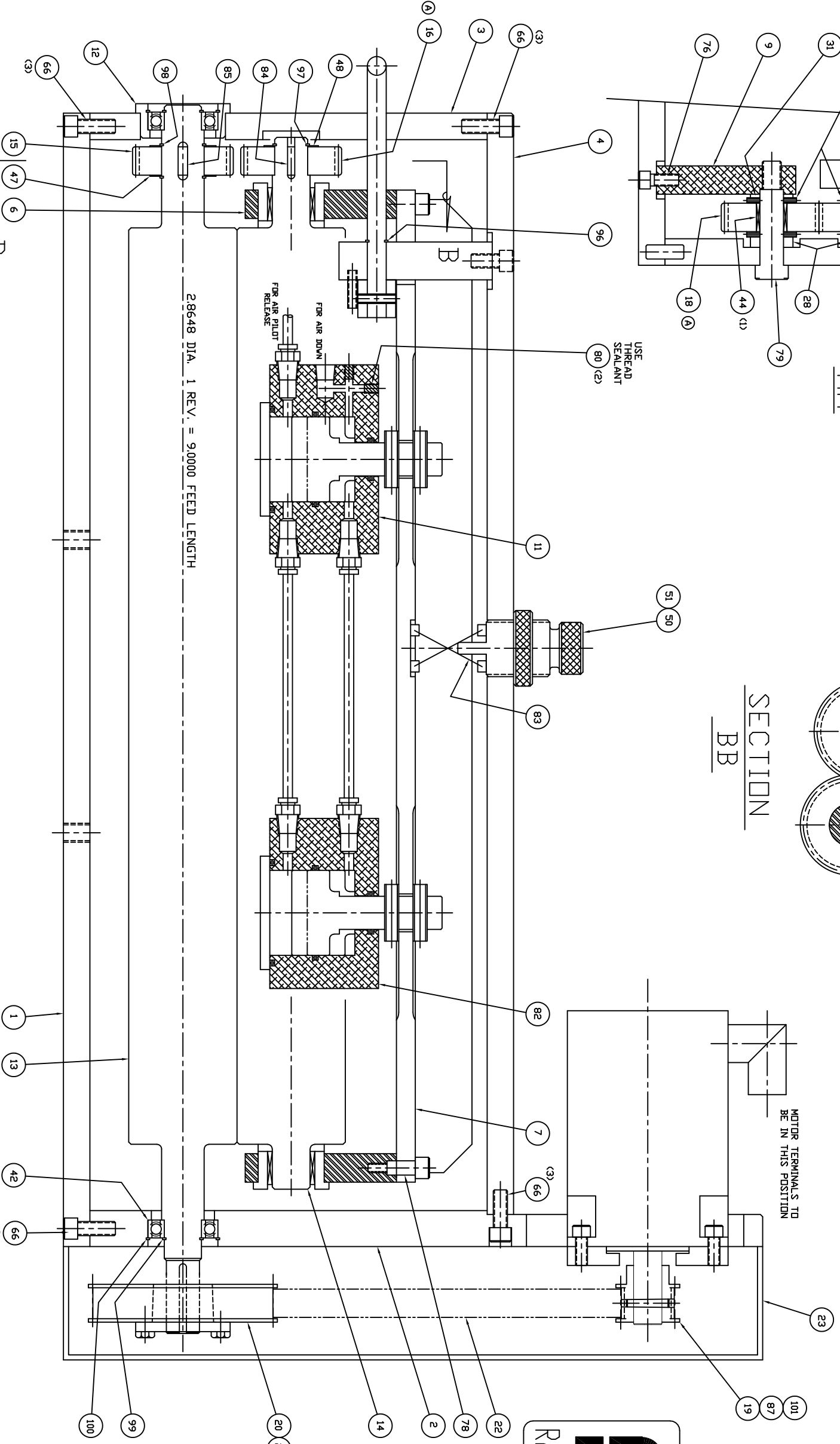
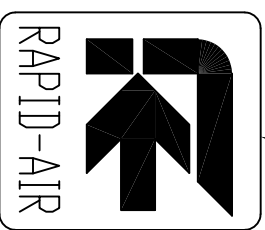


