



Operation Manual
Plotter Film Punch PinLam PF
Model Number XPF-3065SA01



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Introduction

The C.A.Picard Post Plotter Film Punch is designed to punch highly accurate registration holes in relationship to plotted targets on inner and outer layer artwork. The punch is manually controlled with a three-barrel micrometer adjusting system. All punch and target locations are produced by jig grinding. This insures the highest accuracy obtainable. The basic structure is nickel-plated steel plates with a hard anodized aluminum adjuster plate. All punches, punch guides, die bushings and optical bushings are heat-treated tool steel. The CCTV video system consists of a solid state camera and zoom scope combination to allow flexibility in selecting the proper magnification to suit any particular registration situation. The punch design is simple and easily maintained and will give many years of trouble free service.

Safety

All information and instructions supplied in this manual must be complied with for safe operation.

The user will be required to supply the following items for safe assembly and operation:

1. 110 or 220 V.A.C. 50-60 Hz 15 Amp. electrical service
2. 600 kPa, 140 liters per minute clean dry compressed air
3. Lifting sling with 1000 kilogram capacity
4. Fork lift or crane with 1000 kilogram capacity
5. Air line from compressed air source to machine port

The user must unplug electrical connection and disconnect air pressure at source when performing maintenance.

When punch is not in use the electrical and pneumatic service should be shut off.

Use machine to punch film only.

General

The C.A. Picard post plotter film punch is designed to punch artwork in accordance with each customer's specific requirements in regard to film size, punch pattern, and optical target dimensions (reference Layout drawing). The illumination system is compatible with silver halide film only.

For the sound test data recorded for this equipment, in normal use, see data sheet page 27 for specification.

Refer to page 27 for information pertaining to specific component requirements i.e. Voltages, size, Hertz and type.

It must be recognized that the instructions and information included in this manual can not cover all situations and safety matters that may arise. As a result, the user must exercise care and common sense during all phases of installation and operation. Contact the nearest C.A.Picard office regarding any operation or safety questions.

Assembly

An area of six feet wide by four feet deep is the minimum space recommended for machine placement. The operator should have easy access to front and sides of the punch.

The area of operation should be climate controlled and dust free.

Overhead lighting may need to be controlled to reduce any reflections on optical die bushings, which could degrade the quality of the video display.

1. Remove top and sides from shipping containers.
2. Inspect for any damage from shipment. Notify C.A. Picard immediately of any damage.
3. Remove all boxes and shipping constraints to expose main punch unit.
4. Remove four hold-down screws that mount punch stand to shipping pallet.
5. Lift punch off shipping pallet with forklift. Insert fork tongs under lower steel frame tubes from front side.
6. Install rest pads in same threaded holes used to mount punch to shipping pallet.
7. Position punch in area of use and level with rest pads.

CAUTION

This unit is heavy and extreme care must be exercised when it is lifted or moved.

8. Unpack two CCTV monitors and position on monitor mounting cradle. Fasten each monitor to cradle using pre-drilled holes. Use screws and rest feet provided.
9. Unpack CCTV cameras and lens tubes. If cameras are not attached to lens tubes, screw carefully onto tube. Remove two lens-locking screws from zoom scope.
10. Position right camera assembly into open hole in camera mounting plate located above right target location. Orient cameras as shown in figure #1. Tighten thumbscrew in side of block to hold camera assembly in position. Re-install two lens locking screws. (Refer to figure #1.)

11. Position left camera assembly in same manner as right assembly.

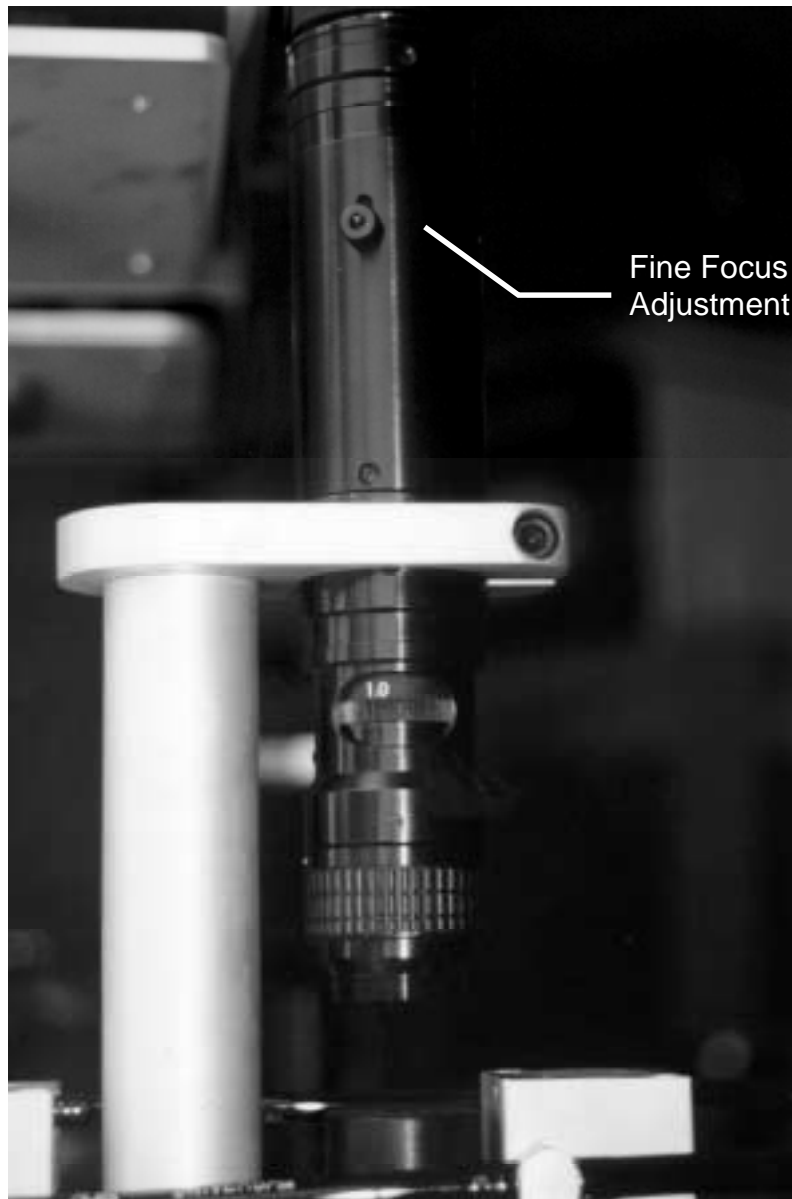


Figure 1. Camera mount and focus adjustment.

12. Connect power cables leading from monitor pedestal to each camera and monitor. Figure #2 shows camera connections.

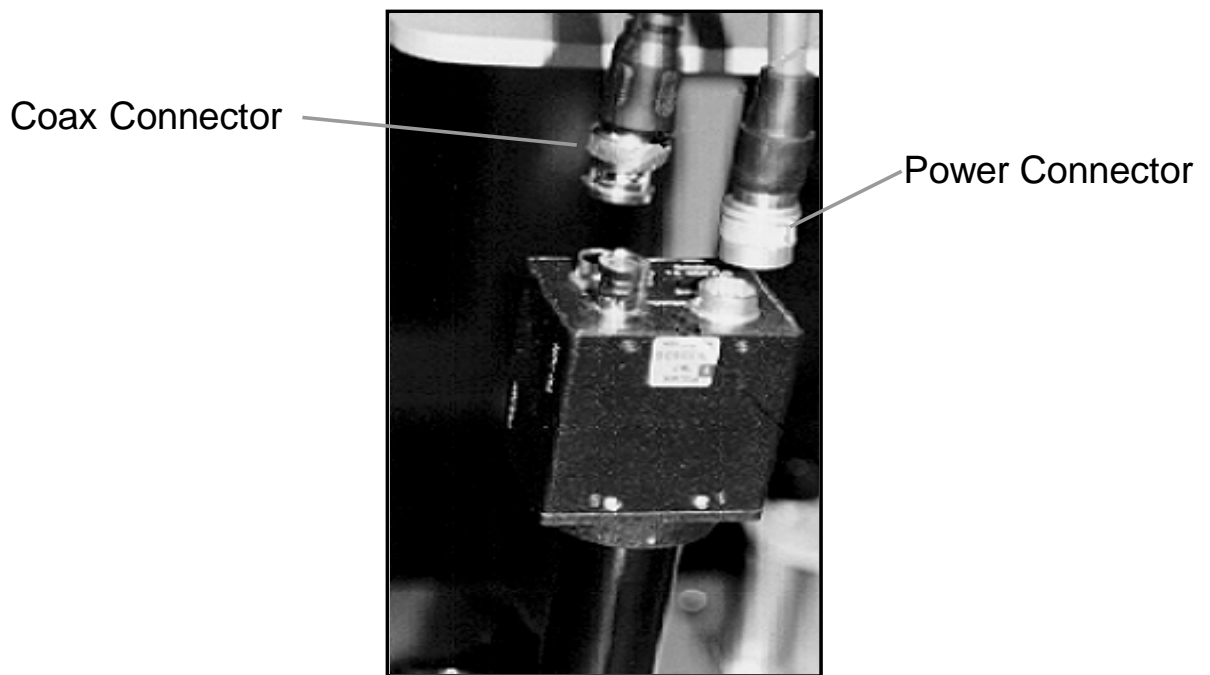


Figure 2. Camera connections.

13. Connect one end of each coax cable into "Video In" receptacle at rear of each monitor. Connect the other end of each coax cable to each camera as shown in figure #2.
14. Remove plastic front cover from machine by lifting up and out.
15. Connect compressed air source to open port on filter-regulator assembly located on pneumatic plate.
16. If required, install user furnished power plug to main 220 V.A.C. cable leading from electrical control box which connects to electrical service receptacle.
17. Replace front cover.

Principle of Operation

To begin operation the operator will enter artwork into the slot at front of the machine and rough align film index targets to optical die bushings as viewed through 25 mm wide slots in punch driver plate. Vacuum is then applied to the adjuster plate to hold film artwork. Next, the artwork is moved into accurate registration with the three point adjusting system. And finally the punch actuator is energized to punch required hole pattern.

The adjusting system consists of a vacuum adjuster plate that floats on air bearings. This plate is moved in "X", "Y" and "Theta" (see figure #3) with

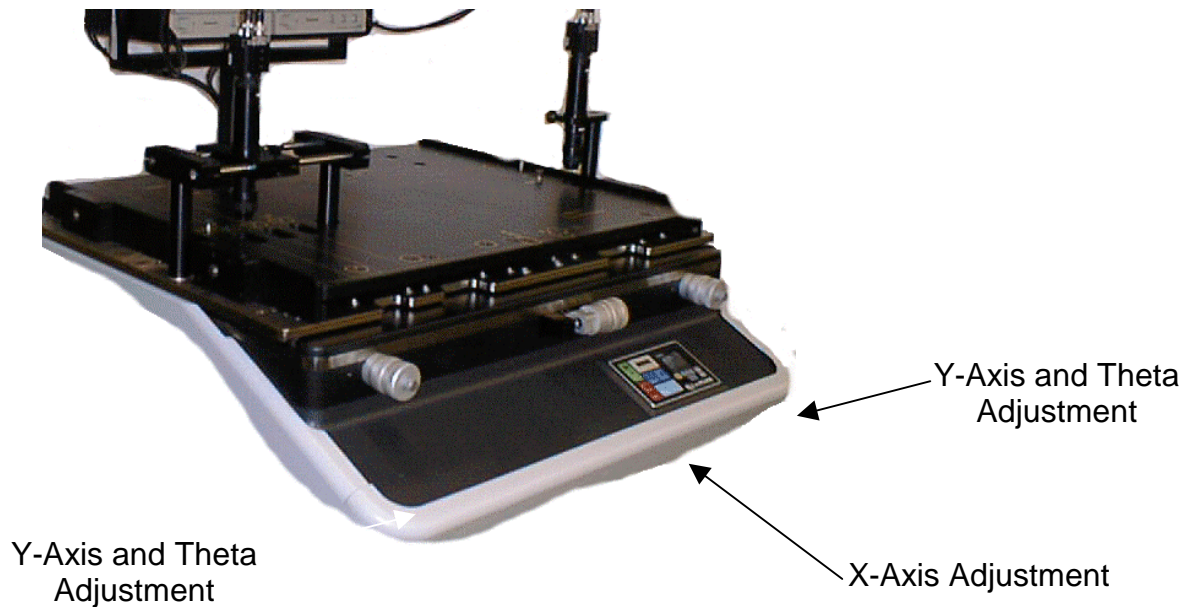


Figure 3 - Three Point Adjustment System

barrel micrometer assemblies bearing against ball bearing races attached to the adjuster plate. Air spring assemblies provide the return force to keep the micrometer pushers loaded. All pusher blocks are designed to be square to the machine so that no operator-controlled movements will be angular.

The punches are guided with tool steel guide bushings that are set in jig ground locations. All components are fixed in relationship to each other to maintain accuracy.

The video system requires no positional accuracy adjustments. It's only function is to provide a sharp image of the alignment targets. The zoom lens feature allows adjustable magnification for simplified alignment.

To conserve compressed air, the air bearing is only energized when the artwork holding vacuum generator is on.

A safety sensor system has been incorporated under the punch driver plate to disable the punch actuator when hands or fingers are entered between the driver and guide plates.

Description

The following list describes the controls, adjustments, and processes required preparing the post plotter film punch for operation.

