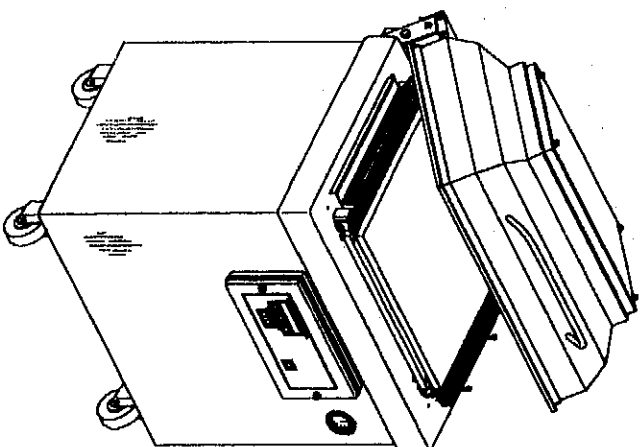
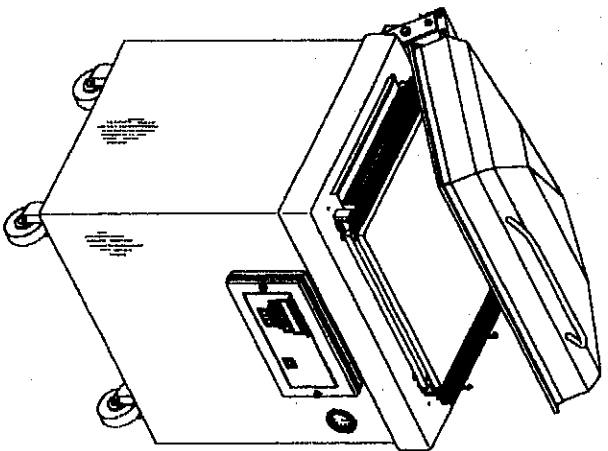


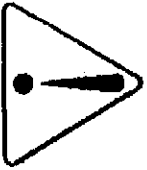
**MODEL  
450A**



**OWNERS MANUAL**  
**(MANUEL D'UTILISATION)**  
**(MANUAL DE UTILIZACIÓN)**



## Safe Operation Practices



This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate your vacuum machine. Failure to comply with these instructions may result in personal injury.

### General Operation

- Read, understand, and follow all instructions in the manual and on the machine before starting. Keep this manual in a safe place for further and regular reference and for ordering replacement parts.
- Only allow responsible individuals familiar with the instructions to operate the machine. Be sure to know controls and how to stop the machine quickly.
- Never put your hands near moving parts.
- Only allow qualified individuals for the maintenance of your machine.
- Remove all obstacles, which may interfere with the machine functions.
- Clear the work area such as electrical wires, buckets, knives etc.
- Be sure that everyone else is clear of your work area before operating the machine.
- Do not sit nor stand on the machine.
- Always turn off the machine after your work is done. Never leave a running machine unattended.
- Always disconnect and wait till the machine has cooled before attempting any maintenance.
- Do not wear loose fitting clothes or jewelry as they may get caught in moving parts of the machine.
- Always wear security shoes, to prevent injury caused by moving the machine or objects falling from the machine.
- Never exceed the time limit to seal, which is recommended by the manufacturer. This is to avoid any damage that may be caused to the sealing bars and to eliminate the risk of fire in the machine. Thus avoiding corporal burns.
- Never touch the sealing bars after they have been used, this will avoid corporal burns. Wait a few minutes to let the machine cool down before touching.
- Always make sure that the sealing bars are well installed in their "Guide Blocks" before starting a cycle.
- Never incline the machine more than 30 degrees, it may tip over and hurt someone seriously.
- Work only in daylight or good artificial light.

**Do not operate the machine while under the influence of alcohol or drugs!**

## Service

- Use proper containers when draining the oil. Do not use food or beverage containers that may mislead someone into drinking from them. Properly dispose of the containers, or store in a safe place immediately following the draining of the oil.
- Prior to disposal, determine the proper method to dispose of waste from your local office of Environmental Protection Agency. Recycling centers are established to properly dispose of materials in an environmentally safe fashion.

Do not pour oil or other fluids into the ground, down a drain or into a body of water.

### **Warning-Your responsibility:**

This machine should only be operated by personal who can read, understand and respect warnings and instruction regarding this machine in the owners manual.

# VACUUM PACKAGING MACHINE

## MODEL 450A

### GENERAL TABLE OF CONTENTS

#### I OPERATION INSTRUCTIONS

#### II MECHANICAL

- A- Front view general assembly drawing
- B- Rear view general assembly drawing
- C- Seal bar assembly drawings  
(twin seal)
- D- Seal bar assembly drawings  
(electrical bag cut option)
- E- Upper seal bar assembly drawing
- F- Gas injection kit installation drawing  
(gas injection option)

#### III ELECTRICAL

- A- Electrical drawing 1 phase
- B- Electrical drawing 3 phase
- C- Electrical drawing 3 phase 50 Hz
- D- "D" connector detail
- E- Electrical parts list

#### IV PNEUMATIC

- A- Pneumatic drawing

# VACUUM PACKAGING MACHINES

## OPERATION INSTRUCTIONS

### TABLE OF CONTENTS

1. Setting up the machine
2. Electrical connection
3. Operation
  - 3.1 Working principles
  - 3.2 Special packaging
    - 3.2.1 Gas flushing
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  - 3.3 Setting of digital controls
  - 3.4 Daily cleaning
4. Trouble shooting
  - 4.1 Failure during a packaging cycle
  - 4.2 Insufficient vacuum
    - 4.2.1 Leakage in the bag
    - 4.2.2 No leakage in the bag
    - 4.2.3 Insufficient vacuum in the chamber
  - 4.3 Faulty seal
    - 4.3.1 Insufficient seal
    - 4.3.2 No seal
    - 4.3.3 Permanent sealing current
    - 4.3.4 Seal does not stick
  - 4.4 Fault in the valves
  - 4.5 Control board failure
5. Regular maintenance

# SIPROMAC INC.

## VACUUM PACKAGING MACHINES

### 1. SETTING UP THE MACHINE:

Before choosing the site for the machine, please consider that you will also need room for packaged and non-packaged products apart from the space needed for the machine itself.

Keep in mind that the machine must not be set up upon uneven ground. Especially with mobile models, the weight of the pump might then cause warping of the machine. Then the lid will not fit correctly.

Before starting to work, check the oil view glass on the pump, if there is a sufficient quantity of oil in the pump. Never use oil other than recommended by the producer. Never exceed maximum quantity of oil indicated, when adding or changing oil. Verify weekly.

Due to the oil viscosity, the machine is hard to start when temperatures are very low. Therefore the pump should be put in a room with an air temperature of at least 50°F (+10°C). On the other hand, there must be free access of air to the pump to allow for cooling so that operation temperature of 160°F (70°C) is not exceeded.

### 2. ELECTRICAL CONNECTION:

Electrical connections must be made by qualified personnel. This person must make sure that the electrical entries corresponds to the proper voltage and amperage of the machine.

All vacuum machines are supplied with an electrical schematic drawing.

An important step in connecting the machine is to make sure that the pump turns in its correct rotation.

Warning: The pump should not rotate more than 3 to 4 seconds in the wrong rotation or it may cause serious damage. The proper rotation is indicated by an arrow on the pump motor.

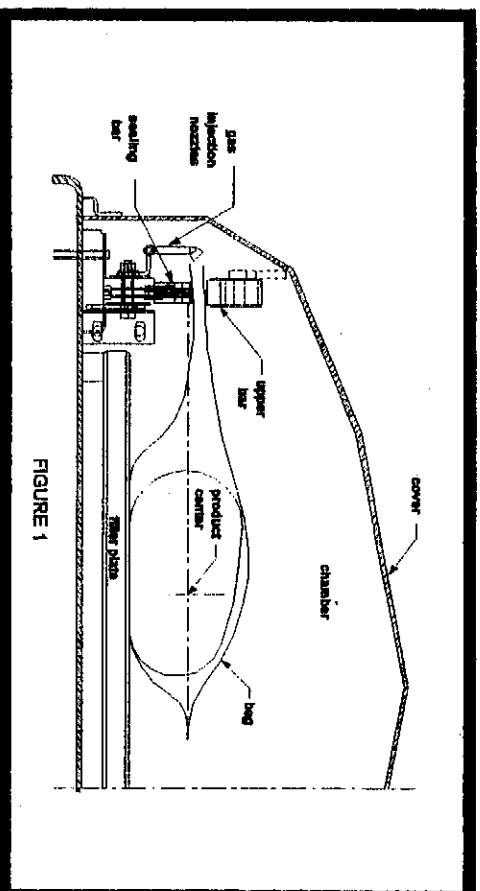
### 3. OPERATION:

#### 3.1 Working principles:

A vacuum packaging cycle is made of 3 stages. First the vacuum is made, the air is completely taken out of the chamber and from bag containing the product. (See figure 1). Then it is possible to inject neutral gas from the nozzles, if the product is delicate. Finally, a mechanism pushes the sealing bar to the rubber support to seal the bag.

To obtain nice packages, the products and the bags have to be of proportional sizes. The bag's opening should never exceed 2" (50 cm) past the seal bars. The product should be centered in height in relation to the seal bar by adjusting the spacers provided.

To obtain a good seal, make sure that no residue of fat is left between the bag's inner sides where sealing is done.



### 3.2 Special packaging:

#### 3.2.1 Gas flushing (option):

There is an atmospheric pressure of 14 lbs/sq. inch (= 1 kg/ sq. cm) upon products when fully evacuated. Products which can be damaged by high pressure must be packaged with a partial vacuum, or the pressure must be counterbalanced by inflating the bag with gas (nitrogen or carbon dioxide) before sealing after evacuation.

For gas flushing, the bags are placed on the sealing bars, the open end placed over the gas nozzles mounted alongside the sealing bar. After evacuation, the vacuum valve closes and the gas valve opens. Gas time can be set by "G" control.

The necessary gas tank and pressure valve mounted on tank is not supplied by Sipromac. The pressure of the gas regulator should be set at approximately 5 lbs/sq. inch. (1/3 kg/sq. cm). Each machine has an adaptor for gas connection when gas flush option is ordered.