SECTION
AA



SECTION
BB

Ⓐ GEAR TRAIN TO BE LUBRICATED
WITH MOBILTECH 375 NC GREASE

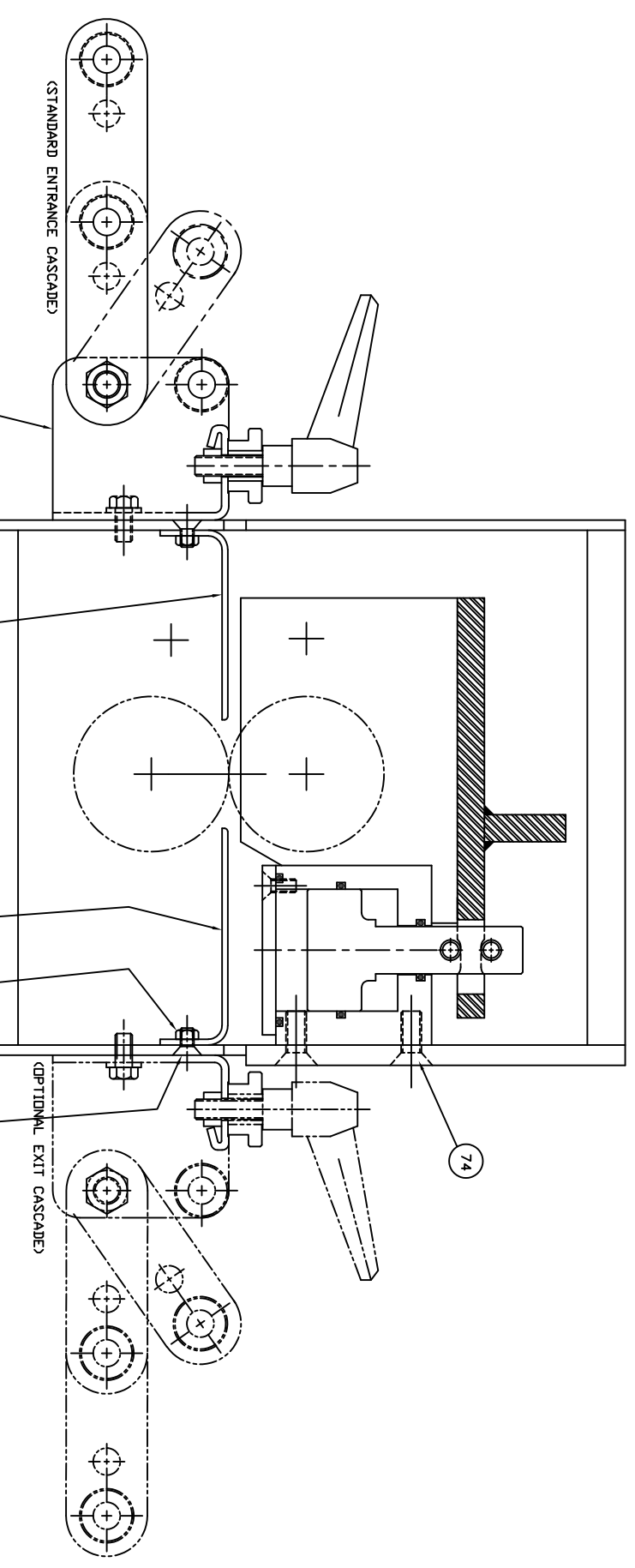
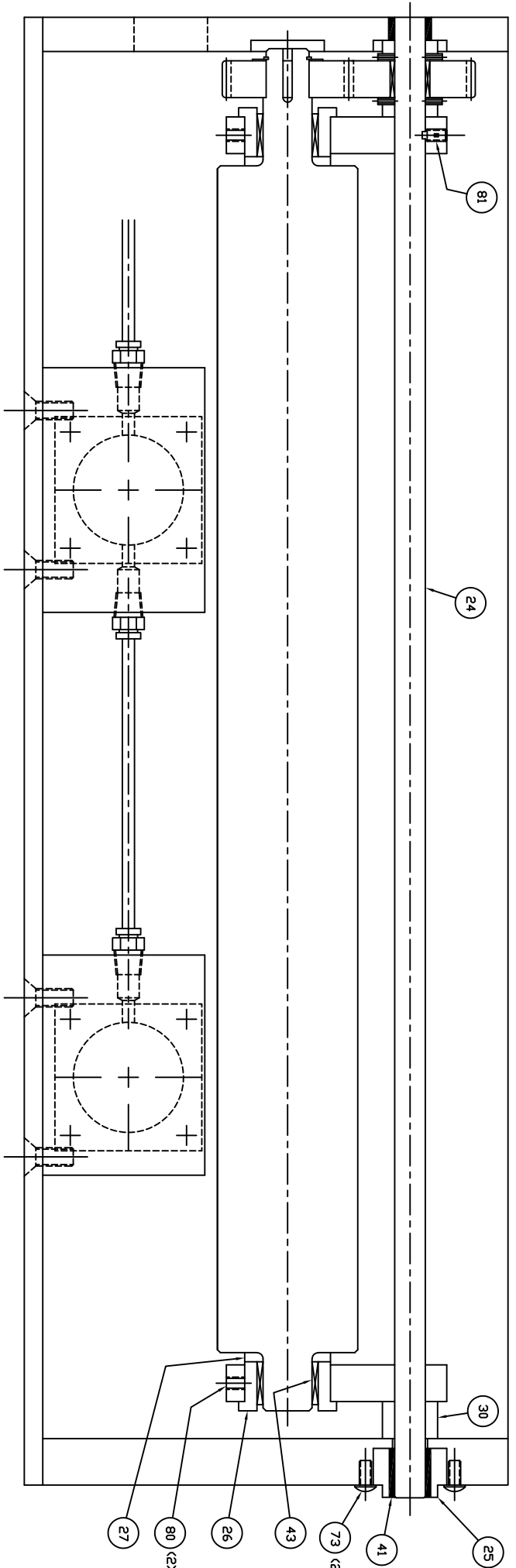