1. Plug main power plug into electrical source
2. Turn on compressed air to machine
3. Activate "Main Power" switch located on right side of punch.
4. Activate power push buttons on front of CCTV monitors. These are to be left on continually and will be controlled by main power switch
5. Rotate each barrel micrometer, noting torque required to move adjuster plate. If plate seems stiff and hard to move or loose and not responsive, adjustments can be made to the "X" and "Y" axis regulators.
6. The air spring regulators are located on the pneumatic plate located behind front cover. Regulators are adjusted by turning clockwise to increase micrometer torque or counter clockwise to decrease torque.
7. The regulator that controls the air bearing pressure has been set at the factory and should require no adjustment. To test for proper air bearing operation reduce air spring pressure to zero by turning air spring regulator adjustment knob counter clockwise. Rotate micrometers counter clockwise to allow maximum movement of adjuster plate. Activate artwork holding vacuum switch. Move the adjuster plate by hand by pushing gently on edges. Plate should slide freely in all directions. Adjust air-bearing regulator to the minimum pressure required to provide this condition. Reset air spring regulators to original pressure.
8. Set adjuster plate to mid range by adjusting with micrometers until edges of adjuster plate are aligned with edges of steel plate directly below.
9. Observe display on monitor screens. A round white disk should be evident in each monitor screen. Set contrast and brightness controls on front of monitors as required, to obtain best image.
10. To adjust for size and focus, first rotate the zoom ring on lens assembly until white disk fills 2/3 of the monitor screen. Next rotate the focus ring to obtain a sharp image. Also there is a pre adjusted focus adjustment on the side of lens tube. To use this feature, loosen both the finger screw

and locking setscrew and move up or down to improve focus. Be sure to lock back in place after adjustment.



Figure 4. Camera zoom and focus controls.

11. If edge of white disk is not sharp it's usually due to dust and lint clogging the optical bushing. Clean bushing with a short blast of compressed air.
12. If confusing reflections are evident on screen it is usually due to improper over head lighting. If lighting can't be changed use black plastic light shields inserted into clearance hole above optical bushing.
13. Insert a scrap piece of film into punch and actuate punch button. Check that all punches have actuated and punched clean burr free holes.
14. At this point the film punch should be ready for production use.



Figure 5 - Control Panel

Set-up

The following list outlines the steps required to make a punching set-up.

1. All artwork will require a round opaque target of specific diameter at the same locations as punch index targets. Refer to basic layout drawing for dimensions.
2. Activate electric and pneumatic control systems.
3. Adjust monitor and lens controls as required.
4. Move adjuster plate to mid range.

Operation

The following sequence outlines the punching procedure.

1. Install punch pin units in proper configuration for film to be processed. Note that slot punches must be oriented to allow slotted shape to enter their respective guide bushings. After punch has entered the bushing, thread the knob into tapped hole until knob is bottomed out.
2. Insert film stop pins per film size code printed on top of punch driver plate. Film should be cut to exact size noted, and circuit configuration should be positioned in relation to film edges per layout dimensions.
3. Slide camera to appropriate film target.
4. Insert film into open slot just above upper surface of adjuster plate.
5. Slide film to rear and to right sides until stop pins are met. The index targets should now be evident on monitor screens.
6. Turn on film hold vacuum switch.
7. Using left barrel micrometer adjust left target pad to be aligned with index target in "Y" axis.
8. Next adjust right micrometer to align right target pad in "Y" axis.
9. And last adjust center micrometer to move both pads in alignment in "X" axis.
10. Make any slight adjustments required to reach exact registration. If targets do not have exactly the same "between center" distance as optical bushings, operator will have to split the error between both targets.
11. Actuate punch button.
12. Turn off film hold vacuum.
13. Depress vacuum release button and remove film.
14. Repeat with the next film.

Linear Gage Counter

This device will allow accurate measurement of distance between targets. Please see Linear Gage Counter manual for device operation.

1. Align left target pad to optical bushing
2. Zero out Linear Gage Counter.
3. Align right target pad to optical bushing.
4. Read number displayed on Linear Gage Counter. The number on the read-out is the total amount of misregistration between the artwork targets and the optical bushings.

Semi-Automatic Operation

Introduction

The C. A. PICARD Semi Automatic Plotter Film Punch uses a personal computer to assist the operator in achieving the optimum film alignment. The Windows NT based system includes highly accurate hardware to locate the plotted film target. The system will indicate which direction the operator must move the table to bring the film into perfect alignment and then signal the operator when the target is in position. Setup and operation are fast and simple.

SPC Data Collection is integrated into the software. The program will monitor growth and shrinkage of material as well as calculate the minimum, maximum, the mean and standard deviation of the punched material. All collected data are stored in a text file for easy retrieval for use in spreadsheets or other reporting media.

Setup

Note: These instructions apply to Semi-Automatic operation only. For machine setup please refer to Film Punch Operation Manual.

Connections

(See illustration next page)

- A. Video Cable (15 pin female to BNC)
 - 1) Plug 15 pin connector to mating connector on the rear of computer.
 - 2) Connect BNC connections #0 and #1 to Video Output connectors on rear of monitors.
- B. Valve Control Cable (37 pin male connector)
 - 1) Plug 37 pin connector to mating connector on rear of computer.

System Startup

Make sure all connections are made and secure.

1. Turn on the power to the monitor and then to the computer.
2. Boot up the system and log-in.
3. Double click on the **Semi-Auto Film Punch** icon to run the program.

An initial startup screen is displayed for a few seconds while the program loads, after which the main screen is displayed (figure 7).

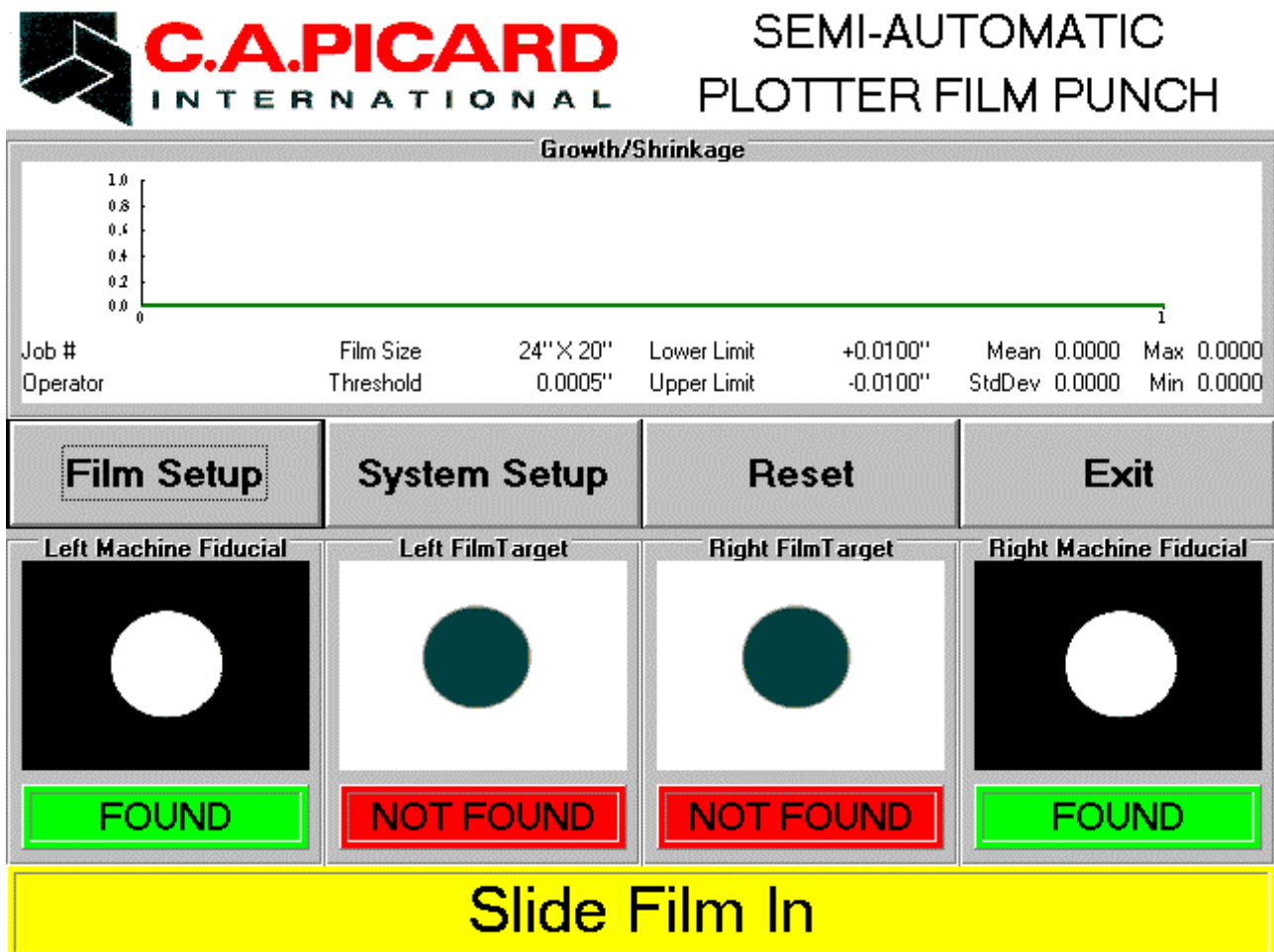


Figure 7 - Main screen for Semi-Automatic Plotter Film Punch

Within a few seconds the system should locate the **Left and Right Machine Fiducials**. The "NOT FOUND" will change to "FOUND" for the Left and Right Machine Fiducials only.

System Setup

Press the **System Setup** button to input the operating parameters. The System Setup screen is displayed (figure 8).

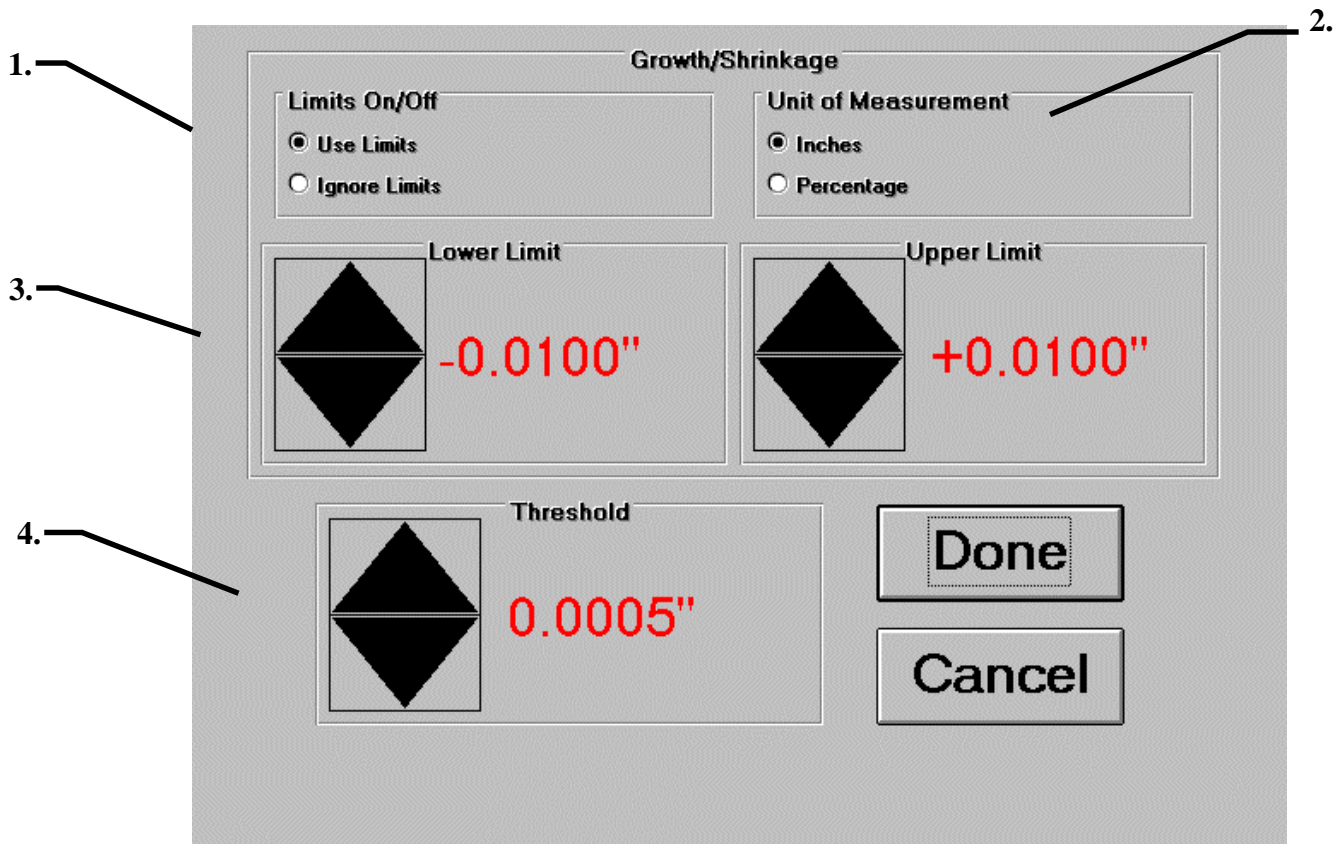


Figure 8 - System Setup screen

1. *Limits On or Off*
Limit values are the allowed growth (Upper Limit) or shrinkage (Lower Limit) of the film. If the film is outside of these set limits, the system will not find the target, thereby not punching the film.
2. *Unit of Measurement*
The limit values can display as either a scale factor or as an increment of an inch.
3. *Lower and Upper Limit adjustment*
Press the up or down arrow to input the limit value desired.
4. *Threshold*
The threshold is the tolerance around the optimum alignment position (after the system calculates for growth or shrinkage) that the system will allow punching of the film. The red "DON'T PUNCH" bar at the bottom of the display will turn green

and display "PUNCH" only if the film is within the set threshold value. Therefore higher threshold values offer faster alignment position location but decreased punched hole consistency from film to film. Lower values might slow down position location but will yield more accurate and consistent punched film.