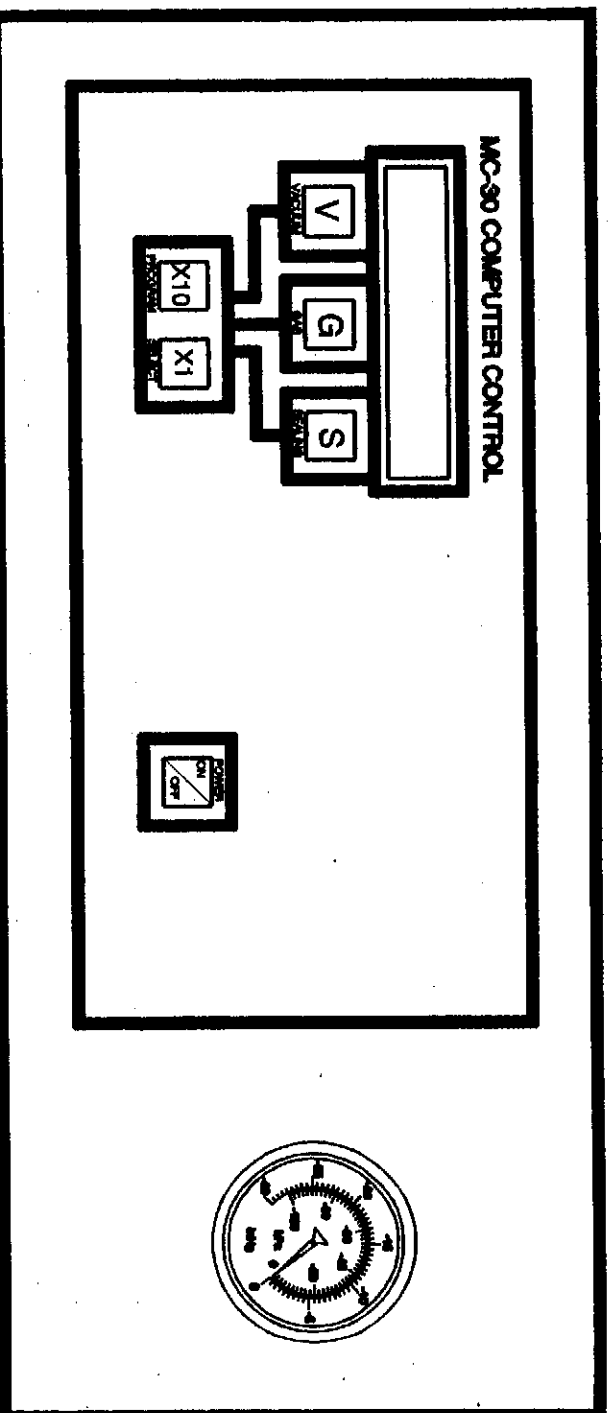
#### 3.2.2 Electrical bag cut (optional):

This option is used to obtain a package that the excess bagtail is cut off close to the seal (cannot be used with top and bottom sealing).



3.3 Setting of digital controls for MC-30E p.c. board:

Control pannel:



To turn on: Press the "Power On" key.

To turn off: Press the "Power Off" key.

How to program a complete cycle:

To enter the vacuum time (sec.):

1. Press the "V" key. The display will flash.
2. Set your desired timing by pressing on "X10" and/or "X1".
3. Press one more time on the "V" key. The display stays on.

To enter the gas time (sec.):

1. Press the "G" key. The display will flash.
2. Set your desired timing by pressing on "X10" and/or "X1".
3. Press one more time on the "G" key. The display stays on.

To enter the sealing time (sec. decimals):

1. Press the "S" key. The display will flash.
2. Set your desired timing by pressing on "X10" and/or "X1".
3. Press one more time on the "S" key. The display stays on.

The micro-processor will memorize the last program you entered. The system functions with a 5 volt Cadium Nickel battery which lasts approximately 3 years and recharges automatically if your machine remains plugged in. You may notice, during the first few days of use, that your micro-processor does not keep you program in memory, it is normal due to the fact that your battery is not yet fully charged.

### **BASIC PROGRAM TO MODIFY ACCORDING TO THE PRODUCTS**

MACHINE	"V"	*"G"	"S"
VAC 250	18 sec.	N/A	1.2 sec.
VAC 350,350D	20 sec.	As needed	1.3 sec.
VAC 450T,450A	20 sec.	As needed	1.3 sec.
VAC 420A	22 sec.	As needed	1.3 sec.
VAC 550A	25 sec.	As needed	1.5 sec.

To modify your program, increase as desired by pressing the "X1" key.

- \* If you do not use the gas option, you have to program "00".

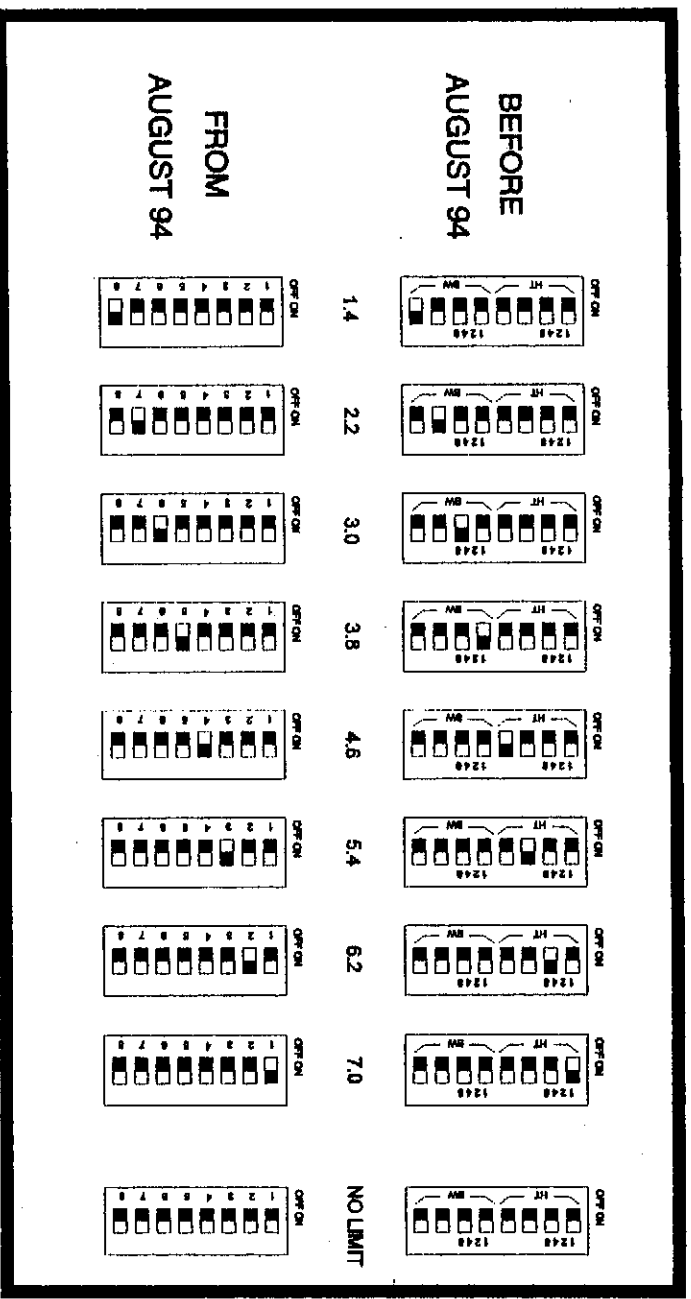
**Warning:** Do not increase the sealing time too much to prevent damaging the teflon.

### **How to use the memories of the MC-30E P.C. board:**

The MC-30E p.c. board has a memory to store up to 9 different programs. To display program number, press the "X10" key. The program number will appear in the center of the display. To select the program number, press the "X1" key, then press the "X10" key to return to operating mode.

### **Sealing time security:**

The MC-30E p.c. board also has a time limit on the sealing. This is an additional security which does not go thru the micro-processor and has a separate circuit. This is in case the computer malfunctions or the operator sets a sealing time too high. When the sealing time reaches the limit value, the machine will turn off automatically.



**TIME LIMITS:**  
Time limit factory settings:

250	3.0
350, 350D	3.8
420A	4.6
450T	4.6
450A	4.6
550A	4.6

**NOTE:** Pressing the "V" key during the vacuum cycle will stop the vacuum cycle and go to the next step (gas or sealing). This is especially useful to package liquids.

**WARNING: ALL ELECTRICAL WORK DESCRIBED IN THIS BROCHURE SHOULD BE DONE BY A QUALIFIED AND AUTHORIZED TECHNICIAN.**

**3.4 Daily cleaning:**

For hygienic cleanliness, it is imperative to clean chamber and spacers daily. Also clean the lid rubber to assure tight seat of the lid.

#### 4. TROUBLE SHOOTING:

##### 4.1 Failure during a packaging cycle:

The lid is closed and cycle fails to start or stop immediately after having started:  
Micro switch is actuated too late, re-set the micro switch.  
Fault in supply of electricity to the timing control (power on light does not go on):  
Check input voltage at transformer (faulty contact in wires);  
Check secondary voltage of transformer (approx. 24 Volt AC);  
Check fuse;  
If none of these apply, change the PC board.

##### 4.2 Insufficient vacuum:

###### 4.2.1 Leakage in the bag:

Leakage in lateral or bottom seal, complain to supplier of bags or film.

###### 4.2.2 No leakage in the bag:

Bag is too large, therefore the surplus of air remains visible (there is surplus of air in 0.4% of the bag volume in each bag). Use bags of suitable size.

Evacuation time is too short:

Pressure bar is jammed and closes opening of bag during evacuation.

Most frequently, insufficient vacuum in bags is due to leakage in bag and not due to any fault of the machine.

Pin-hole leak for which there is no obvious explanation is due to faulty bag material.

Pin-hole leak caused by sharp edge of the product (bone, etc.). Use bone-guard or thicker film.

Tear in bag by careless handling (sharp edge on filling table, damage made by retailer or customer).

##### 4.2.3 Insufficient vacuum in chamber:

If troubles described under 4.2.1 and 4.2.2 do not apply, there is something wrong with the evacuation. To find the leakage quickly, check for leaks with a precision vacuumeter, going back step by step from the chamber to the pump.

At the chamber (measuring point at base of valve) at maximum time of evacuation. If more than 6 torr, proceed directly to the pump, if more than 3 torr, have pump service by pump supplier. If pressure at pump is good, reconnect hoses to pump and measure again.

Verify at vacuum hose connections and valve connections.

#### 4.2.3 Insufficient vacuum in chamber (cont.):

When proceeding this way, starting from pump, loss of pressure per step must not exceed 0.5 to 1 torr.

Warning: Verify connections of measuring equipment before verifying machine.

Most frequent points of leakage: lid gasket, damaged vacuum hose or loose hose clamps.

#### 4.3 Faulty seal:

##### 4.3.1 Insufficient seal:

Damaged teflon or silicone rubber.