2.8648 DIA. 1 REV. = 9.0000 FEED LENGTH

MOTOR TERMINALS TO
BE IN THIS POSITION

DATE	13000606
DESIGNED BY	DLU
CHECKED BY	DLU
APPROVED BY	DLU
ECN #	3724
REV	A
DATE	10-9-14
BY	DLU
CHKD	DLU
APPD	DLU
DATE	13000610

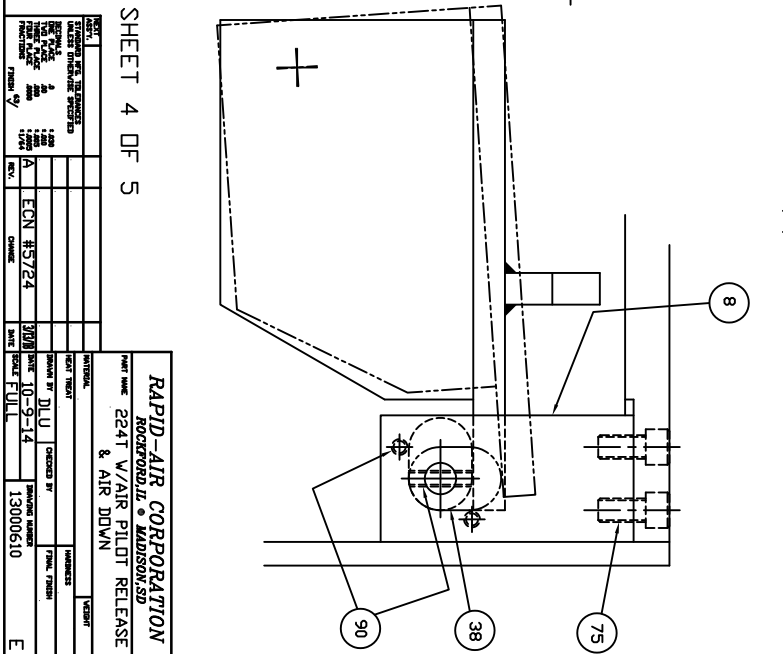
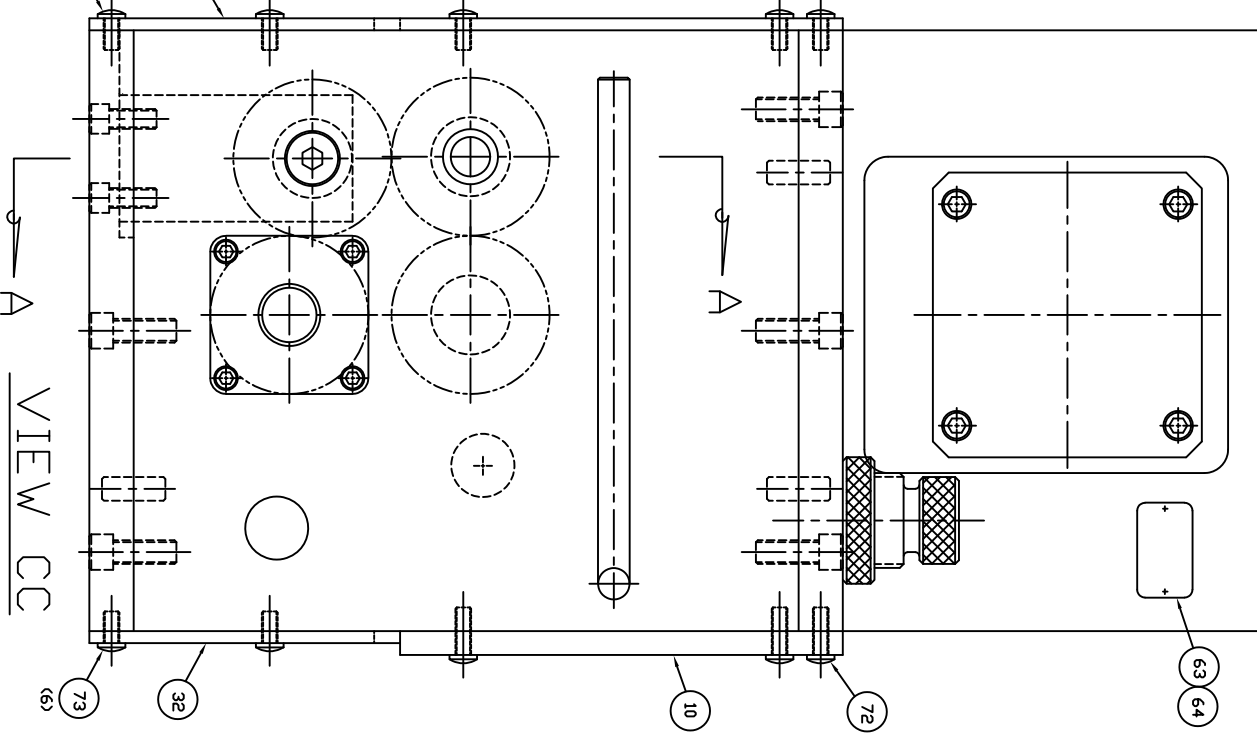
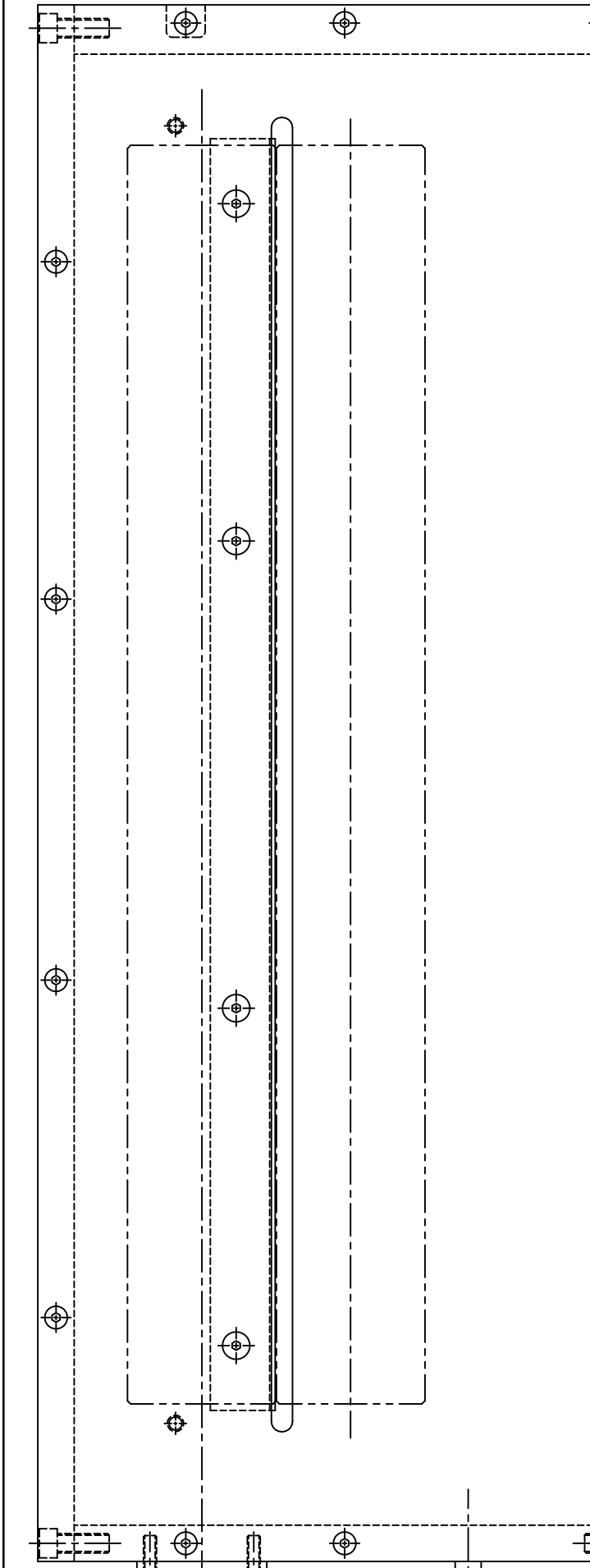
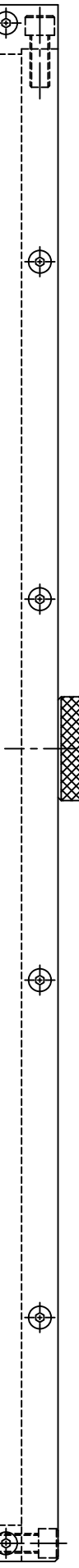