When all values are entered, press **Done** to save or **Cancel** to exit without saving.

At the Main Screen, check the SPC Data area to verify your settings. If any changes are required, repeat the prior steps.

Film Setup

Press the **Film Setup** button to input the film setup parameters. The Film Setup screen is displayed .

The screenshot shows the 'Film Setup' screen with the following elements:

- Film Size**: A section with two diamond-shaped icons. The left icon is labeled 'X' and '24\"'. The right icon is labeled 'Y' and '20\"'. A line labeled '1' points to the 'Y' field.
- Operator**: A text input field with a line labeled '2' pointing to it.
- Job #**: A text input field with a line labeled '3' pointing to it.
- Part #**: A text input field with a line labeled '4' pointing to it.
- Layer Number**: A text input field containing the number '0' in red, with a line labeled '5' pointing to it.
- Done**: A button at the bottom left.
- Cancel**: A button at the bottom right.

Figure 9 Panel Setup Screen

1. Enter the film size if applicable.
2. Enter the operator name.
3. Enter the job number.
4. Enter the part number.

5. Enter the layer number.

These settings set up the system for the correct film size. Information on this screen is also stored in the SPC data collection file.

When all values are entered, press **Done** to save or **Cancel** to exit without saving.

At the Main Screen, check the SPC Data area to verify your settings. If any changes are required, repeat the prior steps.

The system is now set up to start punching film.

Operation

The following sequence outlines how the Plotter Film Punch is operated during normal semi-automatic production.

- A. Insert film into open slot just above upper surface of adjuster plate.
- B. Move film by hand until targets can be seen down through the clearance holes over optical bushings. Rough align film targets in relation to target bushings. The left and right film targets on computer monitor should change from *NOT FOUND* to *FOUND*.

(See illustration next page)

- C. Turn on film hold vacuum switch.
- D. Adjust film to targets as follows:
 - 1) Adjust left micrometer to align left target pad with index target in "Y" axis.
 - 2) Adjust right micrometer to align right target pad in "Y" axis.
 - 3) Adjust center micrometer to move both pads in alignment in "X" axis.

Make any slight adjustments required to reach exact registration. If targets do not have exactly the same "between center" distance as optical bushings, operator will have to split the error between both targets.

When the film is in perfect alignment the *DON'T PUNCH* message at the bottom of the window will change to *PUNCH*.

(See illustration next page)

- E. Press punch button.
- F. Turn off film hold vacuum.

- G. Depress vacuum release button and remove film.
- H. Repeat with the next film.

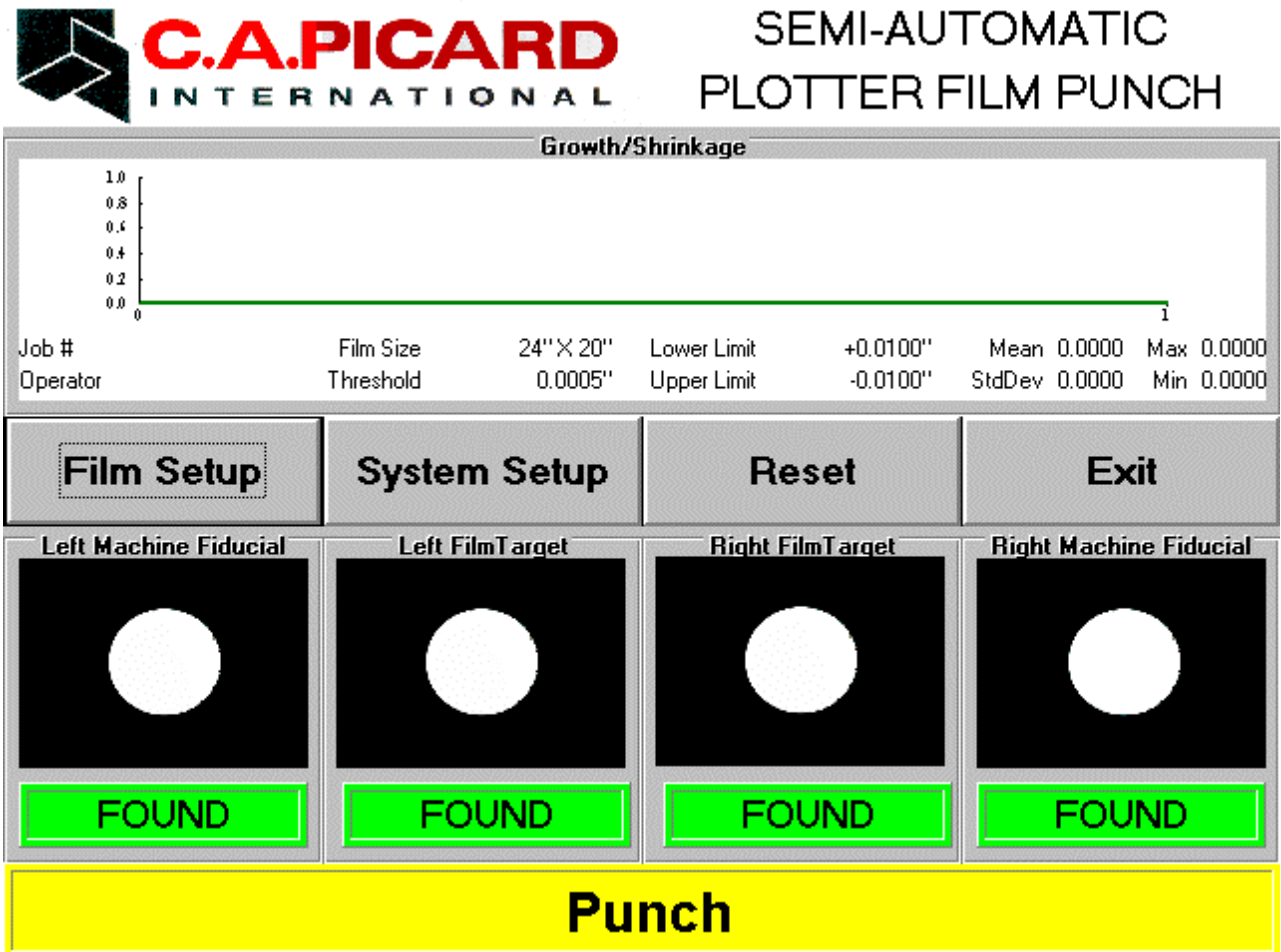


Figure 6 Main screen showing targets found and in punch position.

Maintenance

1. Empty punching slugs, as required, from catch-tray located behind front plastic cover.
2. Clean air filter assembly located on pneumatic plate when contamination is noticed.
3. Keep machine clean and free of dust. This will greatly reduce the time spent keeping the optical bushings producing a sharp image.
4. Replace dull or worn punches:
 - a) Turn off main power switch and shut off air to regulator.
 - b) Bleed existing air from system by activating Film Release switch on control panel. The punch activator plate will move to lower position.
 - c) Remove punch pin units from punch driver plate.
 - d) Unscrew (2) ½-13 set screws holding each punch into knurled knobs.
 - e) Remove punches from knurled knobs.
 - f) Install new punches in same manner. Note that the (2) set screws must be tightened so they lock together and allow punches to rotate within knurled knobs.
 - g) Replace punches into punch driver plate.
 - h) Slowly open, air supply valve and turn on power.
5. To reset the punch counter, remove the front cover panel and locate the counter reset button, depress one time to set counter to zero.

Parts list and layout drawings are included with this manual for parts identification and ordering. Also electrical and pneumatic layouts are provided to aid in trouble shooting.

For maintenance help contact the nearest C. A. Picard office.

Manufacturing Company:

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Customer Specifications

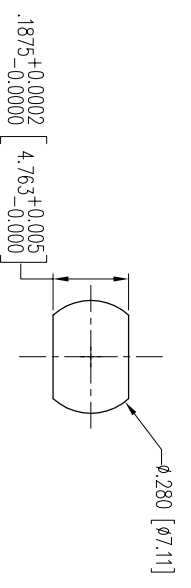
The C.A. Picard Optical Film Punch is designed to punch artwork in accordance with the customer's specific requirements. Each machine is custom engineered in regard to the punch tooling diameters or positions. Specifications are as noted below.

Model:	PinLam Post Plotter Film Punch
Model #:	XPF-3065SA01
Number of punch positions:	15
Punched hole diameters:	7 each .250 [6.35] round 8 each .1875 x .280 [4.76 x 7.11] slot
Artwork target diameter:	.030" [0.76]
Die target diameter:	.032" [0.81]
Maximum artwork size:	20.00 [508.0] x 26.00 [660.4]

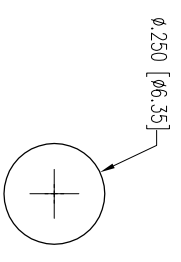
Data Sheet PinLam XPF-3065SA01

Description:	Data:	Remarks:
Power supply, Plug:	110/220 V.A.C. 50/60 Hz, CEE system	
Air supply:	approx. 6 - 7 bar, 550 - 690 kPa	Clean air!
Weight of punch unit:		
Noise level while punching:	72 dB	Depending on modus of noise test, slow/fast
Working heights:	1 meter	Artwork entry height from floor
Working position:	In front of the machine, standing	
Machine dimensions:	97w x 107d x 153h	
Max. material thickness to be punched:	0.007" artwork, 0,18 mm artwork	
Power supply Monitors	12 vdc	Supplied through control box
Power supply: CCD Cameras	12 vdc	Supplied through control box
Power supply: Lower lamps	12 vdc	Supplied through control box
Recommended spare parts:	One set of punches	One set spare punches will be supplied with the machine

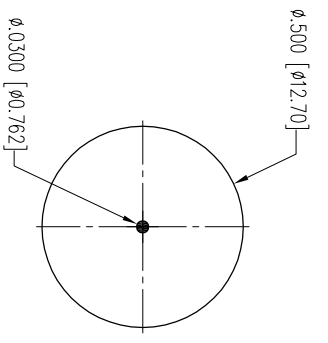
- NOTES:
1. PLATE GRAPHICS: CALL OUT FILM SIZES IN INCHES.
 2. PLATE GRAPHICS: CALL OUT PANELS AS "FORMAT 1" AND "FORMAT 2" (NO SIZE NOTED).
 3. ALL SOFTWARE IN INCHES.
 4. 220 V, 50 HZ ELECTRICAL REQUIREMENT.