Sealing pressure too low, bellows leaking or pressure bar jammed.

Leakers in seal: heating wire mechanically damaged (knicked) or silicone rubber uneven.

##### 4.3.2 No seal:

Sealing wire burnt.

Faulty contact in sealing circuit.

Sealing transformer burnt through.

Contactoer does not work.

##### 4.3.3 Permanent sealing current:

Contactoer is jammed check sealing transformer for damage through overload.

##### 4.3.4 Seal does not stick:

Insufficient layer of polyethylene (inferior quality of bags).

Seal area extremely contaminated by fat or meat juice. Use filling aid.

Sealing temperature is too low (when using very thick films).

Warning: Do not increase sealing time more than really necessary; higher temperature will reduce working life of teflon and silicone rubber.

#### 4.4 Fault in the valve:

Vacuum or air valve does not open.

Check whether there is voltage on the magnetic valves during their period of operation. If there is no voltage a wire is broken or the PC board is damaged.

Lid does not open at the end of the cycle; air enters, but there is still 20 - 40% vacuum in chamber. Vacuum valve does not close.

4.5 Control board failure

PROBLEM	POSSIBLE CAUSE
---------	----------------

- |               |  |
|---------------|--|
| 1. No display | 1.1 Programming error<br>Press on/off switch on membrane   |
|               | 1.2 No current comming to PC board<br>Check fuses check voltage between pins #6 and # 13 on "D" connector, the reading should be approx. 9 volts AC (if not it's due to trans-former or wiring defect) |
|               | 1.3 On/off key defective<br>Disconnect flat cable between PC board and switch and jump pins 1 and 2 or 7 and 8 using a screw driver  |
|               | 1.4 Defective PC board<br>Replace PC board   |

- |   |  |
|---|--|
| 2. Two digits continuously flashes on "V", "G" or "S" | 2.1 Programming error<br>Press corresponding "V", "G" or "S" key |
|   | 2.2 Defective membrane<br>Replace membrane                       |
|   | 2.3 Defective PC board<br>Replace PC board                       |

- |  |   |
|--|---|
| 3. All of the display continuously flashes | 3.1 Cover switch remains closed<br>Check cover switch or continuity between pins #8 and #15 PC board connector see (dwg #006-0029). |
|  | 3.2 Defective<br>Replace PC board   |

- |   |  |
|---|--|
| 4. Display is on but impossible to program valves | 4.1 Programming error<br>Press "V", "G" or "S" to be in programming mode. Only one at any a time |
|   | 4.2 Defective PC board<br>Replace PC board   |

4.5 cont.

5. Impossible to program one timer ("V", "G" or "S") (the display is on) (see step 4 first)

- 5.1 Defective membrane      Replace membrane
- 5.2 Defective PC board      Replace PC board

6. PC board doesn't keep data in memory

- 6.1 Battery not charged      Run the machine or leave it plugged in with switch off for a few hours to charge battery
- 6.2 Defective battery      Replace battery or complete PC board (the battery is mounted on the PC board)
- 6.3 Defective PC board      Replace PC board

7. Cycle doesn't start

- 7.1 Poorly adjusted cover      Adjust switch
- 7.2 Bad connection or      Verify defective limit switch
- 7.3 Defective PC board      Replace PC board
- 7.4 PC board is OK, outputs are defective (see dwg #006-0029)      Check pump fuses, pump contactors coil, valves, etc...

8. Machine "recycling" or cycle "re-start" continuously

- 8.1 Poorly adjusted cover      Adjust
- 8.2 Defective PC board      Replace PC board

5. Regular maintenance:

Routine controls to be made at regular intervals:

Check teflon for wear.

Check silicone rubber for burnt spots and smooth even position.

Check pressure bar for jamming.

Check lid sealing for damage and hardened spots.

Check switch-point of micro switch, adjust if necessary.

Check evacuation hose for damage (contraction of diameter, or abrasions).

Check vacuum connections for tightness.

Check oil in pump (oil level in view glass; add if necessary. Regular change of oil - necessity indicated by change of color).

Check vacuum in chamber with precision vacuumeter.

Check function of cycle with various settings of timers.

INSTALLATION NOTICE FOR MODELS:

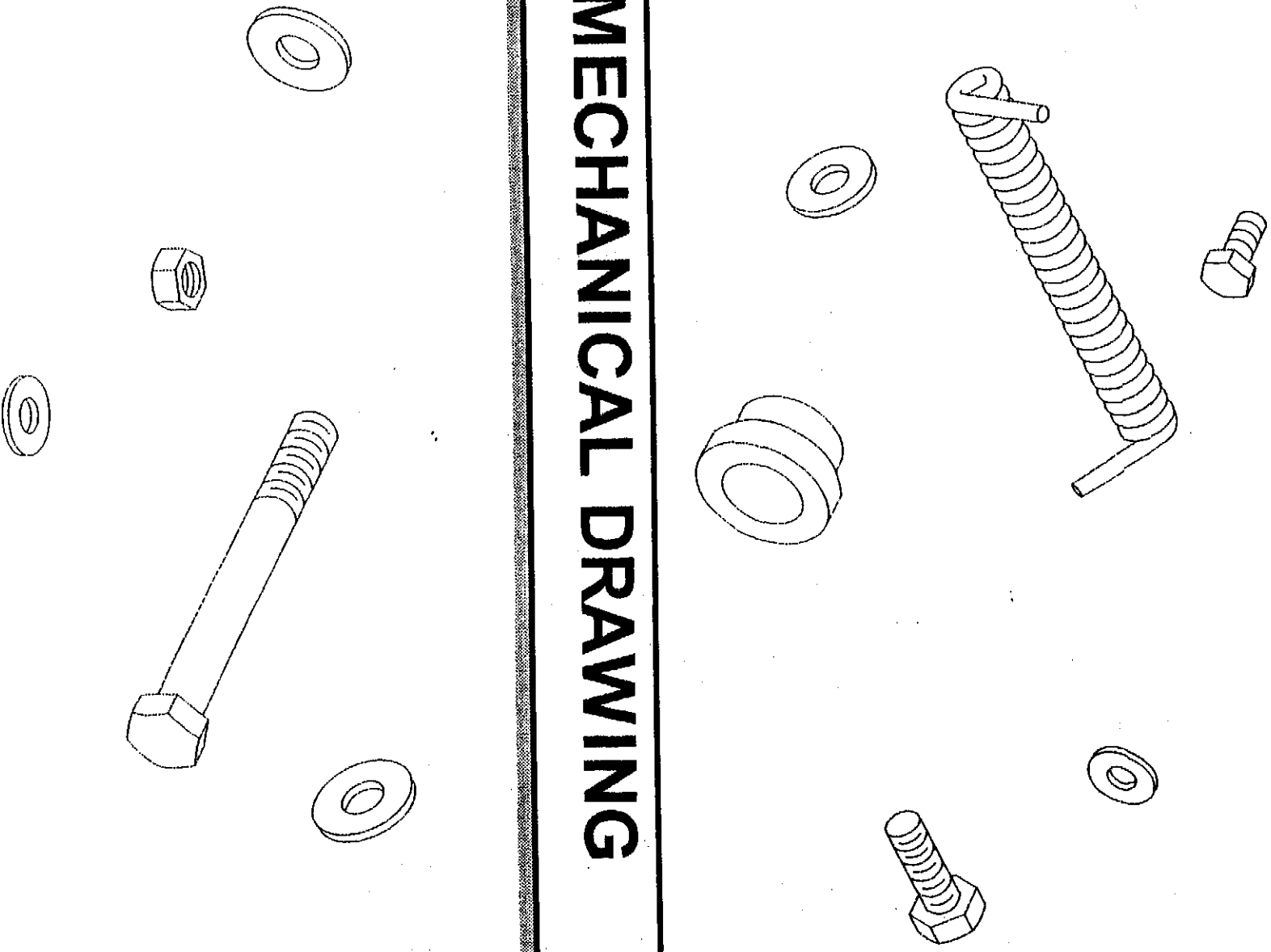
420A,450T,450A,550A,600A,620A,650A AND 700A

IN ORDER TO RESPECT NSF REGULATIONS:

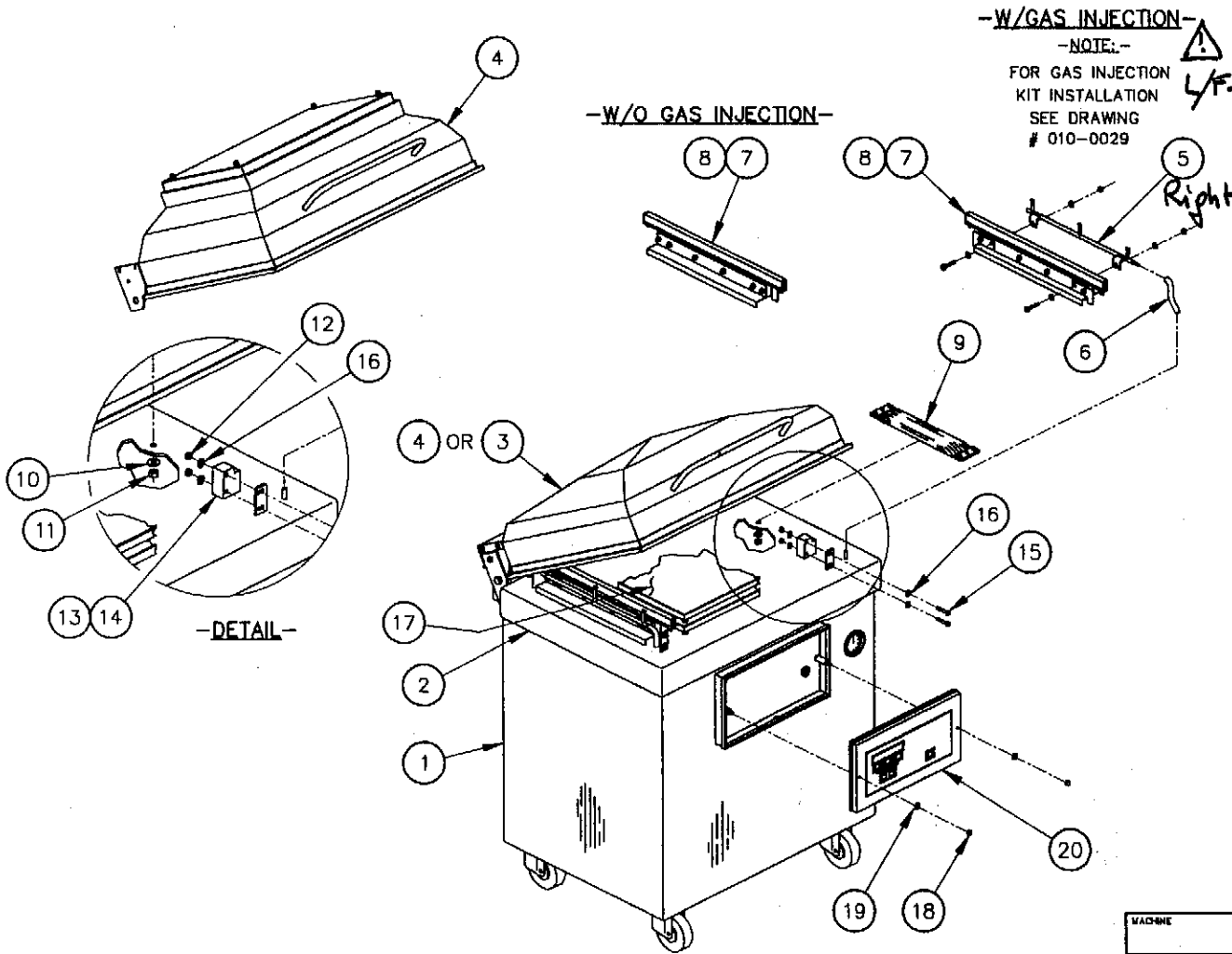
NOTE: A PLASTIC CAP IS INSTALLED ON THE TABLE TOP VACUUM INLET USED FOR LEANING PURPOSES ONLY AND IS TO BE REMOVED PRIOR TO OPERATING THE MACHINE.