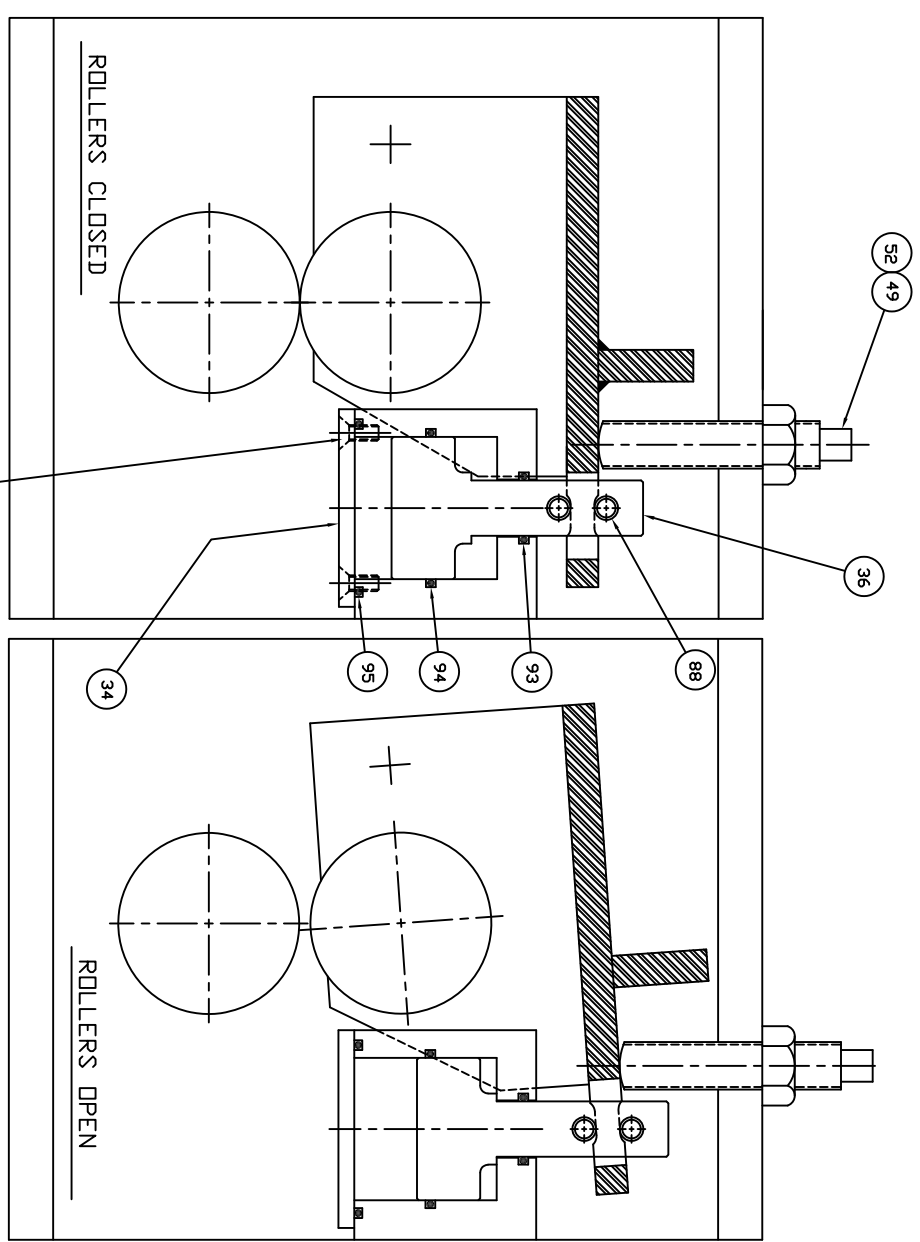
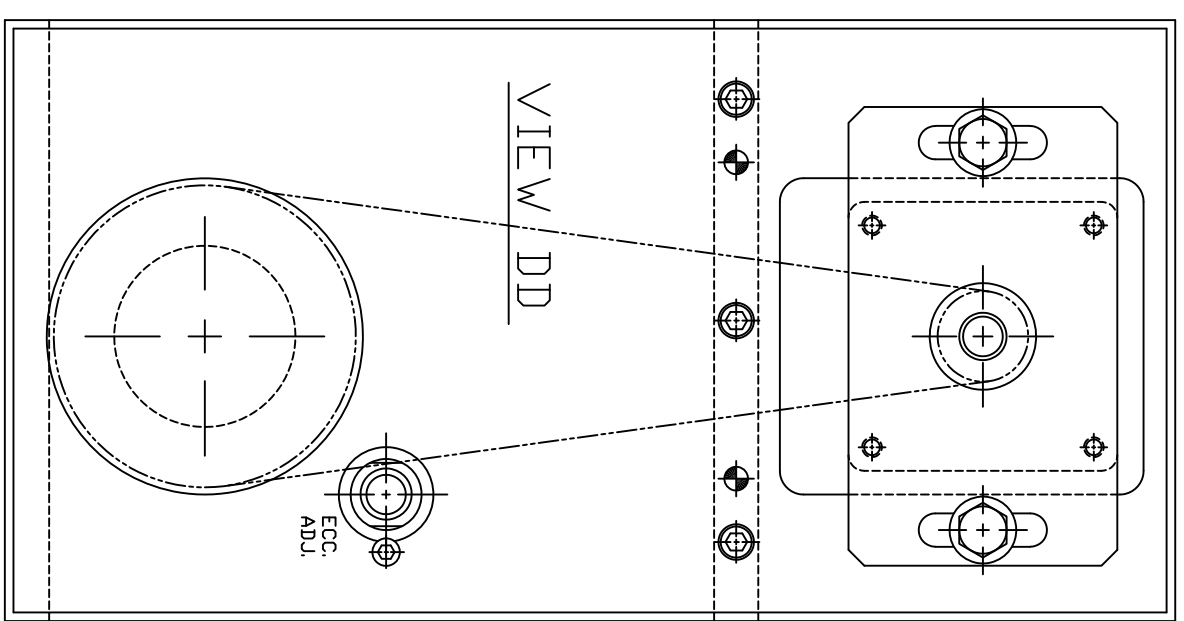
RAPID-AIR CORPORATION
ROCKFORD, IL • WADSWORTH, SD
2241 W/AIR PILOT RELEASE
& AIR DOWN