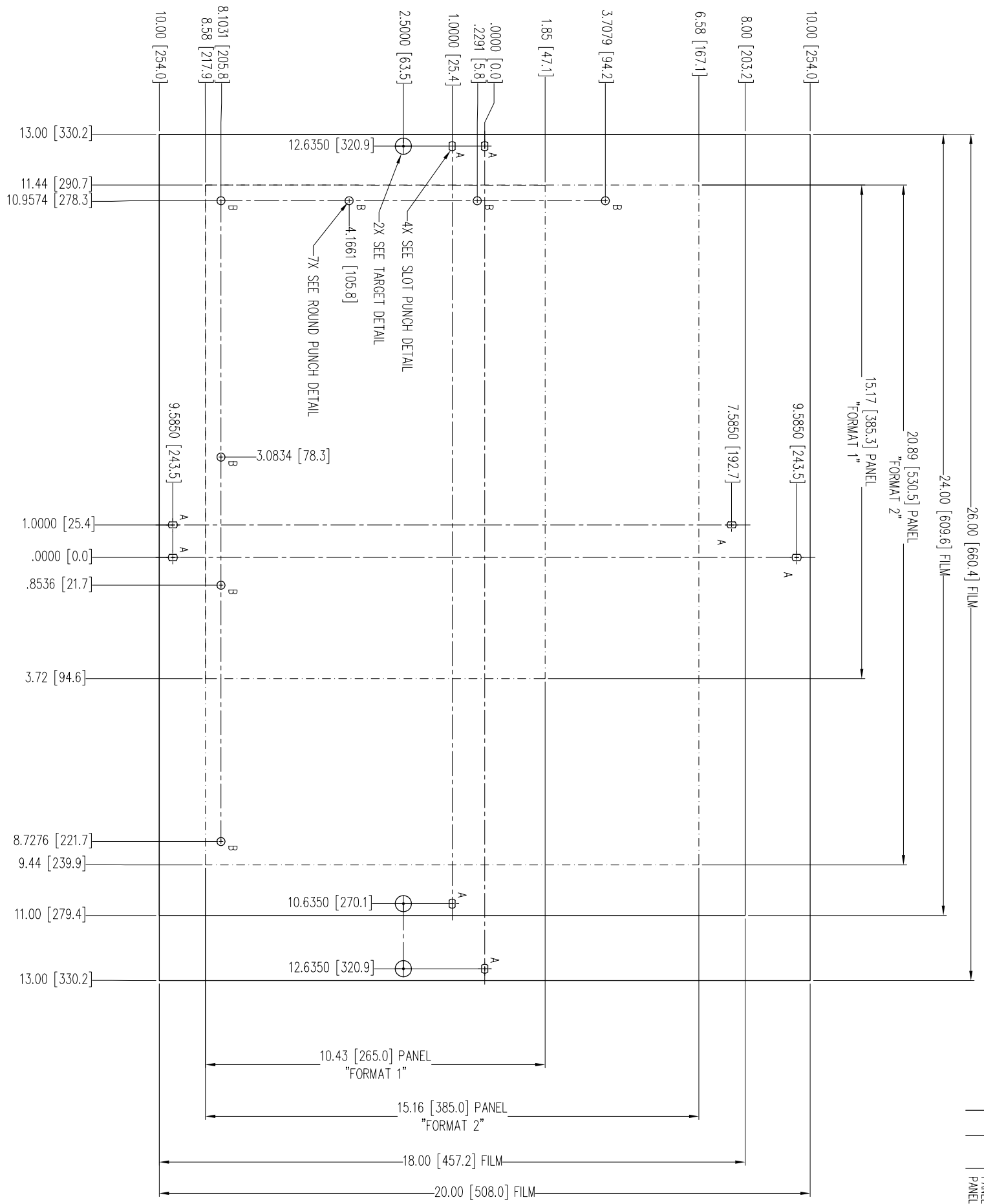
SLOT PUNCH DETAIL



ROUND PUNCH DETAIL



FILM TARGET DETAIL

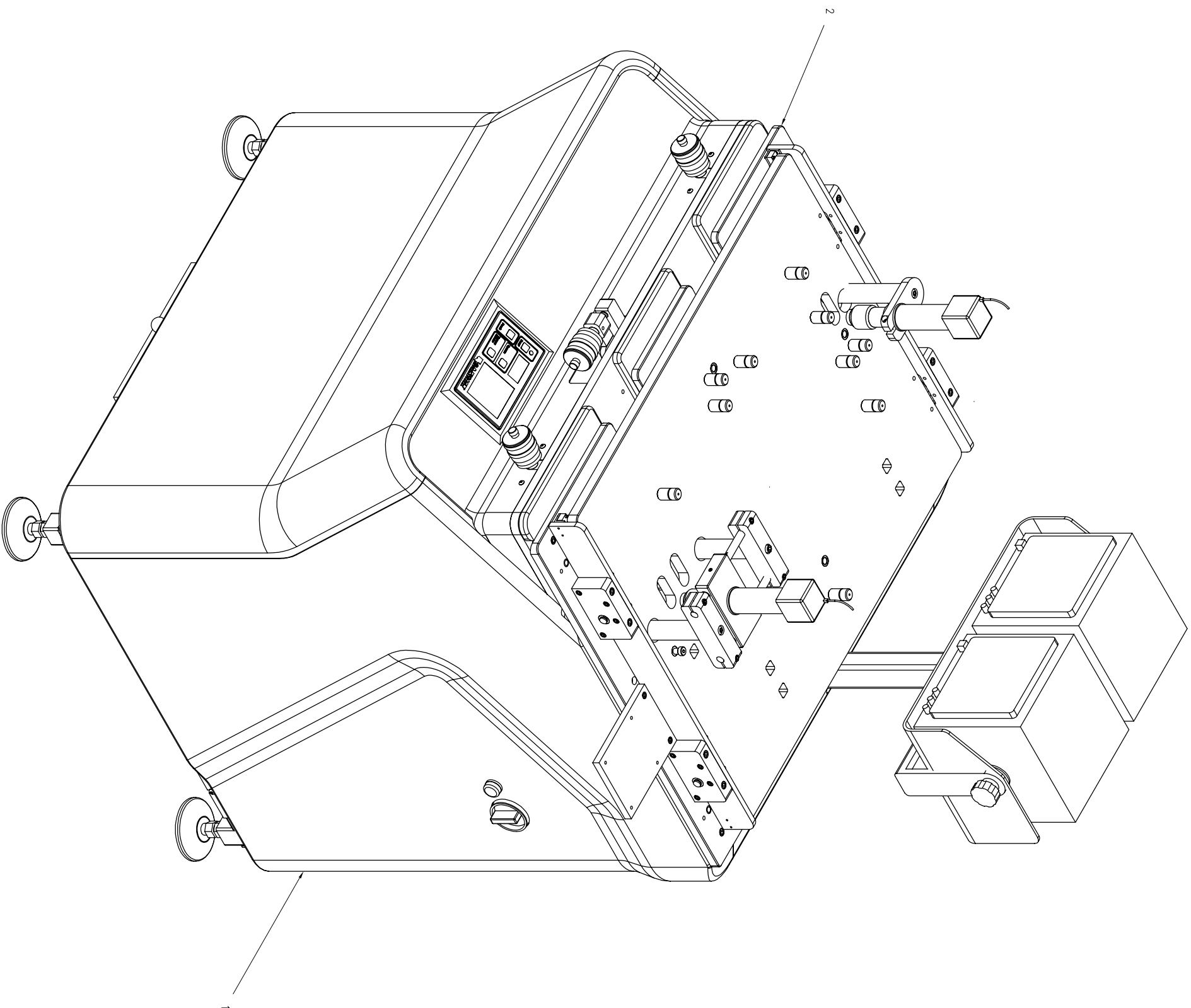


REV.	EDN. #	DESCRIPTION	DATE	APPROV.
A	REC	ROUND PUNCH HOLE: Ø0.250 WAS Ø0.122 HOLE WAS SIZED SAME AS DRILLED PANEL, MUST BE LARGER FOR CLEARANCE	06/22/01	JRG
B	REC	UPDATED DRAWING PER CUSTOMER DRAWING	07/02/01	JRG
C	REC	NOTES: ADDED NOTE LINE 2. PANEL LOCATION (X-AMS) 11.44 WAS 11.43 PANEL LOCATION (X-AMS) 9.44 WAS 9.43	07/06/01	JRG

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND GENERAL TOLERANCES ARE:		DATE	
DECIMALS	.XX ±	DRAWN	JRG 06/14/01
ANGLES	.X° ±	CHECK	JT 07/05/01
XXX ±	.XX ±	ENG	JT 07/05/01
XXXX ±	.XX ±	APPROV	JT 07/05/01
THE MATERIAL CONTAINED HEREIN IS PROPRIETARY TO CAPRICORN INTERNATIONAL, AND SHALL NOT BE REPRODUCED, DISCLOSED, OR WRITTEN CONSISTENT OF CAPRICORN INTERNATIONAL.		PLOTTER FILM PUNCH LAYOUT	
DRAWER AND REMOVE SHARP EDGES		610x460 AND 660x510 MM FILM SIZES	
CDO FILE: XPF-3065 LAYOUT		385x265 AND 530x385 MM PANEL SIZES	
		SCALE: N/A	
		DO NOT SCALE DRAWING	
		SHEET: 1 OF 1	



NOTES:



REV.	EQU. #	DESCRIPTION	DATE	APPROV.

ITEM	QUANTITY	PART NUMBER	DATE
2	1	XPF-3065 SHEET 3 OF 8	
1	1	XPF-3065 SHEET 2 OF 8	

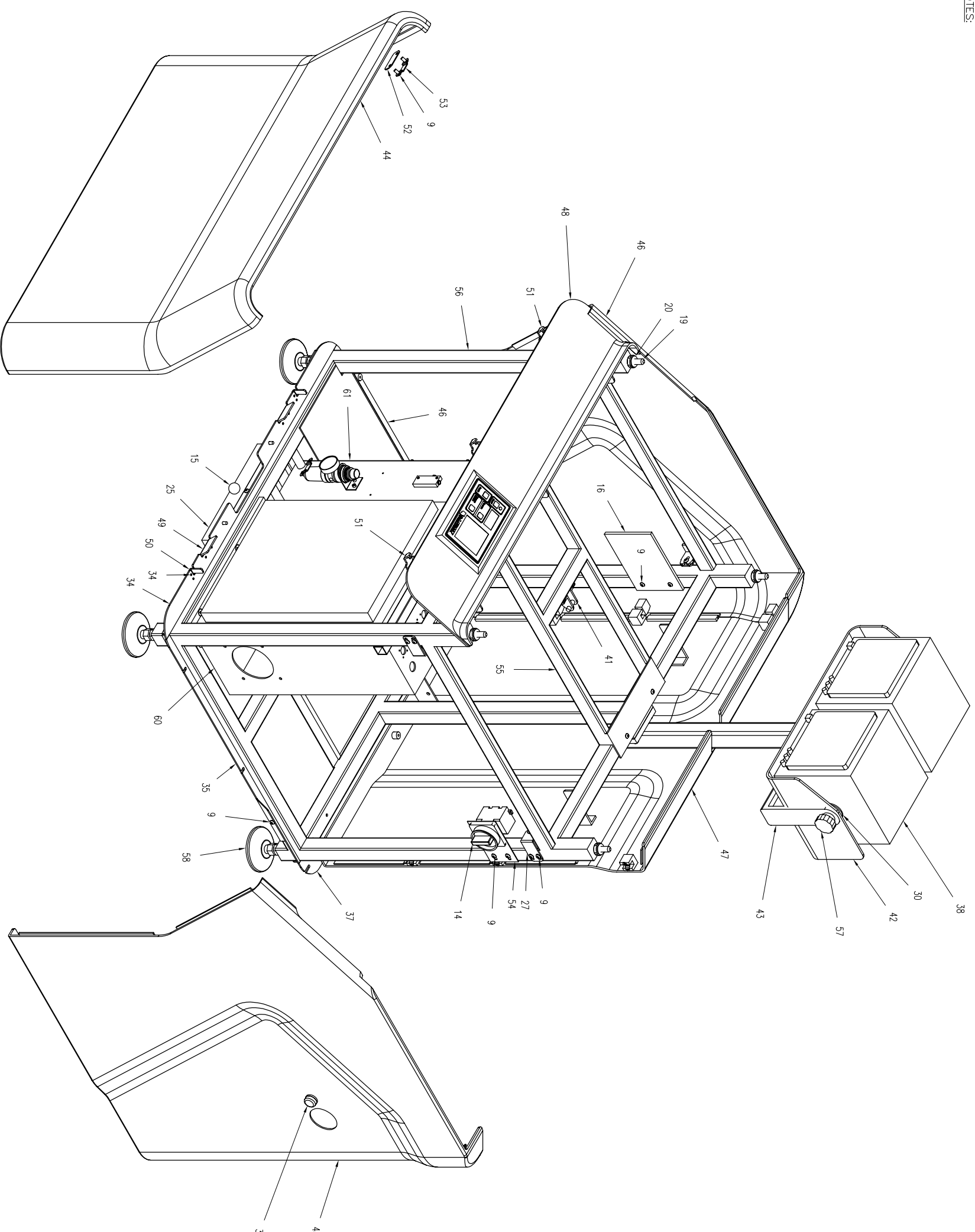
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND GENERAL TOLERANCES ARE:		DRAWN JMG		DATE 08/07/01	
DECIMALS	.XX ± .06	CHECK	--	ENG	--
ANGLES	.X° ± .5°	APPROV	--	MATERIAL	SEE PARTS LIST
XXX ± .0005	.XX ± .03	FINISH	N/A	SCALE	NONE
THE MATERIAL CONTAINED HEREIN IS PROPRIETARY TO C.A.PICARD INTERNATIONAL, AND SHALL NOT BE REPRODUCED, DISCLOSED, OR WRITTEN CONSIST OF C.A.PICARD INTERNATIONAL DESIGN AND REMOVE SHARP EDGES		C.D. FILE: XPF-3065		SCALE: NONE	

DESCRIPTION		MACHINE ASSEMBLY		DRAWING #	
PUNCH DIE ASSEMBLY		ASSEMBLY DRAWING		XPF-3065	
				REV N/C	

4 3 2 1

A B C D

NOTES:



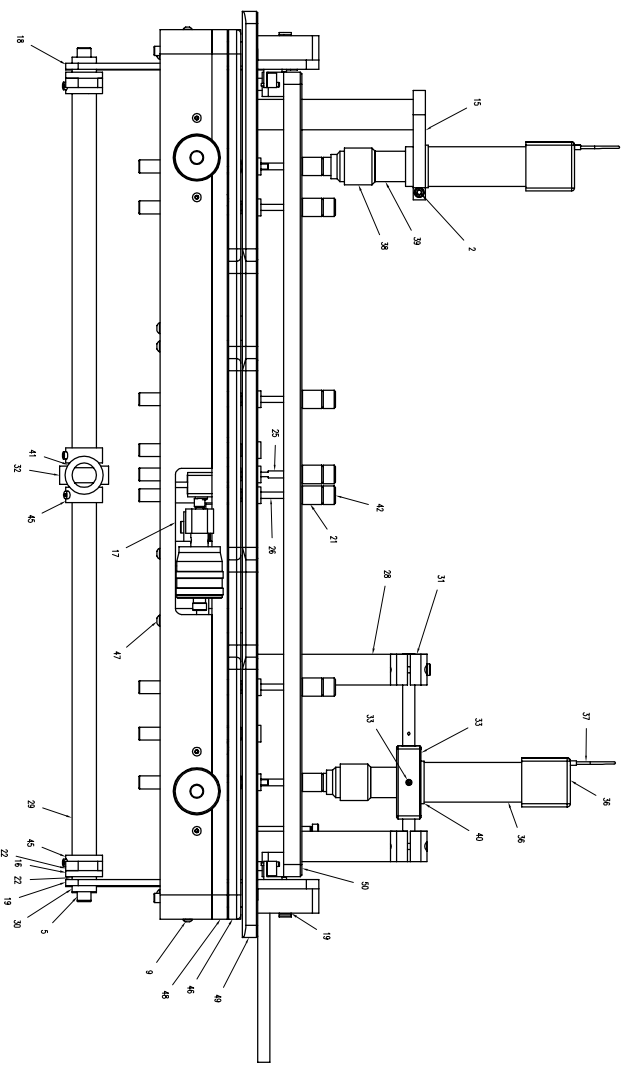
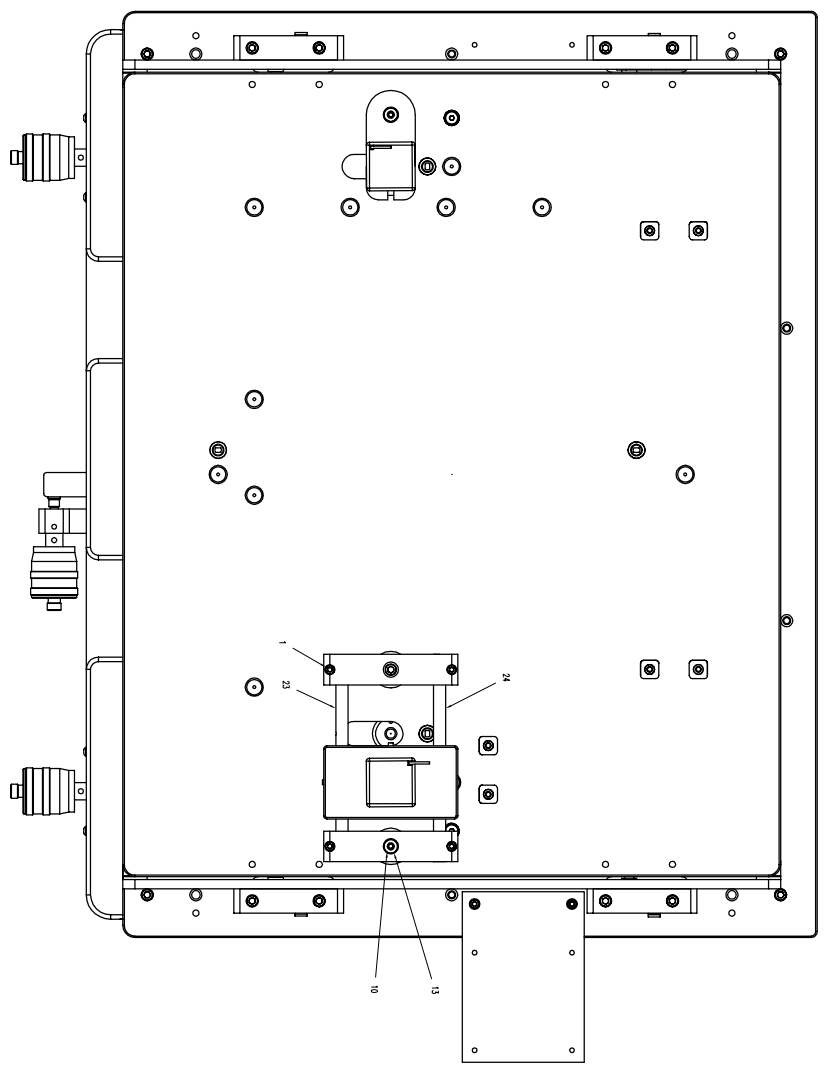
REV.	ENCL #	DESCRIPTION	DATE	APPROV