# MECHANICAL DRAWING



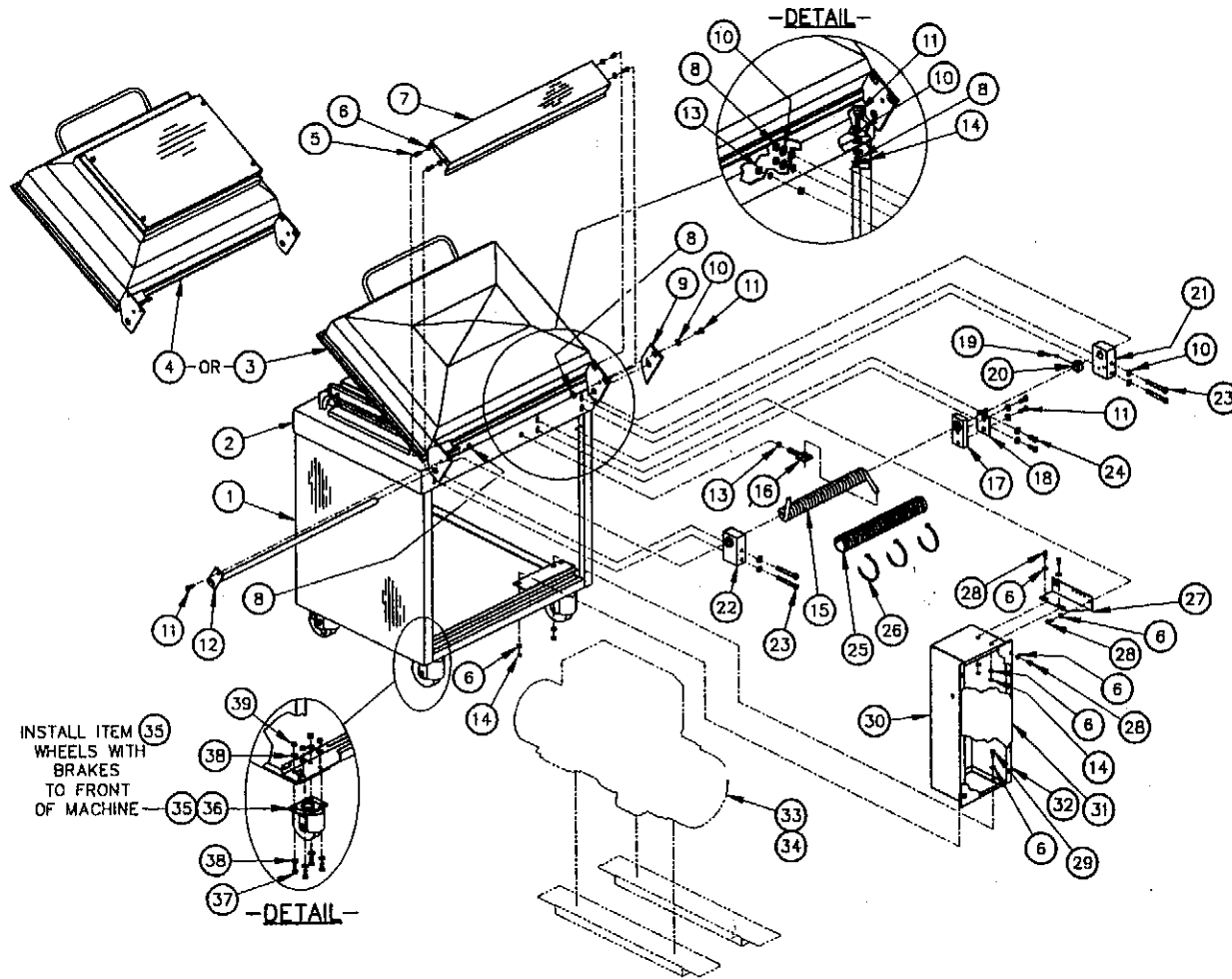
ITEM	PART #	DESCRIPTION	QT.
1	005-0447	STRUCTURE ASSEMBLY	1
2	005-0531	TABLE ASSEMBLY	1
3	005-0540	COVER ASSEMBLY	1
4	005-0530	9 1/2" PLEXI COVER ASS'Y (OPT.)	1
5	005A0533	GAS INJECTION BAR ASS'Y (OPT.)	2
6	008-0464	GAS INJECTION CONNECTION TUBE (OPT.)	2
7	005-0564	SEAL BAR ASSEMBLY W/ SUPPORT	2
8	005-0565	SEAL BAR ASSY W/ SUPPORT (BAG CUT OPT.)	2
9	005-0532	BELLOWS ASSEMBLY	2
10	051-0780	FLAT WASHER 3/8" S/S	2
11	051-0620	HEX. NUT 3/8"-16 NC. S/S	2
12	051-0581	HEX. NUT 1/4"-20 NC. NYLON LOCK S/S	8
13	002-0326	LEFT/SEAL BAR BLOCK	2
14	002-0327	RIGHT/SEAL BAR GUIDE BLOCK	2
15	051-0250	HEX. BOLT 1/4"-20 NC. X 1 1/2" S/S	8
16	051-0740	FLAT WASHER 1/4" S/S	16
17	005-0534	FILLER PLATE ASSEMBLY	2
18	051-0591	ACORN NUT 1/4"-20 NC. S/S	2
19	052-2045	FLAT WASHER 1/4" COPPER	2
20	005-0319	P.C. BOARD SUPPORT ASSEMBLY	1



D	REMOVED VACUUM GAUGE ASS'Y SEE 005-0447	98-11-10	S.L.
C	REDRAWN / MODIF. No A-0226	97-10-20	A.P.
LET.	MODIFICATION	DATE	INT.

MACHINE		450A		METRIC TOLERANCE	INCH TOLERANCE	SCALE	QTY.
PART		MACHINE ASSEMBLY FRONT VIEW		± .005	± .015"	1	1
ITEM:		CNC:		± .01	± .005"		
MAT:		BY A. PROVENCER		± .0005	± .0005"	NO. 005-0410	
		DATE 97-11-10		ANGLE ± 1'	N.T.S.	DATE	

1005-0410



ITEM	PART #	DESCRIPTION	QT.
1	005-0410	MACHINE ASSEMBLY FRONT VIEW	1
2	005-0531	TABLE ASSEMBLY	1
3	005-0540	COVER ASSEMBLY	1
4	005-0530	9 1/2" PLEXI COVER ASSEMBLY (OPT.)	1
5	051-0185	SCREW 1/4"-20 NC. X 1/2" PAN PHILL S/S	4
6	051-0740	FLAT WASHER 1/4" S/S	17
7	004-0172	SPRING COVER PRE-ASSEMBLY	1
8	051-0620	HEX. NUT 3/8"-18 NC. S/S	12
9	001-1335	CHAMBER STOPPER	1
10	051-0783	FLAT WASHER 3/8" (THICK) S/S	25
11	051-0360	HEX. BOLT 3/8"-18 NC. X 1" S/S	8
12	004-0129	COVER AXIS PRE-ASSEMBLY	1
13	051-0630	HEX. NUT 1/2"-13 NC. S/S	2
14	051-0581	HEX. NUT 1/4"-20 NC. NYLON LOCK	5
15	008-0460	COVER SPRING	1
16	005-0346	SPRING TENSION SUPPORT PRE-ASSY	1
17	004-0276	CENTRAL COVER AXIS SUPPORT	1
18	001-1540	CENTRAL COVER AXIS SUPPORT FIXATION	1
19	051-0178	SET SCREW 1/4"-20 NC. X 5/16" S/S	1
20	005-0348	MICRO-SWITCH COLLAR ASSY	1
21	004-0274	LEFT COVER AXIS SUPPORT	1
22	004-0275	RIGHT COVER AXIS SUPPORT	1
23	051-0424	HEX. BOLT 3/8"-18 NC. 3 1/2" S/S	4
24	051-0360	HEX. BOLT 3/8"-16 NC. 1 1/4" S/S	2
25	038-0350	SLIT COORUG LOOM 2" ID X 370 MM	1
26	057-0330	CABLE TIES 14" LONG BLACK	3
27	001-1384	UPPER E-BOX SUPPORT (RIGHT)	1
28	051-0180	HEX. BOLT 1/4"-20 NC. X 1/2" S/S	7
29	051-0190	HEX. BOLT 1/4"-20 NC. X 3/4" S/S	2
30	005-0347	ELECTRICAL BOX PRE-ASSEMBLY	1
31	004-0273	ELECTRICAL BOX COVER PRE-ASSEMBLY	1
32	056-0020	SPRING NUT 1/4"-20 NC. STEEL	4
33	004-0287	"BUSH" PUMPS INSTALLATION	1
34	004-0288	"LEYBOLD" PUMPS INSTALLATION	1
35	130-4PHB	4" PL. CASTER SWIVEL W/ BRAKE	2
36	130-4PHO	4" PL. CASTER SWIVEL W/O BRAKE	2
37	052-0520	BOLT 5/16"-18 NC. X 3/4" ZINC	18
38	051-0760	FLAT WASHER 5/16"-18 NC. ZINC	32
39	052-3110	HEX. NUT 5/16"-18 NC. ZINC	16