ITEM	QTY	PART NO.	DESCRIPTION
118			
117			
116			
115			
114	2	65908112	SHCS #8-32 X 1 1/8
113	1	64230010	BLACK POLY TUBE 1/4"
112	8	67100121	MALE CONNECTOR 1/4" IPT TO 1/4" ODE
111	1	67200001	MUFFLER
110	2	65920225	SHCS 1/4-20 X 2 1/4
109	1	34100338	SPACER
108	2	66612037	BHSCS #10-32 X 3/8
107	2	60108206	"O" RING
106	3	65906150	SHCS #6-32 X 1 1/2
105	1	39900175	INLET LABEL
104	2	65920125	SHCS 1/4-20 X 1 1/4
103	1	60108014	"O" RING
102	1	28900446	CONTR'OL ASSEMBLY
101	1	32500045	TAPER PIN INSTALLATION DRAWING
100	2	60900185	RETAINING RING
99	2	60910098	RETAINING RING
98	2	60910112	RETAINING RING
97	1	60910087	RETAINING RING
96	1	60910050	RETAINING RING
95	2	60108230	"O" RING
94	2	60108228	"O" RING
93	2	60108212	"O" RING
92	2	61300050	LOCK WASHER 1/2
91	2	61200034	FLAT WASHER 1/2
90	3	62425100	ROLL PIN
89	8	62337100	DDWEL PIN 3/8 X 1
88	4	62137150	SPIRAL PIN
87	1	62500006	TAPER PIN
86	1	36800013	KEY
85	1	36800006	KEY
84	1	36800021	KEY
83	1	37500117	SPRING
82	1	30100289	PISTON HOUSING
81	1	66700072	SET SCREW
80	4	66220037	SET SCREW
79	1	66162200	SHOULDER SCREW
78	4	66137075	SHOULDER SCREW
77	1	36300004	GAUGE FITTING
76	2	65931075	SHCS 5/16-18 X 3/4
75	2	65936075	SHCS 3/8-16 X 3/4
74	8	66536100	BHSCS 3/8-16 X 1
73	22	66620050	BHSCS 1/4-20 X 1/2
72	8	66620075	BHSCS 1/4-20 X 3/4
71	1	69200032	VALVE
70	4	65920075	SHCS 1/4-20 X 3/4
69	8	66520062	FHSCS 1/4-20 X 5/8
68	4	65931100	SHCS 5/16-18 X 1
67	2	65853150	HEX BOLT 1/2-13 X 1 1/2
66	12	65936100	SHCS 3/8-16 X 1
65	8	66520050	FHSCS 1/4-20 X 1/2
64	2	66300250	DRIVE SCREW
63	1	39900051	S/N TAG
62	1	39900246	RAPID-AIR LOGO
61	1	68000024	REGULATOR
60	1	31500505	ENTRANCE GUIDE
59	1	31500504	EXIT GUIDE
58	1	68000026	GAUGE
57	1	31702137	REGULATOR RETAINING PLATE
56	1	34100236	GAUGE SPACER
55	1	31702113	GAUGE & REGULATOR PLATE
54	1	10900509	CASCADE ASSEMBLY
53	8	65102520	HEX NUT 1/4-20
52	1	65117516	JAM NUT 3/4-16
51	1	36200031	ADJUSTING SCREW LOCKWUT
50	1	36100078	ADJUSTING SCREW
49	1	36100104	POSITIVE STOP SCREW
48	1	64520022	THRUST WASHER
47	2	64520025	THRUST WASHER
46	8	64520008	THRUST WASHER
45	4	64510002	THRUST BEARING
44	2	64500057	NEEDLE BEARING
43	2	64500066	NEEDLE BEARING
42	2	64600049	BALL BEARING
41	1	64100046	DILITE BUSHING
40	1	64100075	DILITE BUSHING
39	1	69000044	MOTOR
38	1	36500045	CAM
37	1	36600036	CAM HANDLE
36	2	35500231	PISTON
35	1	31702112	MANIFOLD PLATE
34	2	31400550	PISTON COVER
33	1	31500503	ENTRANCE GUARD
32	1	31500502	LOWER EXIT GUARD
31	1	34100325	SPACER
30	1	34100381	SPACER
29	1	34100323	SPACER
28	2	34100322	SPACER
27	2	34100321	ROLLER SPACER
26	2	33900265	BEARING SLEEVE
25	1	32900858	ECCENTRIC SHAFT
24	1	32900860	PIVOT SHAFT
23	1	31500489	BELT COVER
22	1	32500046	TIMING BELT
21	1	32500036	BUSHING (FOR 32500029)
20	1	32500029	PULLEY (LOWER ROLL)
19	1	32500044	MOTOR PULLEY
18	2	32600233	UPPER IDLER SPUR GEAR
17			
16	1	32600292	UPPER ROLLER SPUR GEAR
15	1	32600235	LOWER ROLLER SPUR GEAR
14	1	34200387	UPPER ROLLER
13	1	34200386	LOWER ROLLER
12	1	30100290	BEARING HOUSING
11	1	30100292	PISTON HOUSING
10	1	31702503	PISTON HOUSING MOUNTING PLATE
9	1	31702115	GEAR SUPPORT PLATE
8	1	31702111	CAM PIVOT PLATE
7	1	21900259	ROLLER TIP PLATE ASSEMBLY
6	2	31702106	ROLLER SIDE PLATE
5	1	31702473	MOTOR MOUNTING PLATE
4	1	31702502	L.H. SIDE PLATE
3	1	31702471	R.H. SIDE PLATE
2	1	31702470	R.H. SIDE PLATE
1	1	31702501	BOTTOM PLATE