ITEM	QUANTITY	PART NUMBER	DESCRIPTION
61	1	ZPF-0129	PNEUMATIC ASSEMBLY, FILM PUNCH
60	1	ZPF-0131	ELEC. ASSY, 220V, WITH QUICK DISCONNECTS
59	1	ZPF-0125	MEMBRANE SWITCH ASSEMBLY
58	4	RM-99-014	LEVELING FOOT 5/8-11 STUD
57	2	RM-30-006	KNOB, FLUTED
56	1	PF-99-120	MACHINE WELDED FRAME STANDARD PE
55	1	PF-99-118	ADAPTER, CYLINDER MOUNT
54	1	PF-99-111	MASTER POWER SWITCH MOUNT
53	3	PF-99-110	FRONT PANEL MOUNT, LOOP PLATE
52	3	PF-99-109	FRONT PANEL MOUNT, BASE PLATE
51	3	PF-99-108	FRONT PANEL MOUNT, GUIDE, TOP
50	2	PF-99-107	FRONT PANEL MOUNTING GUIDE LEFT / RIGHT
49	2	PF-99-106	FRONT PANEL MOUNTING GUIDE FRONT / REAR
48	1	PF-99-105	CONTROL PANEL
47	1	PF-99-104	REAR COVER PANEL
46	1	PF-99-103	LEFT SIDE COVER PANEL
45	1	PF-99-102	RIGHT SIDE COVER PANEL
44	1	PF-99-101	FRONT COVER PANEL
43	1	PF-99-100	SUPPORT, MONITOR, WELDED
42	1	PF-99-099	GRADLE, MONITOR MOUNT
41	1	PF-99-094	BRACKET, CLEVIS MOUNTING
40	1	PF-72-011-1	LIGHT BULB, 120 V.A.C.
39	1	PF-72-011	LAMPHOUSE / AMBER LENS, A.C.
38	2	PF-70-027	MONITOR, CCV-9" B/W, CH-902 12 DC
37	1	PF-53-004	REAR PANEL SUPPORT SHELF
36	1	PF-53-003	LEFT PANEL SUPPORT SHELF
35	1	PF-53-002	RIGHT PANEL SUPPORT SHELF
34	1	PF-53-001	FRONT PANEL SUPPORT SHELF
33	2	PF-42-003	WASHER, SPECIAL
32	1	PF-20-049	CONTROL PANEL STIFFENER
31	1	PF-10-151	PLATE, ELECTRICAL ENCLOSURE MOUNTING
30	2	PF-10-106	PLATE, STUD MOUNT
29	3	PF-04-011	CONTROL PANEL MOUNT
28	3	PF-04-010	CONTROL PANEL MOUNTING BRACKET
27	4	PF-04-009	SIDE PANEL MOUNTING BRACKET
26	2	PF-04-008	REAR PANEL MOUNT BRACKET
25	1	PF-99-074	CHIP COLLECTOR DRAWER
24	1	PF-70-013	DATA INPUT TOUCH PANEL
23	1	PF-53-001	PNEUMATIC PLATE SUPPORT BAR
22	1	PF-48-002	TOUCH PANEL RETAINER CLIP
21	1	PF-44-011	CHIP COLLECTOR TUBE DISCHARGE END MOUNTING BRACKET
20	4	PF-44-006	KNURLED NUT, 1/2-13
19	4	PF-41-001	JACK SCREW SHAFT, PUNCH DIE MOUNT
18	2	PF-38-013	STANDOFF, #0.750 OD X #0.312 ID X 2.25 L
17	2	PF-38-012	STANDOFF, 0.750 OD X 0.3125 ID X 1.25 L
16	1	PF-04-013	CONVENIENCE PLUG MOUNTING PLATE
15	1	GF-54-001	ROUND KNOB, BLACK PLASTIC, 1/4-20 THD
14	1	AP1-039-010	MAIN DISCONNECT, ACTUATOR
13	1	AP1-039-009	MAIN DISCONNECT, SWITCH BODY
12	2	44-0250-20-0000	NYLON LOCK NUT, 1/4-20
11	2	05-0312-18-0500	BUTTON HEAD CAP SCREW, 5/16-18 X 0.500 L
10	2	05-0250-20-1250	BUTTON HEAD CAP SCREW, 1/4-20 X 1.250 L
9	83	05-0250-20-0500	BUTTON HEAD CAP SCREW, 1/4-20 X 0.500 L
8	8	05-0190-32-0250	BUTTON HEAD CAP SCREW, 10-32 X 0.250 L
7	4	05-0164-32-0250	BUTTON HEAD CAP SCREW, 8-32 X 0.250 L
6	2	04-0312-18-0750	FLAT HEAD CAP SCREW, 5/16-18 X 0.750 L
5	4	01-0312-18-1250	SOCKET HEAD CAP SCREW, 5/16-18 X 1.250 L
4	4	01-0250-20-2750	SOCKET HEAD CAP SCREW, 1/4-20 X 2.750 L
3	2	01-0250-20-0625	SOCKET HEAD CAP SCREW, 1/4-20 X 0.625 L
2	8	01-0138-32-0500	SOCKET HEAD CAP SCREW, 6-32 X 0.500 L
1	2	01-0112-40-0375	SOCKET HEAD CAP SCREW, 4-40 X 0.375 L

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND DECIMAL TOLERANCES ARE:	DATE
.XXX ± .005	08/07/01
.XXX ± .005	
.XXX ± .05	
.XXX ± .005	

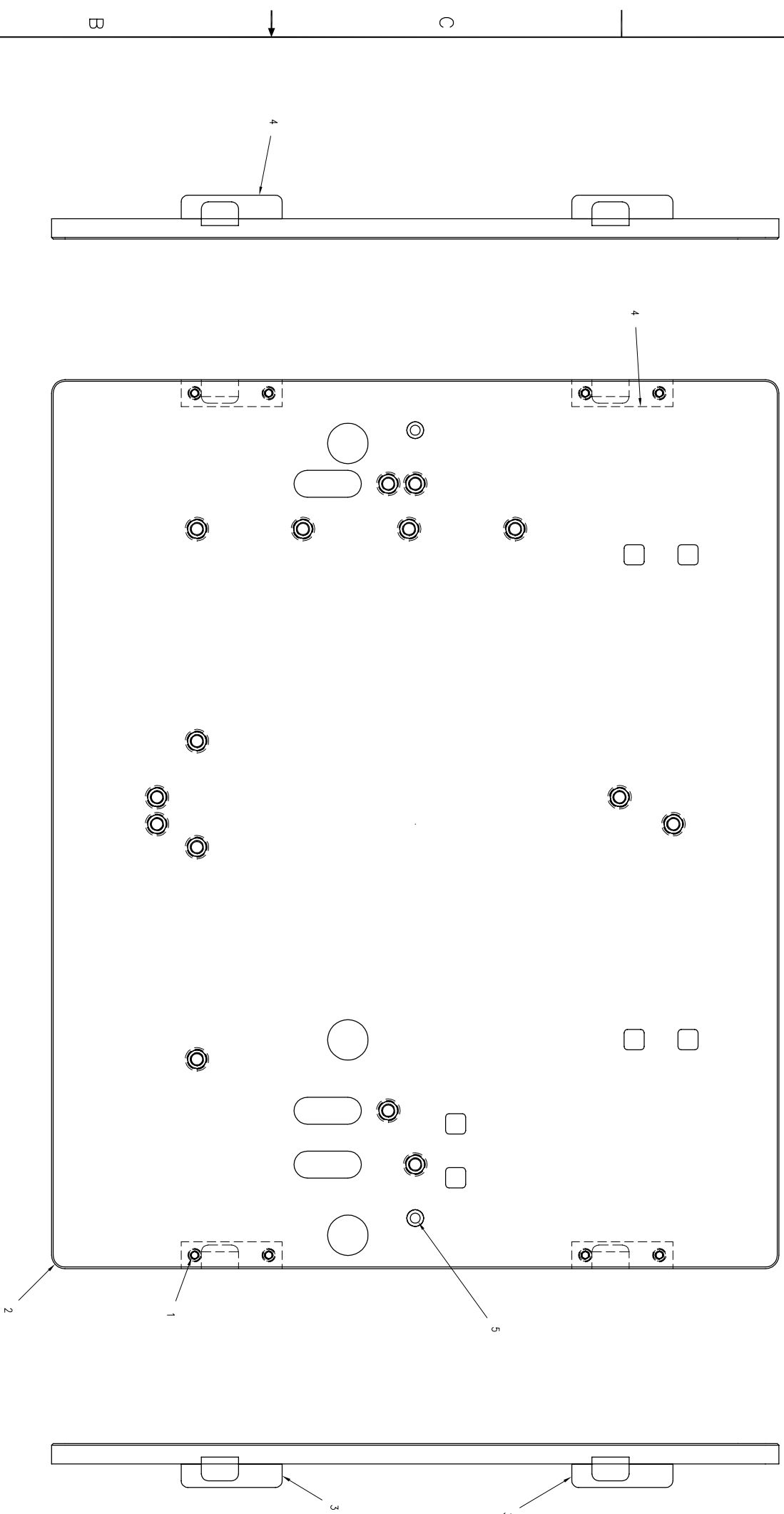
C.A. PICARD
INTERNATIONAL

FRAME ASSEMBLY
ASSEMBLY DRAWING
FILM PUNCH
XPT-3065
SCALE: 2" = 8"



NO.	QTY.	DESCRIPTION	UNIT	ASSEMBLY
1	1	CHASSIS	1	100-100-1000
2	1	MOTOR	1	100-100-1000
3	1	GEAR	1	100-100-1000
4	1	BEARING	1	100-100-1000
5	1	SCREW	1	100-100-1000
6	1	WASHER	1	100-100-1000
7	1	SPACER	1	100-100-1000
8	1	PLATE	1	100-100-1000
9	1	BRACKET	1	100-100-1000
10	1	SCREW	1	100-100-1000
11	1	WASHER	1	100-100-1000
12	1	SPACER	1	100-100-1000
13	1	PLATE	1	100-100-1000
14	1	BRACKET	1	100-100-1000
15	1	SCREW	1	100-100-1000
16	1	WASHER	1	100-100-1000
17	1	SPACER	1	100-100-1000
18	1	PLATE	1	100-100-1000
19	1	BRACKET	1	100-100-1000
20	1	SCREW	1	100-100-1000
21	1	WASHER	1	100-100-1000
22	1	SPACER	1	100-100-1000
23	1	PLATE	1	100-100-1000
24	1	BRACKET	1	100-100-1000
25	1	SCREW	1	100-100-1000
26	1	WASHER	1	100-100-1000
27	1	SPACER	1	100-100-1000
28	1	PLATE	1	100-100-1000
29	1	BRACKET	1	100-100-1000
30	1	SCREW	1	100-100-1000
31	1	WASHER	1	100-100-1000
32	1	SPACER	1	100-100-1000
33	1	PLATE	1	100-100-1000
34	1	BRACKET	1	100-100-1000
35	1	SCREW	1	100-100-1000
36	1	WASHER	1	100-100-1000
37	1	SPACER	1	100-100-1000
38	1	PLATE	1	100-100-1000
39	1	BRACKET	1	100-100-1000
40	1	SCREW	1	100-100-1000
41	1	WASHER	1	100-100-1000
42	1	SPACER	1	100-100-1000
43	1	PLATE	1	100-100-1000
44	1	BRACKET	1	100-100-1000
45	1	SCREW	1	100-100-1000
46	1	WASHER	1	100-100-1000
47	1	SPACER	1	100-100-1000
48	1	PLATE	1	100-100-1000
49	1	BRACKET	1	100-100-1000
50	1	SCREW	1	100-100-1000

NOTES:



REV.	EQU. #	DESCRIPTION	DATE	APPROV.