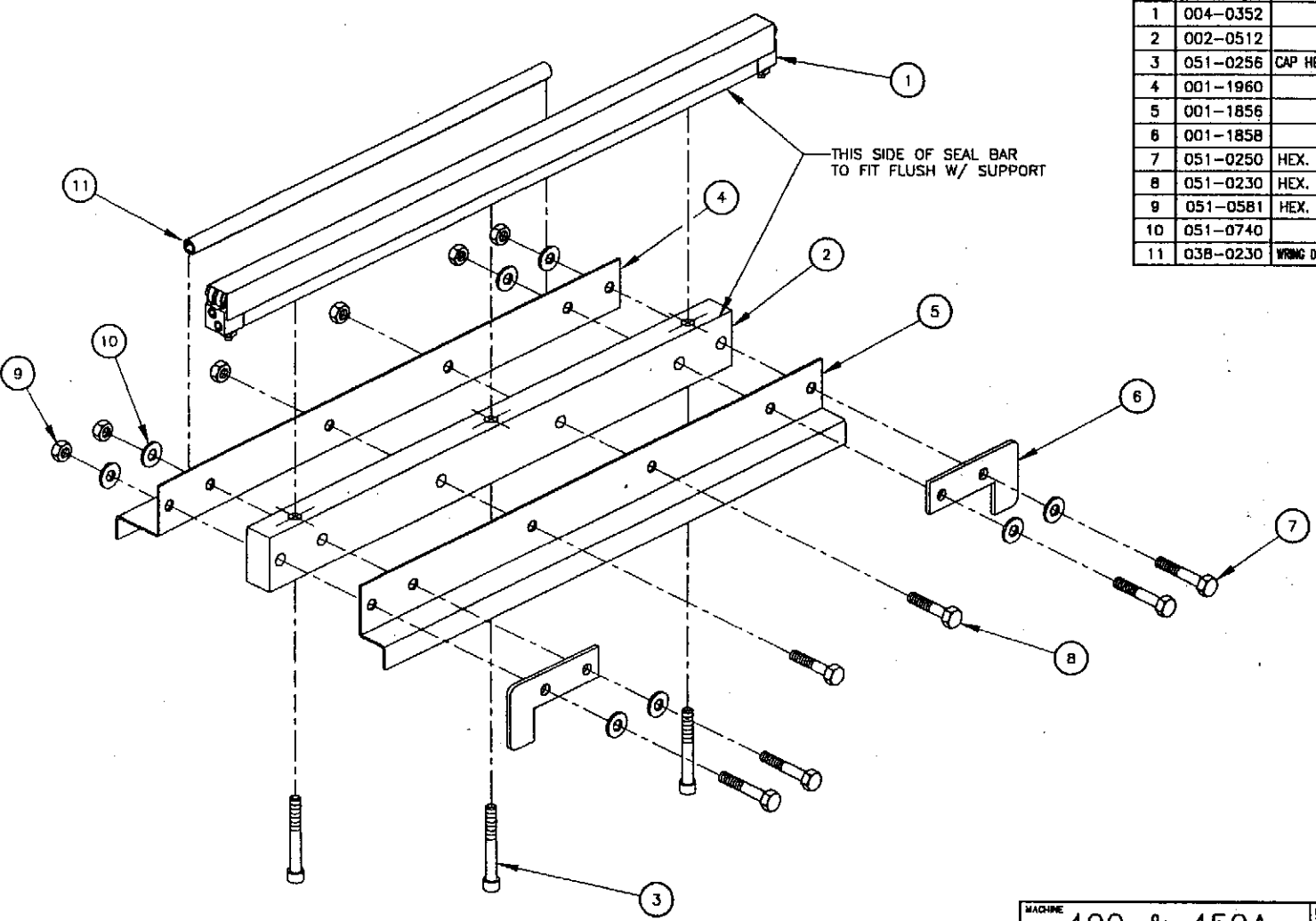
INSTALL ITEM  
WHEELS WITH  
BRAKES  
TO FRONT  
OF MACHINE

NOTE: WHEELS NOT INSTALLED  
(SHIPPED IN SEPARATE BOX)  
ITEMS (35) THRU (39)

LET.	MODIFICATION	DATE	INT.
E	ITEM #5 051-0185 WAS 051-0180/ QTY WAS 11 ITEM #28 051-0180 WAS ITEM #5 051-0185/ FOR N.S.F.	98-04-02	A.P.
D	ADDED HOLES ON ITEM # 26 001-1364	97-10-21	A.P.
C	ITEM #13 051-0581 WAS 051-0580	97-08-22	A.P.
B	REDRAWN	96-12-02	M.L.

MACHINE		450A		METRIC TOLERANCE	INCH TOLERANCE
PART		MACHINE ASSEMBLY REAR VIEW		0 ± .5	.0 ± .015"
ITEM:		CNC:		.0 ± .06	.01 ± .005"
MAT:		DATE 98-12-02		.000 ± .0008	.000 ± .0005"
APP:		DATE		ANGLE ± 1°	N.T.S.
				SCALE	QT. 1
				005-0411	

005-0411



ITEM	PART #	DESCRIPTION	QT.
1	004-0352	SEAL BAR PRE-ASSEMBLY	2
2	002-0512	SEAL BAR SUPPORT (TABLE)	2
3	051-0256	CAP HEX. SKT. BOLT 1/4"-20 NC X 1 3/4" S/S	6
4	001-1960	EXTERIOR BELLOWS COVER	2
5	001-1856	INTERIOR BELLOWS COVER	2
6	001-1858	SEAL BAR GUIDE	4
7	051-0250	HEX. BOLT 1/4"-20 NC. X 1 1/2" S/S	8
8	051-0230	HEX. BOLT 1/4"-20 NC. X 1 1/4" S/S	4
9	051-0581	HEX. NUT 1/4"-20 NC. NYLON LOCK S/S	12
10	051-0740	FLAT WASHER 1/4" S/S	16
11	03B-0230	WRING DUCT W/ ADHESIVE BACKING (0.35" X 0.5" X 300) PVC	2

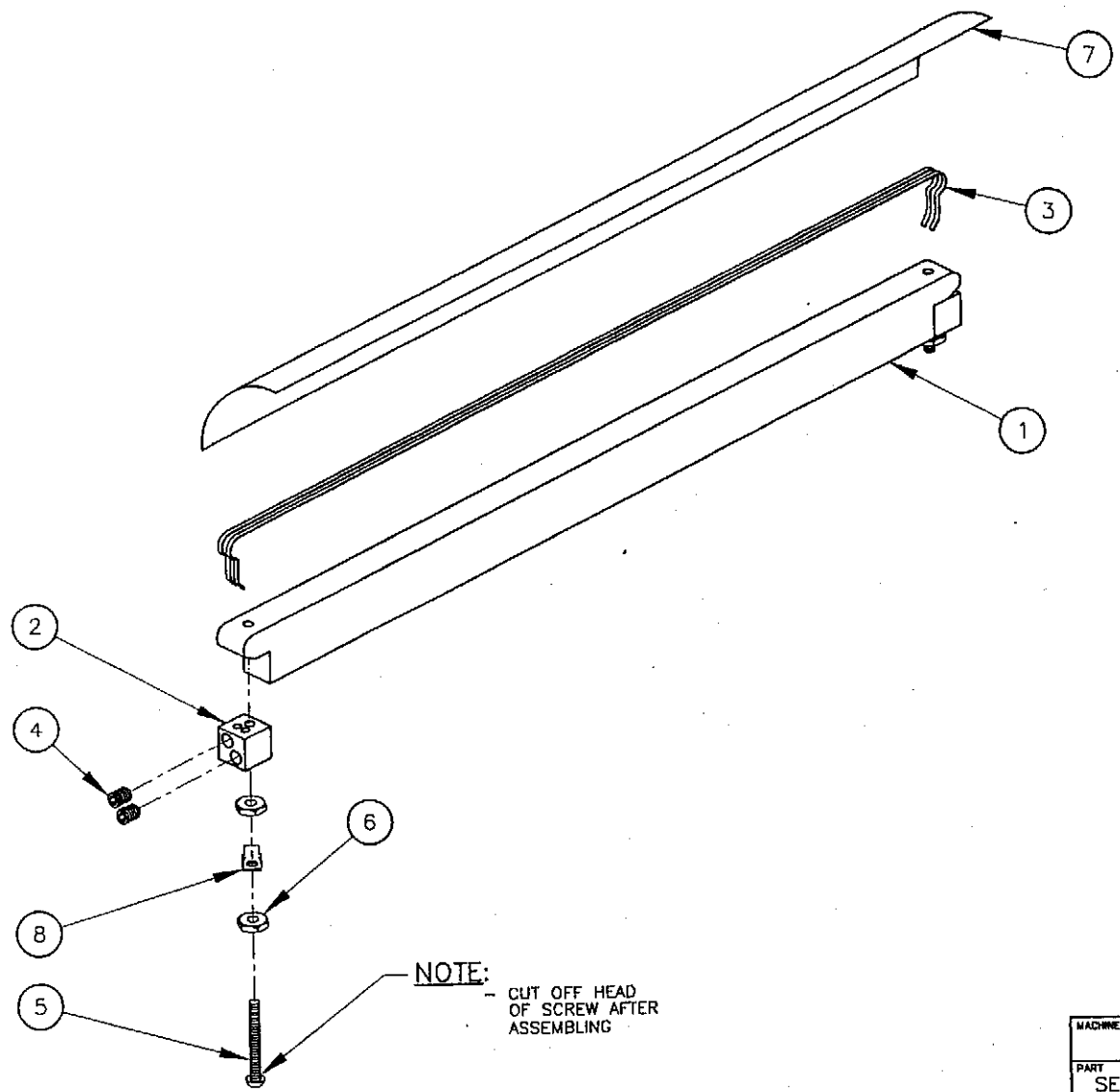
19

1005-0564

B	ADDED 400	99-05-06	S.L.
A	REDRAWN/ WAS 004-0353/ MODIF. NO. A-0226	97-10-20	A.P.
LET.	MODIFICATION	DATE	INT.