RAPID-AIR CORPORATION
 ROCKFORD, ILL. • MADISON, SD
 PART NO. 2241 V/AIR PILOT RELEASE
 & AIR DOWN

REV.	DATE	DESCRIPTION
1	10-9-14	REVISED BY
2		REVISED BY
3		REVISED BY
4		REVISED BY
5		REVISED BY
6		REVISED BY
7		REVISED BY
8		REVISED BY
9		REVISED BY
10		REVISED BY
11		REVISED BY
12		REVISED BY
13		REVISED BY
14		REVISED BY
15		REVISED BY
16		REVISED BY
17		REVISED BY
18		REVISED BY
19		REVISED BY
20		REVISED BY
21		REVISED BY
22		REVISED BY
23		REVISED BY
24		REVISED BY
25		REVISED BY
26		REVISED BY
27		REVISED BY
28		REVISED BY
29		REVISED BY
30		REVISED BY
31		REVISED BY
32		REVISED BY
33		REVISED BY
34		REVISED BY
35		REVISED BY
36		REVISED BY
37		REVISED BY
38		REVISED BY
39		REVISED BY
40		REVISED BY
41		REVISED BY
42		REVISED BY
43		REVISED BY
44		REVISED BY
45		REVISED BY
46		REVISED BY
47		REVISED BY
48		REVISED BY
49		REVISED BY
50		REVISED BY
51		REVISED BY
52		REVISED BY
53		REVISED BY
54		REVISED BY
55		REVISED BY
56		REVISED BY
57		REVISED BY
58		REVISED BY
59		REVISED BY
60		REVISED BY
61		REVISED BY
62		REVISED BY
63		REVISED BY
64		REVISED BY
65		REVISED BY