ITEM	QUANTITY	PART NUMBER	DESCRIPTION
7	1	XPF-3065-AW	SILK SCREEN ARTWORK (XPF-3065)
6	15	RM-90-011	INSERT, 1/2-13 ID X 3/4-16 OD
5	2	RM-65-018	BEARING, BRONZE, 0.3750 X 0.6250 X 3/4
4	2	PF-31-006	CAP. BEARING, LEFT
3	2	PF-31-005	CAP. BEARING, RIGHT
2	1	PF-10-169	PLATE, PUNCH DRIVER (XPF-3065)
1	8	01-0312-18-1000	SOCKET HEAD CAP SCREW, 5/16-18 X 1.000 L

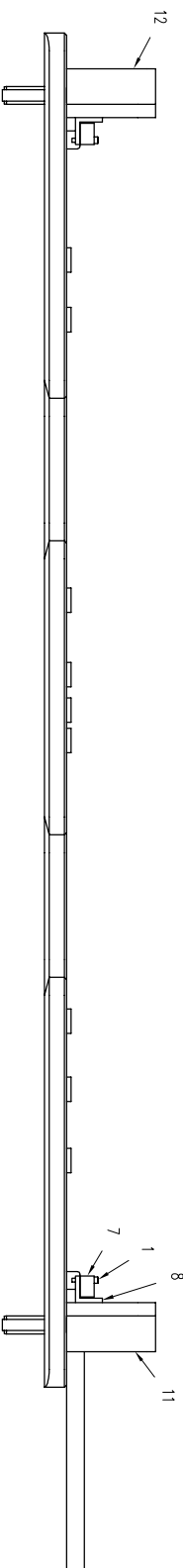
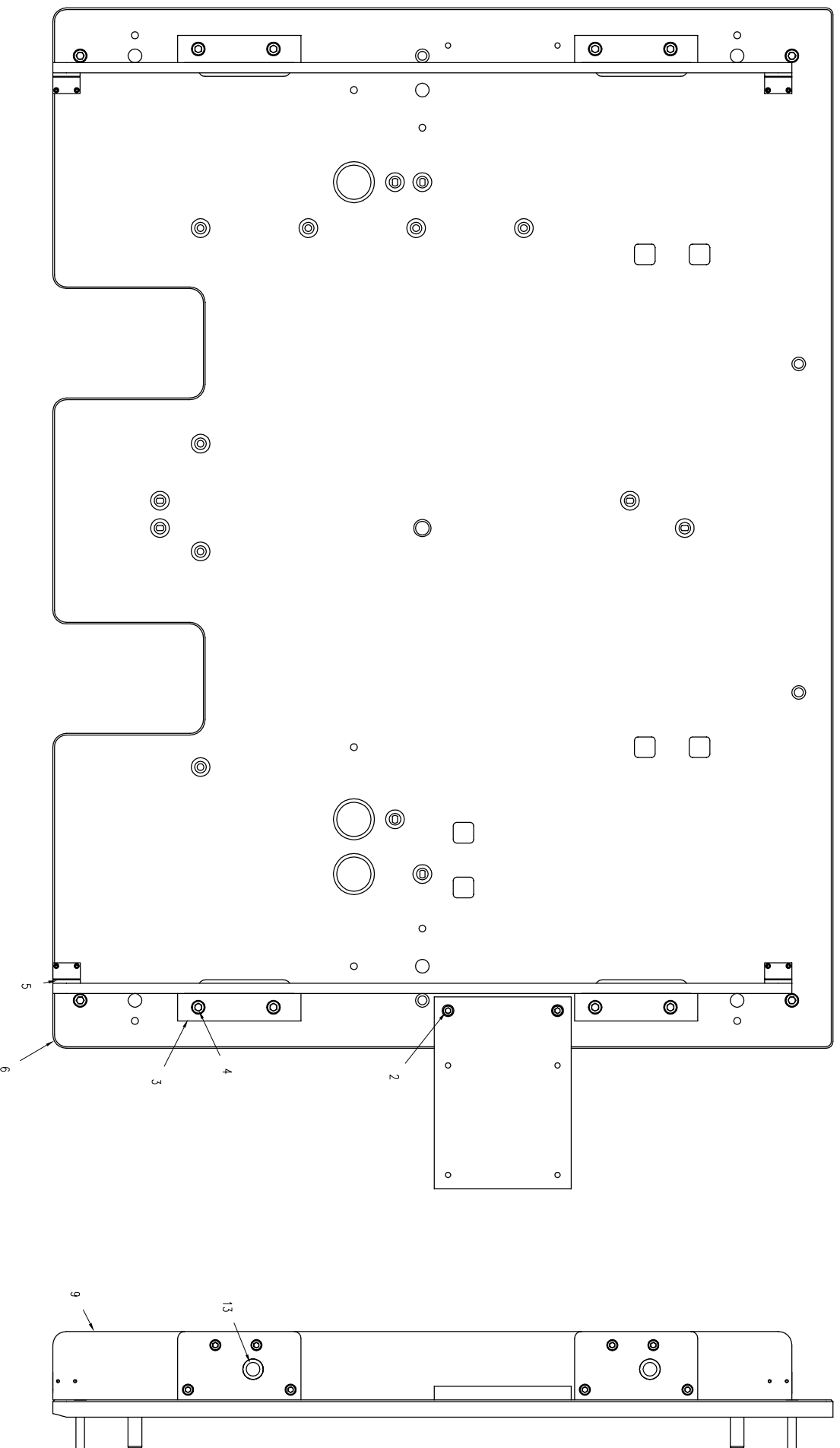
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND GENERAL TOLERANCES ARE:		DATE	
DECIMALS	.XX ± .06	DRAWN	JMG 08/07/01
ANGLES	.X° ± .5°	CHECK	-
	.XX ± .03	ENG	-
	.XXXX ± .0005	APPROV	-
THE MATERIAL CONTAINED HEREIN IS PROPRIETARY TO C.A.PICARD INTERNATIONAL, AND SHALL NOT BE REPRODUCED, DISCLOSED, OR WRITTEN CONSENT OF C.A.PICARD INTERNATIONAL.		FINISH: N/A	
DEBurr and REMOVE SHARP EDGES		CPO FILE: XPF-3065	



PUNCH DRIVER PLATE ASSEMBLY
ASSEMBLY DRAWING
FILM PUNCH

SCALE: NONE
DRAWING # XPF-3065
REV N/C

NOTES:



REV.	ENR #	DESCRIPTION	DATE	APPROV

ITEM	QUANTITY	PART NUMBER	DESCRIPTION
1	8	01-0112-40-0625	SOCKET HEAD CAP SCREW, 4-40 X 0.625 L
2	2	01-0250-20-0625	SOCKET HEAD CAP SCREW, 1/4-20 X 0.625 L
3	16	01-0250-20-1000	SOCKET HEAD CAP SCREW, 1/4-20 X 1.500 L
4	8	01-0312-18-2500	SH CAP SCREW 5/16 DIA, 18x2.5L6, SS
5	8	04-0112-40-0900	FLAT HEAD CAP SCREW 4-40 X 0.900 L
6	1	MPF-0002-EDM-P2	GUIDE PLATE ASSEMBLY, POST EDM
7	4	PE-73-025	SWITCH, PHOTO
8	4	PF-04-013	BRACKET, SENSOR MOUNTING
9	2	PF-10-098	PLATE, LEVER MOUNT, END
10	1	PF-10-137	PLATE, MONITOR MOUNT
11	2	PF-60-020	BLOCK, LEVER MOUNT, RIGHT
12	2	PF-60-021	BLOCK, LEVER MOUNT, LEFT
13	4	RM-55-017	BRONZE BEARING, 50 LD, X .75 O.D, X 1.0 LG.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND DECIMAL TOLERANCES ARE:

DECIMALS .xxx ± .005

ANGLES .xxx° ± .05°

XXX ± .0025

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DATE: 08/01/01

SCALE: N/A

SCALE NAME: 00 NO1 SCALE DRAWING

SHEET: 5 OF 8

C.A. PICARD INTERNATIONAL

GUIDE PLATE ASSEMBLY ASSEMBLY DRAWING

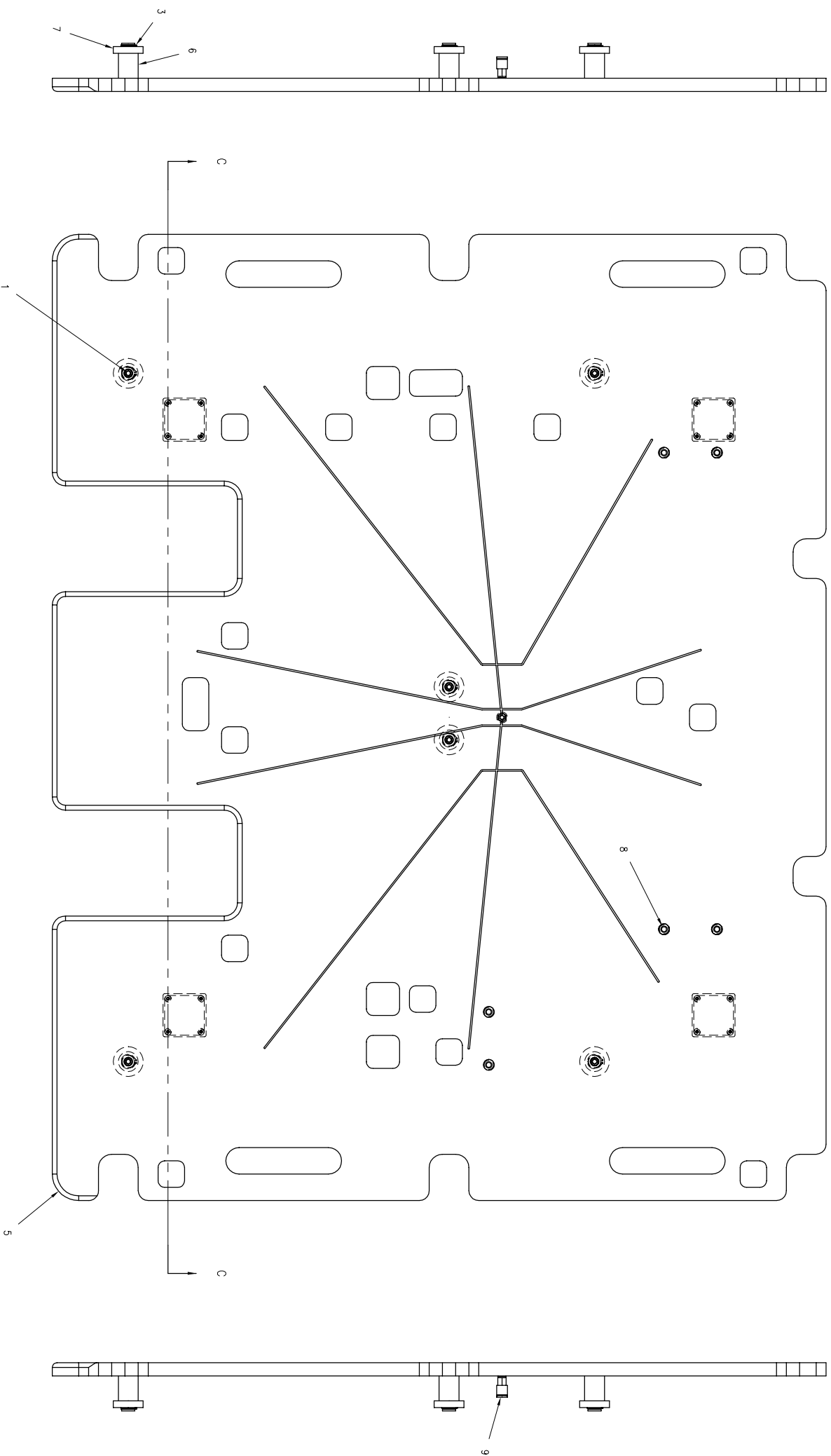
DATE: 08/01/01

SCALE: N/A

SCALE NAME: 00 NO1 SCALE DRAWING

SHEET: 5 OF 8

NOTES:



SECTION C-C

REV.	EQU. #	DESCRIPTION	DATE	APPROV.