MACHINE	400 & 450A		METRIC TOLERANCE	INCH TOLERANCE
PART	SEAL BAR ASSEMBLY W/ SUPPORT		0 ± .0	.0 ± .015"
ITEM:	CNC:	SCALE	.00 ± .003"	.00 ± .003"
MAT:	BY A. PROVENCER	DATE 97-10-20	.000 ± .0008	.000 ± .0008"
	APP.	DATE	ANGLE ± 1'	N.T.S.
				DT. 2
				NO. 1005-0564

17



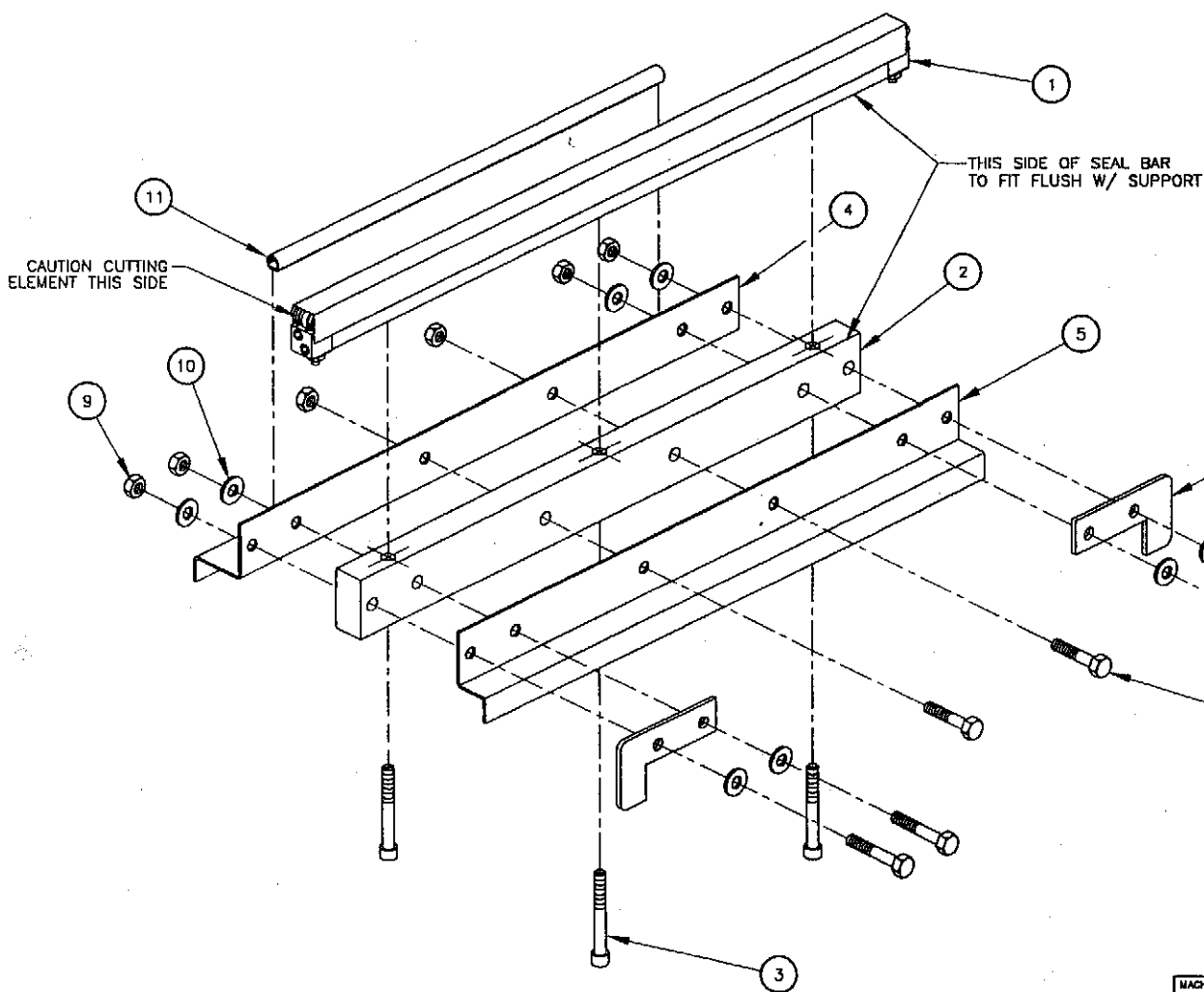
ITEM	PART #	DESCRIPTION	QT.
1	002-0481	SEAL BAR (TABLE)	1
2	002-0031	CONNECTOR	2
3	039-0200	SEALING ELEM. STD TWIN (2x626mm EA.)	0.014
4	052-0395	SCREW 1/4"-20 NC. X 5/16" SET HEX SKT OVAL PT	4
5	052-0250	SCREW #8-32 X 1 1/2" RND SLOT BRASS	2
6	051-0550	NUT #8-32 S/S	4
7	176-0200	TEFLON TAPE 5S ADHESIVE X 2" X (496mm EA.)	0.063
8	027-0400	CONNECTOR ADAPTOR 1/4" X #10 STUD	2

NOTE: - CUT OFF HEAD OF SCREW AFTER ASSEMBLING

LET.	MODIFICATION	DATE	INT.
C	ADDED 400	99-05-08	S.L.
B	REDRAWN	98-02-10	A.P.

MACHINE	400 & 450A		METRIC TOLERANCE	INCH TOLERANCE
PART	SEAL BAR PRE-ASSEMBLY		D. ± .005	.0 ± .015"
ITEM:	CNC:	SCALE	.0 ± .005	.00 ± .000"
MAT:	DATE	NO.	.000 ± .0000	N.T.S.
	DATE	004-0352	ANGLE ± 1°	
APP.	BY: A. PROVENCHER	DATE		QT. 2
	DATE	98-02-10		

1004-0352



ITEM	PART #	DESCRIPTION	QT.
1	004-0355	BAG CUT SEAL BAR PRE-ASSEMBLY	2
2	002-0512	SEAL BAR SUPPORT (TABLE)	2
3	051-0256	CAP HEX. SKT. BOLT 1/4"-20 NC X 1 3/4" S/S	6
4	001-1960	EXTERIOR BELLOWS COVER	2
5	001-1856	INTERIOR BELLOWS COVER	2
6	001-1858	SEAL BAR GUIDE	4
7	051-0250	HEX. BOLT 1/4"-20 NC. X 1 1/2" S/S	8
8	051-0230	HEX. BOLT 1/4"-20 NC. X 1 1/4" S/S	4
9	051-0581	HEX. NUT 1/4"-20 NC. NYLON LOCK S/S	12
10	051-0740	FLAT WASHER 1/4" S/S	16
11	038-0230	WING DUCT W/ ADHESIVE BACKING (0.35" X 0.5" X 300) PVC	2

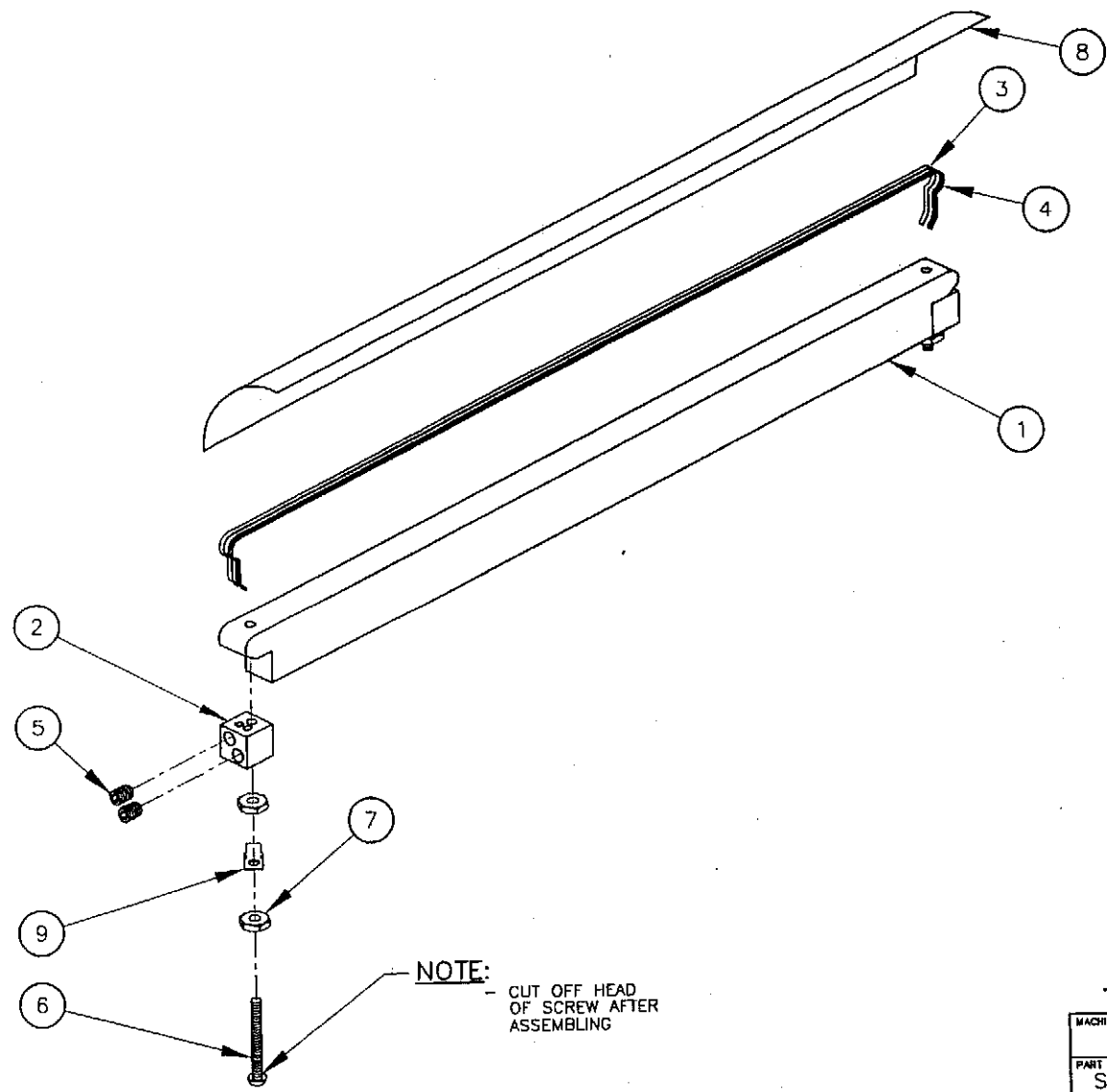
-BAG CUT OPTION-

MACHINE <b>400 &amp; 450A</b>		METRIC TOLERANCE S. & S .00 ± .005 .00 ± .008 .000 ± .0008 ANGLE ± 1°	S&M TOLERANCE D ± .015 D ± .0005 D ± .0005 N.T.S.	SCALE	QT. <b>2</b>
PART <b>SEAL BAR ASSEMBLY W/ SUPPORT</b>					
ITEM:	ENC:	DATE	DATE	NO. <b>005-0565</b>	
MAR:	BY <b>A. PROVENCER</b>	DATE	DATE		
		APP.	DATE		

A	ADDED 400	99-05-08	S.L.
LET.	MODIFICATION	DATE	INT.