SHEET 4 OF 5

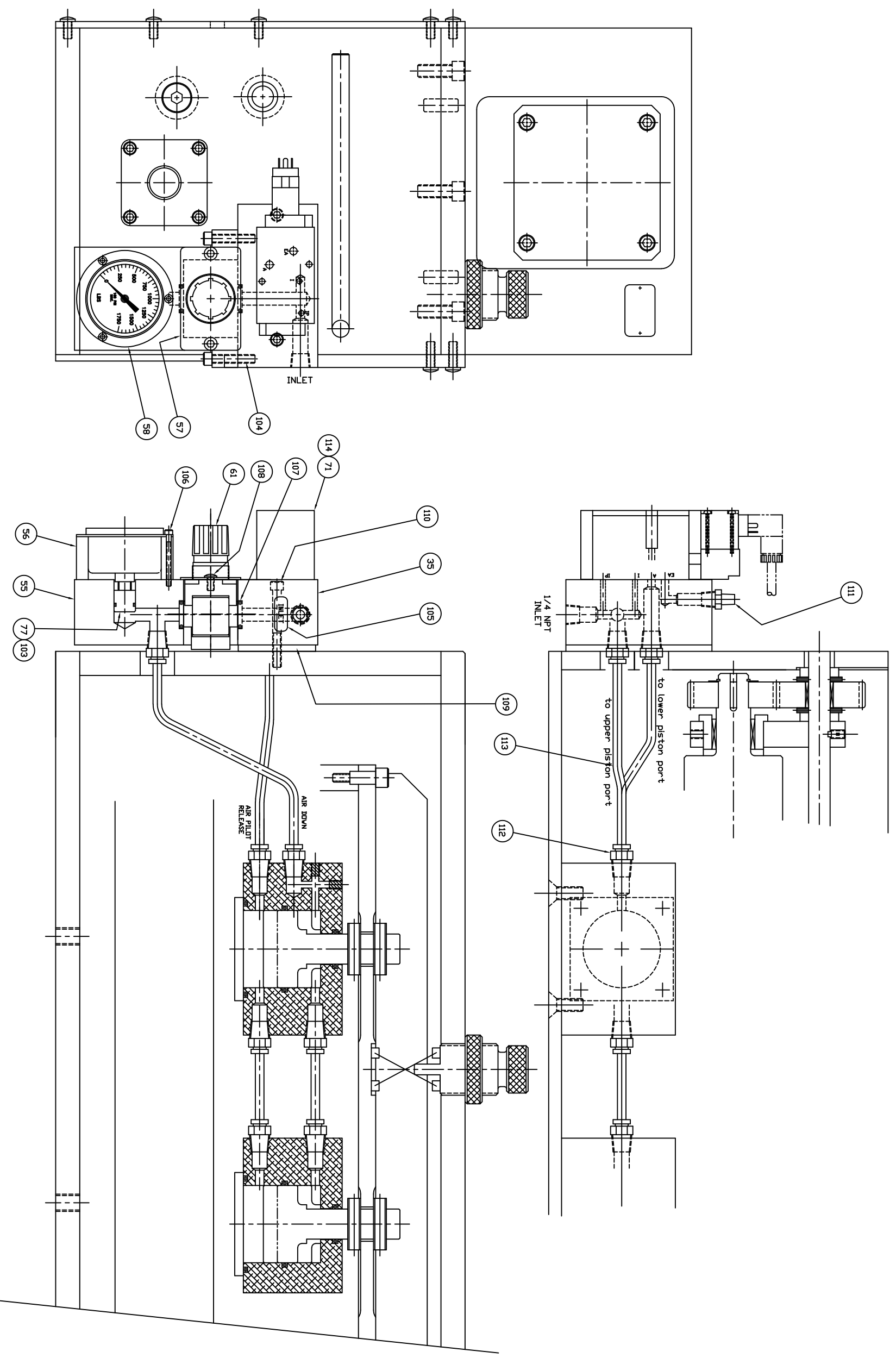
RAPID-AIR CORPORATION
 ROCKFORD, ILL. & MADISON, SD
 224T V/AIR PILOT RELEASE
 & AIR DOWN

REV.	DATE	BY	CHKD.	DESCRIPTION
1	10-9-54	JLU		ISSUED FOR PRODUCTION
2	10-9-54	JLU		REVISED TO FULL

APPROVED: [Signature]

DATE: 10-9-54

13000610



REV.	DATE	BY	CHKD.	DESCRIPTION
A	10-9-54	JLU		CON #3724
B	10-9-54	JLU		CON #3724
C	10-9-54	JLU		CON #3724
D	10-9-54	JLU		CON #3724
E	10-9-54	JLU		CON #3724

RAPID-AIR CORPORATION
 ROCKFORD, ILL. • MADISON, SD
 PART NAME: 224T w/AIR PILOT RELEASE
 & AIR DOWN
 PART NUMBER: 13000610