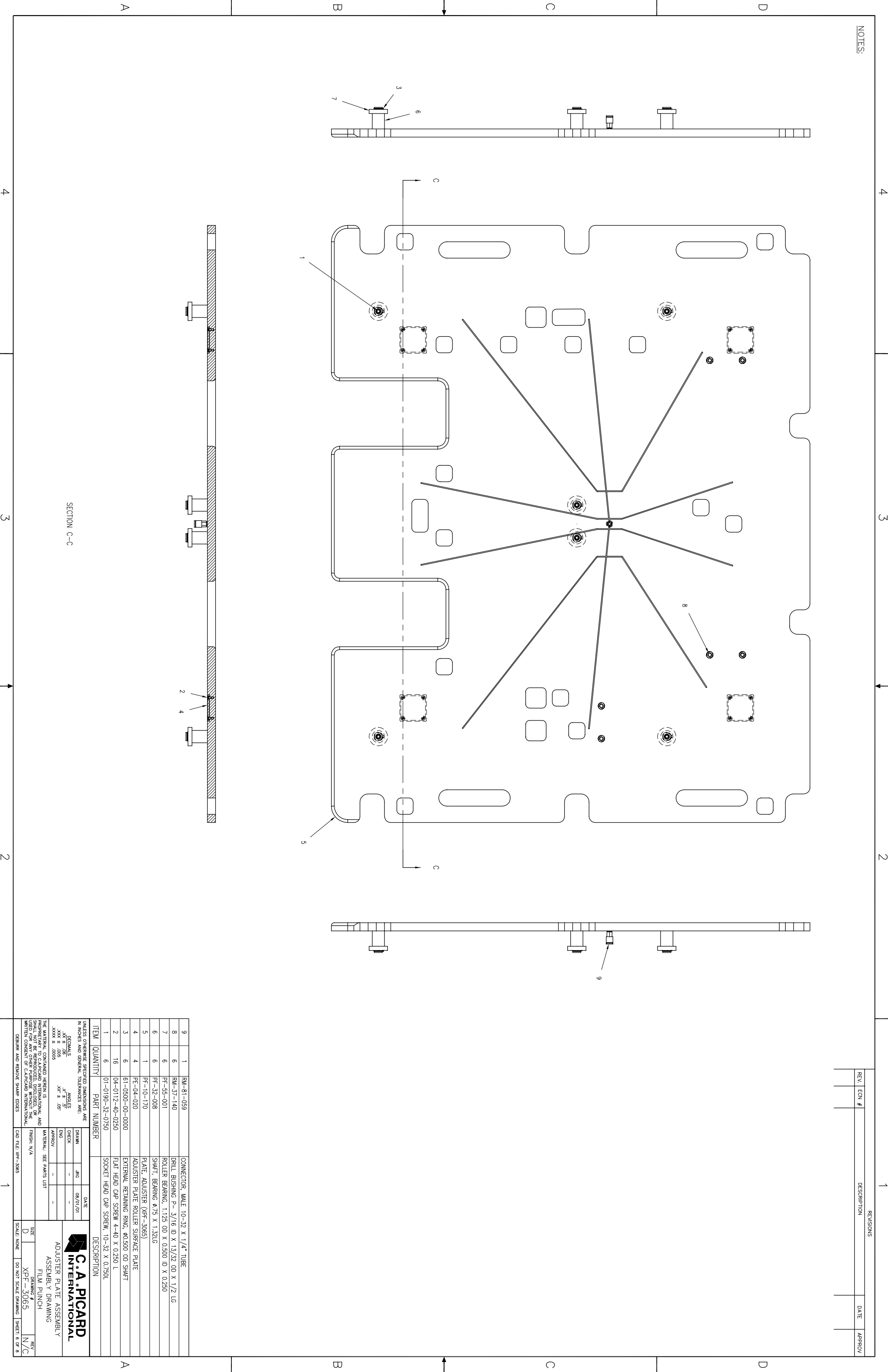
ITEM	QUANTITY	PART NUMBER	DESCRIPTION
1	1	RM-81-059	CONNECTOR, MALE 10-.32 X 1/4" TUBE
2	6	RM-37-140	DRILL BUSHING P- 3/16 ID X 13/32 OD X 1/2 LG
3	6	PF-55-001	ROLLER BEARING, 1.125 OD X 0.500 ID X 0.250
4	6	PF-32-008	SHAFT, BEARING #.75 X 1.32LG
5	1	PF-10-170	PLATE, ADJUSTER (XPF-3065)
6	4	PE-04-020	ADJUSTER PLATE ROLLER SURFACE PLATE
7	6	61-0500-00-0000	EXTERNAL RETAINING RING, #0.500 OD SHAFT
8	16	04-0112-40-0250	FLAT HEAD CAP SCREW 4-40 X 0.250 L
9	6	01-0190-32-0750	SOCKET HEAD CAP SCREW, 10-.32 X 0.750L

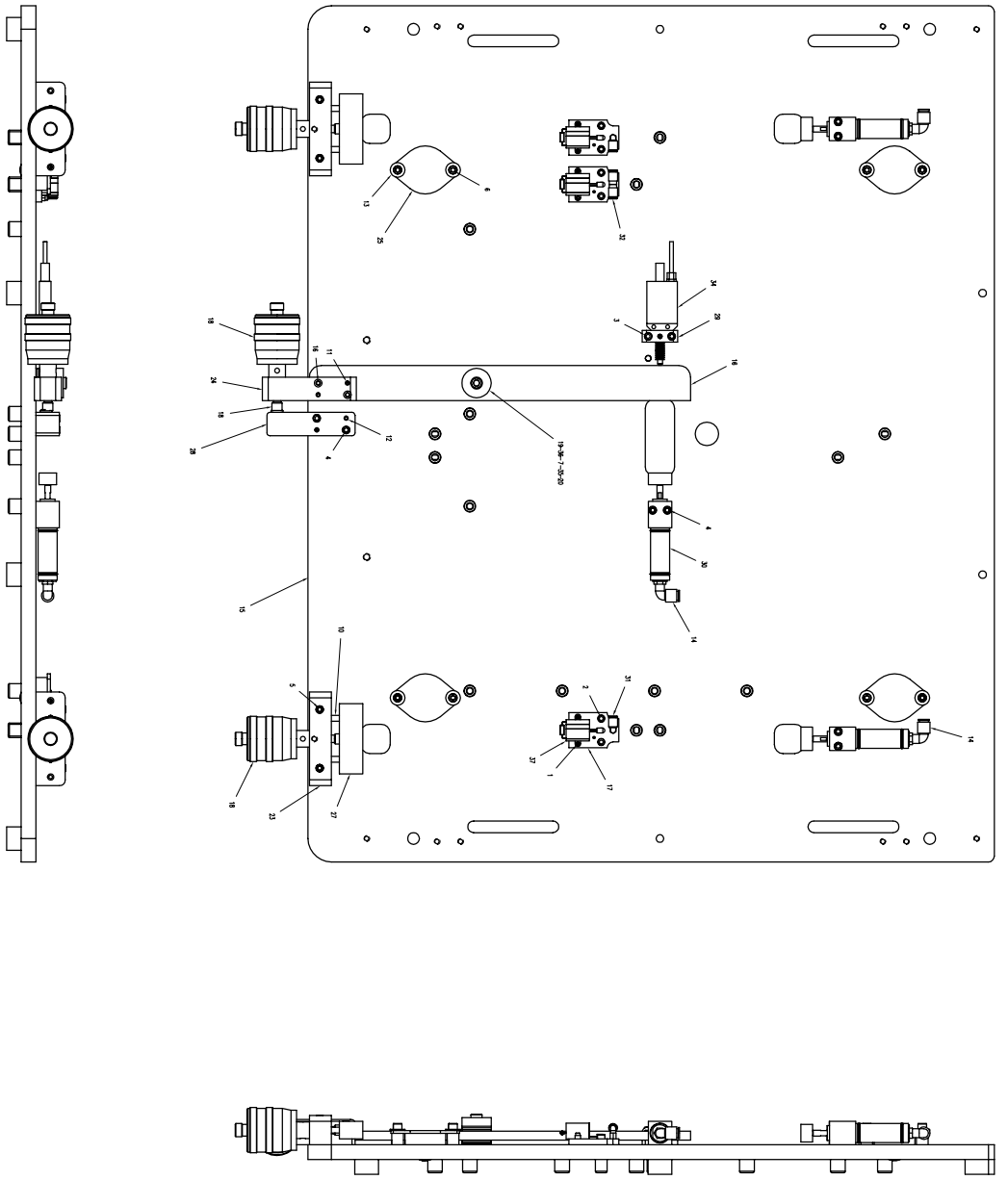
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND GENERAL TOLERANCES ARE:		DATE	
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.XX ± .05	ANGLES	CHECK	-
.XX ± .05	ANGLES	ENG	-
.XX ± .05	ANGLES	APPROV	-
MATERIAL: SEE PARTS LIST		FINISH: N/A	
MATERIAL: SEE PARTS LIST		SCALE: NONE	
MATERIAL: SEE PARTS LIST		DO NOT SCALE DRAWING	
MATERIAL: SEE PARTS LIST		SHEET: 6 OF 8	

C.A. PICARD
INTERNATIONAL

ADJUSTER PLATE ASSEMBLY
ASSEMBLY DRAWING
FILM PUNCH

DRAWING #
XPF-3065

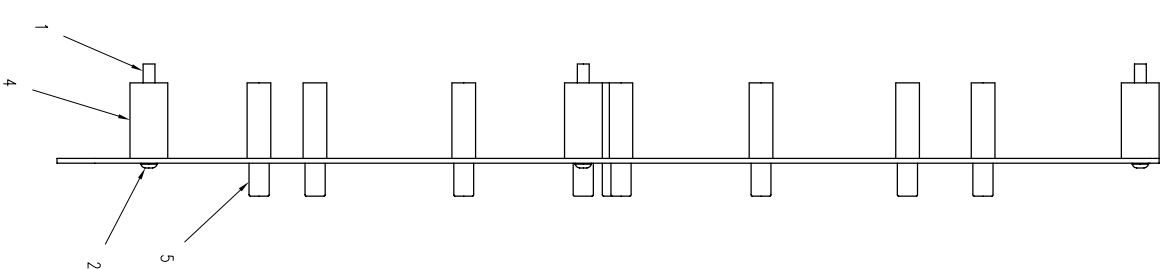
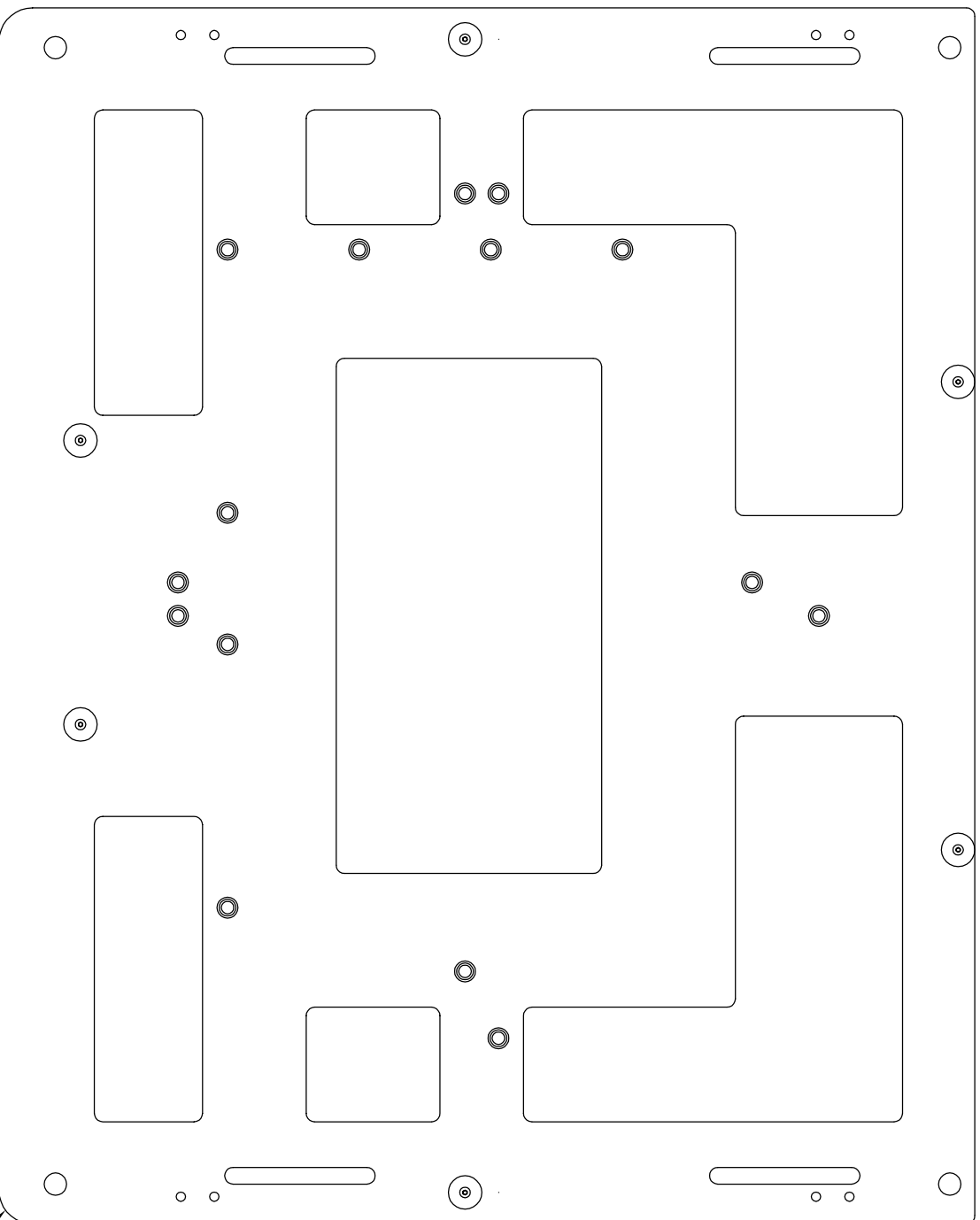




REV.	DATE	DESCRIPTION
01	10/10/10	INITIAL RELEASE
02	10/10/10	REVISION 1
03	10/10/10	REVISION 2
04	10/10/10	REVISION 3
05	10/10/10	REVISION 4
06	10/10/10	REVISION 5
07	10/10/10	REVISION 6
08	10/10/10	REVISION 7
09	10/10/10	REVISION 8
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29	10/10/10	REVISION 28
30	10/10/10	REVISION 29
31	10/10/10	REVISION 30
32	10/10/10	REVISION 31

1. TITLE: INITIAL RELEASE
 2. DATE: 10/10/10
 3. DESCRIPTION: INITIAL RELEASE
 4. DRAWN BY: [Name]
 5. CHECKED BY: [Name]
 6. APPROVED BY: [Name]
 7. PART NUMBER: [Number]
 8. QUANTITY: [Quantity]
 9. MATERIAL: [Material]
 10. FINISH: [Finish]
 11. TOLERANCES: [Tolerances]
 12. DIMENSIONS: [Dimensions]
 13. WEIGHT: [Weight]
 14. VOLUME: [Volume]
 15. SURFACE AREA: [Surface Area]
 16. COST: [Cost]
 17. LEAD TIME: [Lead Time]
 18. STORAGE: [Storage]
 19. HANDLING: [Handling]
 20. SAFETY: [Safety]
 21. ENVIRONMENTAL: [Environmental]
 22. COMPLIANCE: [Compliance]
 23. LEGAL: [Legal]
 24. OTHER: [Other]

NOTES:



REV.	EQU. #	DESCRIPTION	DATE	APPROV.