1005-0565

10



ITEM	PART #	DESCRIPTION	QT.
1	002-0481	SEAL BAR	1
2	002-0031	CONNECTOR	2
3	039-0230	REFLEX BAND 2.5MM (626mm EA.)	0.063
4	039-0270	"T" PROFILE CUT. ELEM. (626mm EA.)	0.063
5	052-0395	SCREW 1/4"-20 NC. X 5/16" SET HEX SKT OVAL PT	4
6	052-0250	SCREW #8-32 X 1 1/2" RND SLOT BRASS	2
7	051-0550	NUT #8-32 S/S	4
8	176-0200	TEFLON TAPE 55 ADHESIVE X 2" X (496mm EA.)	0.063
9	027-0400	CONNECTOR ADAPTOR 1/4" X #10 STUD	2

**NOTE:**  
- CUT OFF HEAD  
OF SCREW AFTER  
ASSEMBLING

-BAG CUT OPTION-

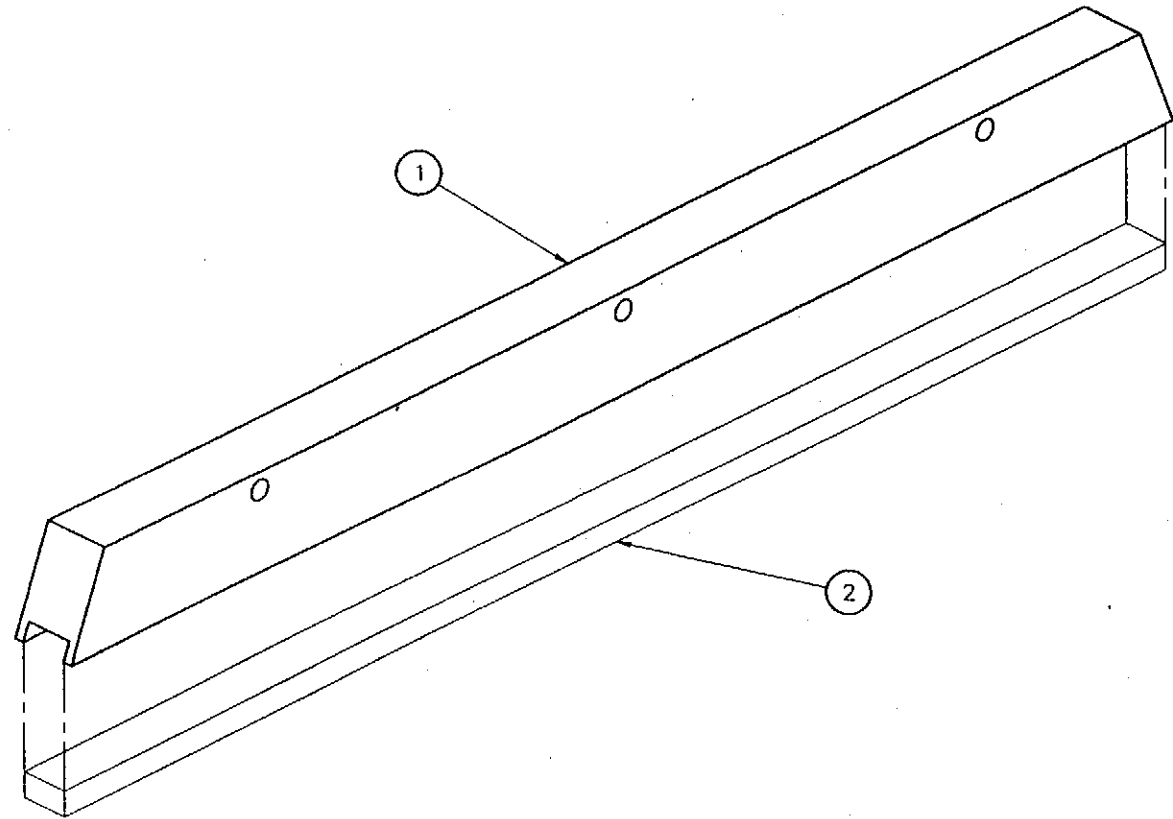
LET.	MODIFICATION	DATE	INT.
C	ADDED 400	99-05-06	S.L.
B	REDRAWN	98-02-10	A.P.

MACHINE	400 & 450A	METRIC TOLERANCE	INCH TOLERANCE	SCALE	M	QT.	2
PART	SEAL BAR PRE-ASSEMBLY	0. ± .3 0. ± .015 0. ± .05 0.00 ± .005 0.000 ± .0005 ANGLE ± 1°	0 ± .015 00 ± .005 000 ± .0005 N.T.S.				
ITEM:		CNC:					
MAT:		APP. BY A. PROVENCER	DATE 98-02-10				NO. 004-0355

1004-0355

20

ITEM	PART #	DESCRIPTION	QT.
1	002A0480	UPPER SEAL BAR SUPPORT	1
2	008-0450	UPPER SEAL BAR RUBBER	1

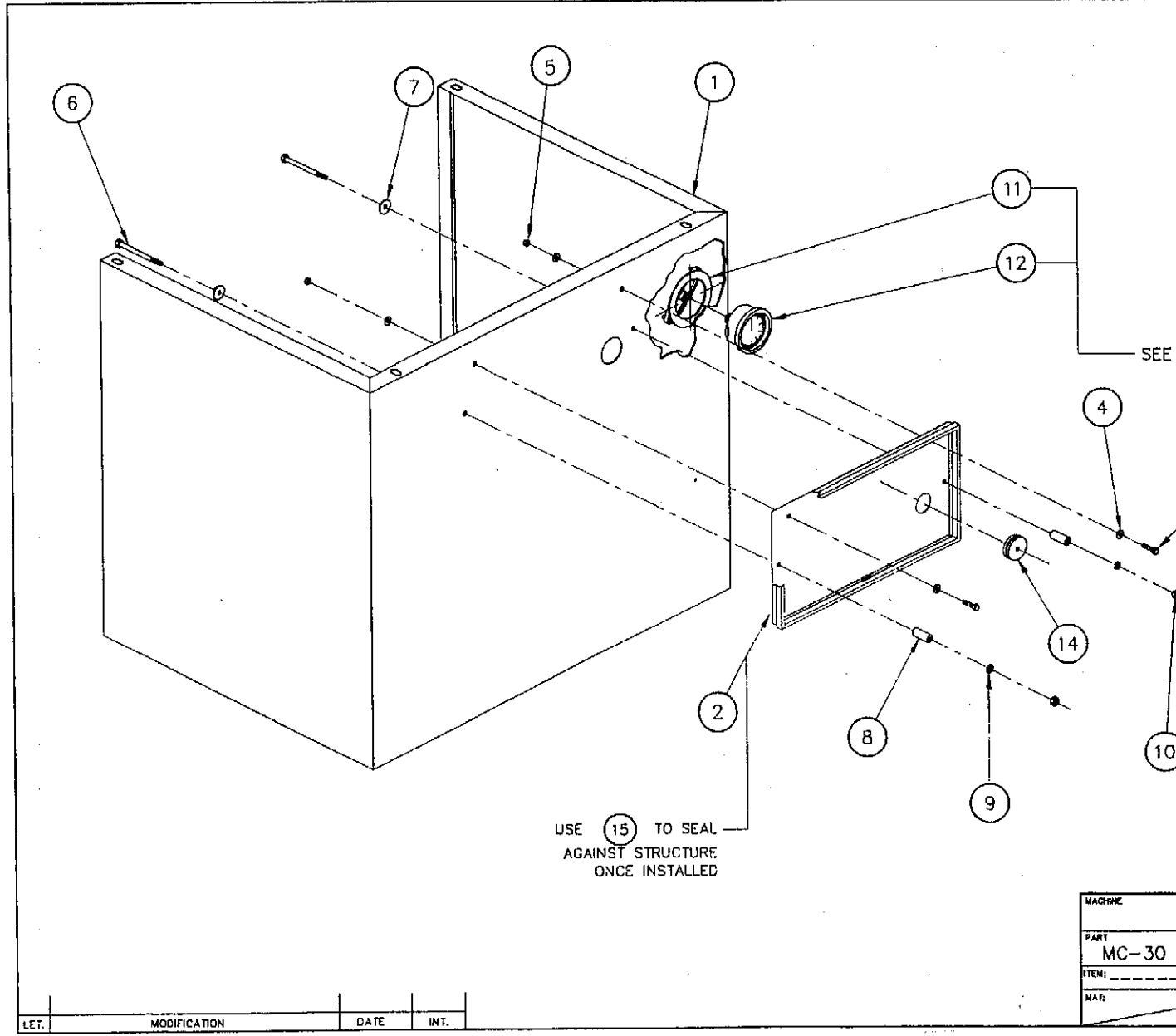


1004A0351

MACHINE <b>400 &amp; 450A</b>		METRIC TOLERANCE 0. ± .01 .01 ± .001 .00 ± .0005 ANGLE ± 1°	INCH TOLERANCE 07 ± .015 00 ± .005 000 ± .0005 N.T.S.	SCALE	QT. <b>2</b>
PART <b>UPPER SEAL BAR PRE-ASSY</b>					
ITEM:	ENG:	DATE <b>99-08-02</b>	NO. <b>004A0351</b>		
MAT:	APP. <b>S. LAROCHE</b>	DATE			

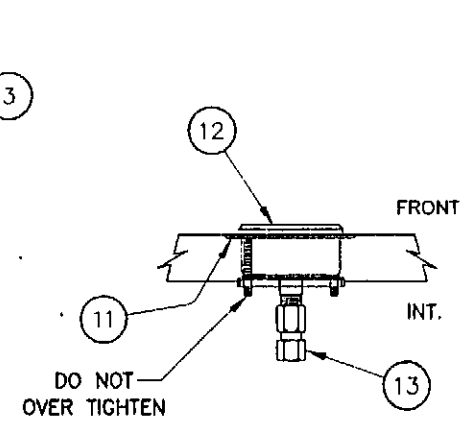
C	REDRAWN	99-08-02	S.L.
LET.	MODIFICATION	DATE	INT.