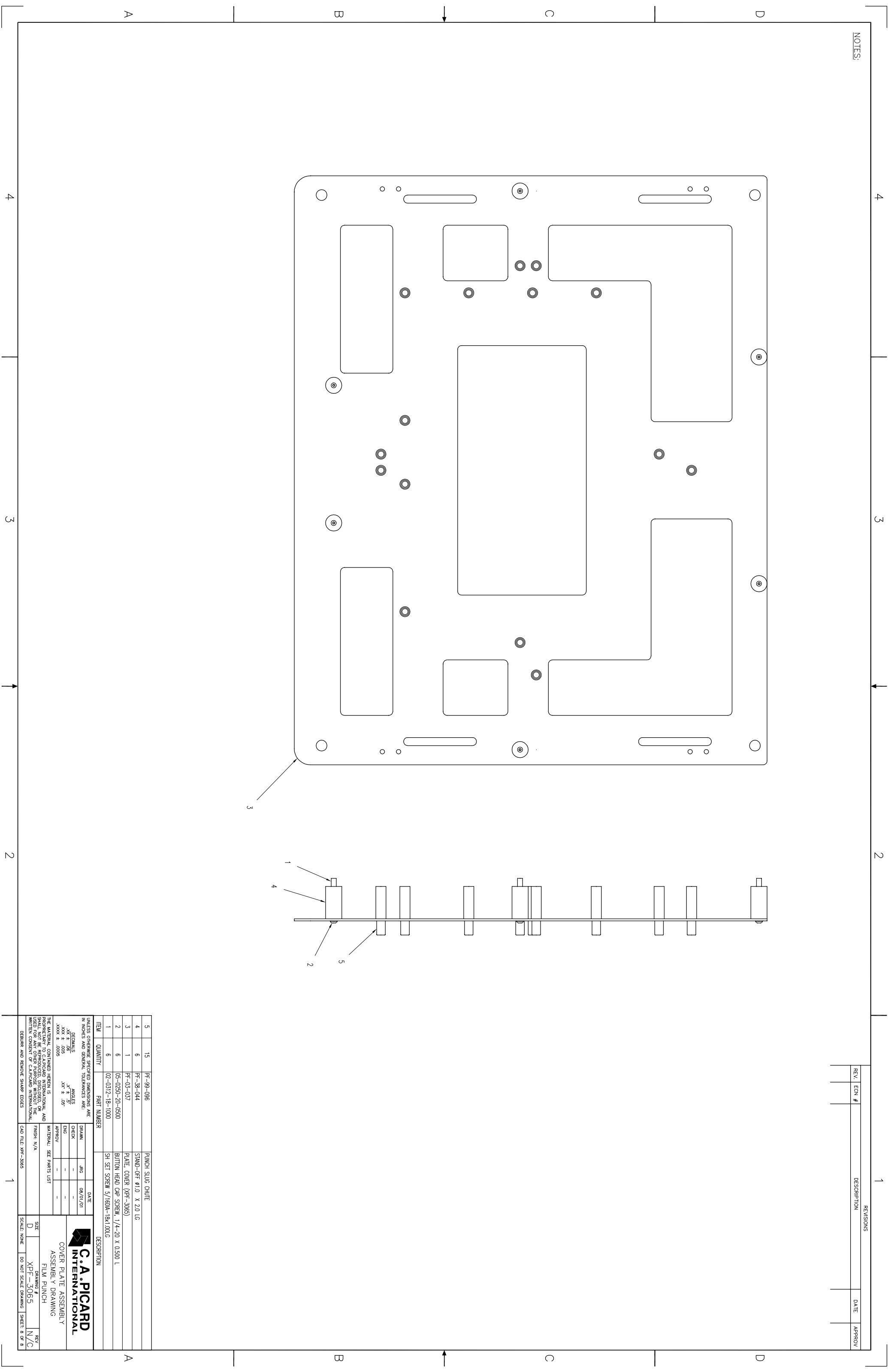
ITEM	QUANTITY	PART NUMBER	DESCRIPTION
5	15	PF-99-096	PUNCH SLUG CHUTE
4	6	PF-38-044	STAND-OFF #1.0 X 2.0 LG
3	1	PF-03-037	PLATE COVER (PF-3065)
2	6	05-0250-20-0500	BUTTON HEAD CAP SCREW, 1/4-20 X 0.500 L
1	6	02-0317-18-1000	SH SET SCREW 5/16DM-18x1.00LG

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND GENERAL TOLERANCES ARE:		DATE	
DECIMALS	.XX ± .06	DRAWN	JHG 08/07/01
ANGLES	.X° ± .5°	CHECK	-
	.XX' ± .05'	ENG	-
	.XXXX ± .0005	APPROV	-
THE MATERIAL CONTAINED HEREIN IS PROPRIETARY TO C.A.PICARD INTERNATIONAL, AND SHALL NOT BE REPRODUCED, DISCLOSED, OR WRITTEN CONSIST OF C.A.PICARD INTERNATIONAL.		FINISH: N/A	
DEBURR AND REMOVE SHARP EDGES		CADD FILE: XPF-3065	

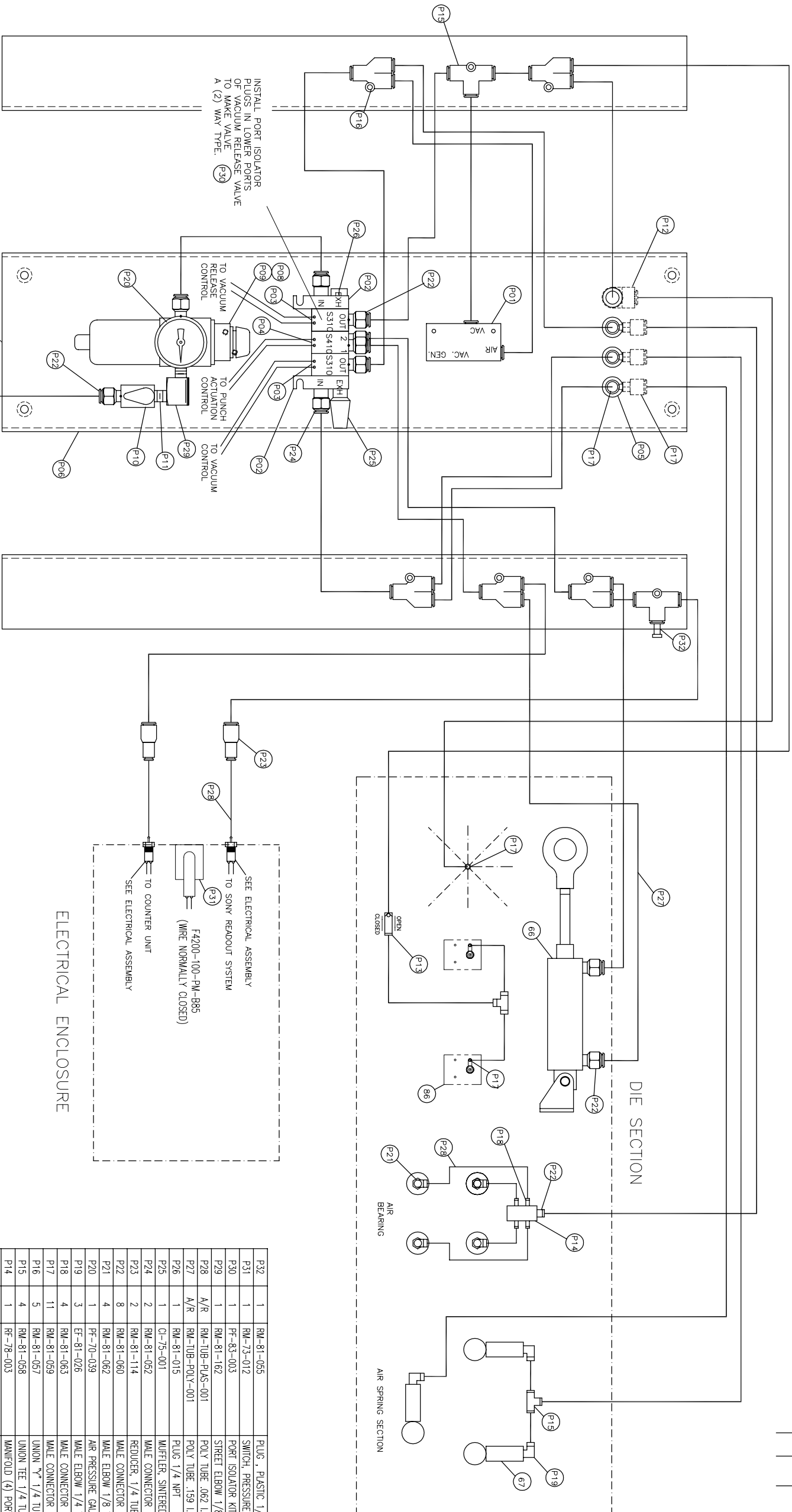


COVER PLATE ASSEMBLY
ASSEMBLY DRAWING
FILM PUNCH

DRAWING # XPF-3065
SCALE: NONE
DO NOT SCALE DRAWING



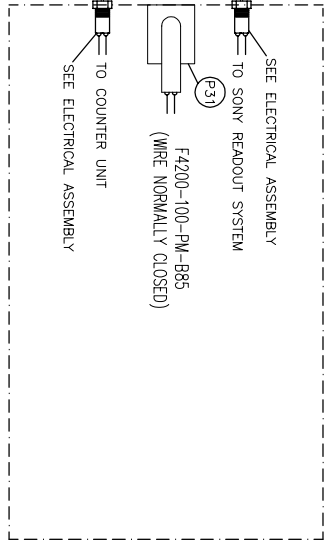
NOTES:



PNEUMATIC MOUNTING PLATE

80-100 P.S.I. AIR

ELECTRICAL ENCLOSURE



PART NO.	QTY	RECD	PART OR IDENTIFYING NO.	DESCRIPTION
P32	1		RM-81-055	PLUG, PLASTIC 1/4 DIA.
P31	1		RM-73-012	SWITCH, PRESSURE N.O.
P30	1		PE-83-003	PORT ISOLATOR KIT
P29	1		RM-81-162	STREET ELBOW 1/8 NPT
P28	A/R		RM-TUB-PLAS-001	POLY TUBE .002 I.D.
P27	A/R		RM-TUB-POLY-001	POLY TUBE .159 I.D
P26	1		RM-81-015	PLUG 1/4 NPT
P25	1		C-75-001	W/FILER, SINTERED BRONZE 1/4 NPT
P24	2		RM-81-052	MALE CONNECTOR 1/4 TUBE X 1/4 NPT
P23	2		RM-81-114	REDUCER, 1/4 TUBE TO 1/8 TUBE
P22	8		RM-81-060	MALE CONNECTOR 1/4 TUBE X 1/8 NPT
P21	4		RM-81-062	MALE ELBOW 1/8 TUBE X 10-32 THD
P20	1		PE-70-039	AIR PRESSURE GAUGE
P19	3		EE-81-026	MALE ELBOW 1/4 TUBE X 1/8 NPT
P18	4		RM-81-063	MALE CONNECTOR 1/8 TUBE X 10-32 THD
P17	11		RM-81-059	MALE CONNECTOR 1/4 TUBE X 10-32 THD
P16	5		RM-81-057	UNION "T" 1/4 TUBE
P15	4		RM-81-058	UNION TEE 1/4 TUBE
P14	1		RE-78-003	MANIFOLD (4) PORT
P13	1		RM-83-12	CHECK VALVE
P12	1		RM-83-003	NEEDLE VALVE
P11	1		PE-81-015	CLOSE NIPPLE 1/8 NPT
P10	1		RM-83-006	VALVE, BALL
P09	1		PE-70-024	MOUNTING BRACKET
P08	1		PE-70-023	FILTER/REGULATOR
P07			Open	
P06	1		PE-99-117	CHANNEL PNEUMATIC MOUNTING
P05	3		PE-77-001	REGULATOR, RELIEVING
P04	1		PE-74-003	VALVE, SOLENOID (4) WAY
P03	2		PE-74-002	VALVE, SOLENOID (3) WAY
P02	1		PE-70-045	END PLATE ASSEMBLY
P01	1		PE-71-003	VACUUM GENERATOR

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND GENERAL TOLERANCES ARE:

DECIMALS	ANGLES
.XX ± .03	.X° ± .5°
.XXX ± .003	.XX' ± .05"
.XXXX ± .0005	

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REV.	ECH #	DESCRIPTION	DATE	APPROV.

C.A. PICARD INTERNATIONAL

FINISH: N/A
 MATERIAL: N/A
 APPROV: AFC 10/19/00

PNEUMATIC ASSEMBLY

DRAWING # ZPE-0129
 SCALE: NONE DO NOT SCALE DRAWING SHEET 1 OF 1



Production Technology Division

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