ITEM	PART #	DESCRIPTION	QT.
1	004-0204	STRUCTURE PRE-ASS'Y	1
2	005-0585	REAR MC-30 SUPPORT ASSY.	1
3	051-0180	BOLT 1/4"-20 x 1/2"	2
4	051-0740	FLAT WASHER 1/4"	4
5	051-0581	NUT 1/4"-20 NYLON LOCK	2
6	051-0270	BOLT 1/4"-20 x 2 1/4"	2
7	051-0757	FLAT WASHER 1/4" THICK	2
8	058-0100	NYLON SPACER 6.5mm x 15mm x 30mm	2
9	051-0750	LOCK WASHER 1/4"	2
10	051-0580	NUT 1/4"-20	2
11	001-1869	HOLDING WASHER (FOR VAC. GAUGE)	1
12	114-0260	VACUUM GAGE W/ SUPPORT	1
13	101-0038	STR. 1/4" FNPT x 3/8" T.P. COMP. BR.	1
14	036-0213	GROMMET 1/4" ID x 1 1/2" OD RUBBER	1
15	154-0012	5200 MARINE ADHESIVE SEAL	.06

SEE INSTALLATION DETAIL



-INSTALLATION DETAIL-

USE (15) TO SEAL AGAINST STRUCTURE ONCE INSTALLED

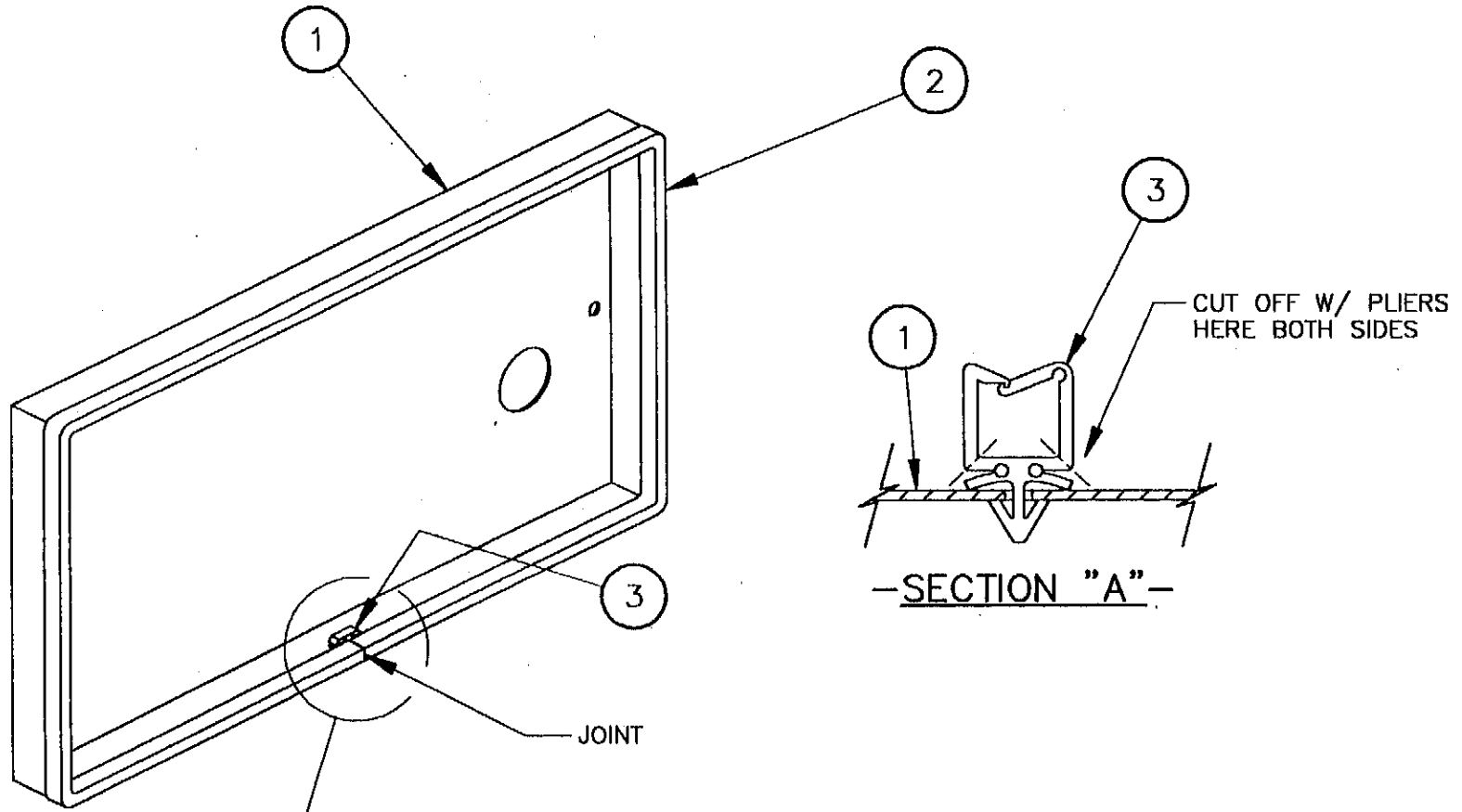
MACHINE	450A		METRIC TOLERANCE	INCH TOLERANCE
PART	MC-30 STRUCTURE ASS'Y		0 ± .3	.0 ± .015"
			.0 ± .005	.00 ± .0005"
			.000 ± .0000	.000 ± .0000"
			ANGLE ± 1°	N.T.S.
ITEM:	CNC:	SCALE	M-I	QT. 1
DATE	BY S. LAROUCHE	DATE 98-11-06	NO. 005-0447	

LET.	MODIFICATION	DATE	INT.
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1005-0447

005-0585

ITEM	PART #	DESCRIPTION	QT.
1	004-0115	REAR P.C. BOARD SUPPORT PRE-ASS'Y	1
2	179-0014	RUBBER 1/4" X 3/8" X 1/16" ("U" SHAPED)	1
3	057-0002	CABLE TIE HOLDER	1



SEE SECTION "A"

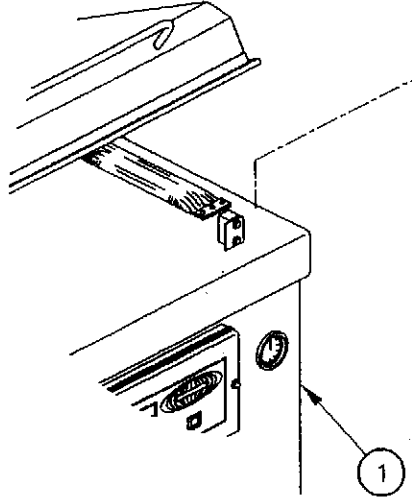
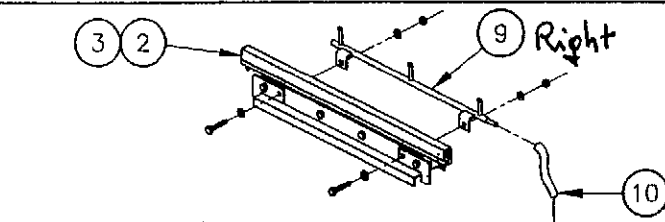
MACHINE	420A, 450T, 450A, 550A & 580A	METRIC TOLERANCE	INCH TOLERANCE
		0. ± .5 .0 ± .05 .00 ± .005 ANGLE ± 1'	.0 ± .015" .00 ± .005" .000 ± .0005" N.T.S.
PART	REAR P.C. BOARD SUPPORT ASS'Y		

B	A&R 620A SEE 004-0584	98-05-15	L.M.
A	A&R 600A SEE 004-0584	98-05-15	L.M.
LET.	MODIFICATION	DATE	INT.

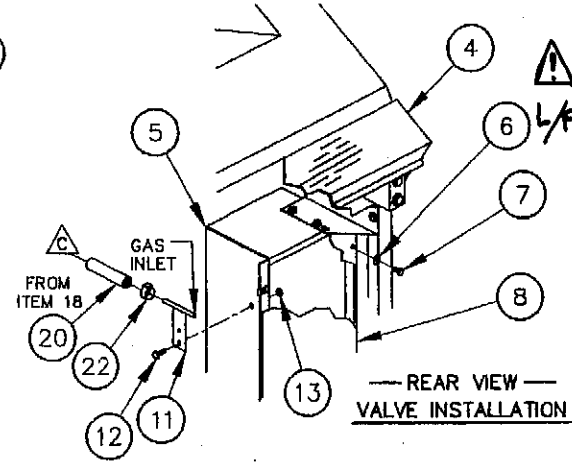
ITEM: _____	CNC: _____	SCALE _____	QT. 1
MAT: _____	DWG BY A. PROVENCHER	DATE 98-05-05	NO. 005-0585
	APP. _____	DATE _____	

22

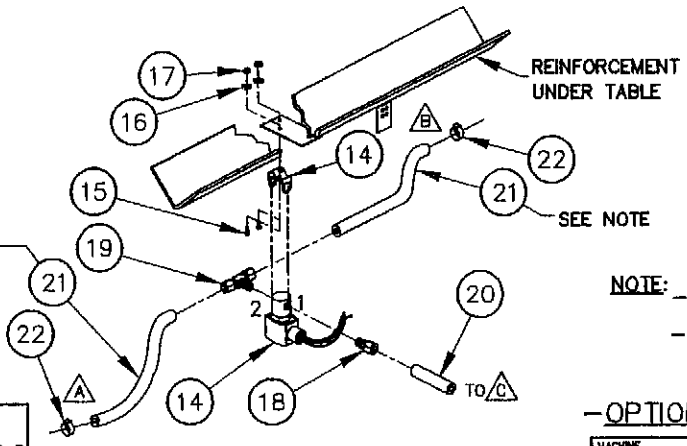
23



— FRONT VIEW —  
GAS INJECTION BAR INSTALLATION



— REAR VIEW —  
VALVE INSTALLATION



— UNDER TABLE VIEW —  
VALVE INSTALLATION

NOTE: THESE ITEMS  
MUST BE THE  
SAME LENGTH

TO GAS INJECTION TUBES  
UNDER TABLE, REMOVE THE TWO  
EXISTING CAPS & CONNECT HOSES A & B

NOTE: —PARTS ① THRU ⑧ ARE EXISTING PARTS  
—PARTS ⑨ THRU ⑳ ARE PARTS SUPPLIED W/ KIT

— OPTION GAS INJECTION —

ITEM	PART #	DESCRIPTION	QT.
1	005-0410	MACHINE ASSEMBLY FRONT VIEW	1
2	005-0564	SEAL BAR ASS'Y W/ SUPPORT	2
3	005-0565	SEAL BAR ASS'Y W/ SUPPORT (BAG CUT OPT.)	2
4	005-0411	MACHINE ASSEMBLY REAR VIEW	1
5	005-0347	ELECTRICAL BOX ASSEMBLY	1
6	051-0740	FLAT WASHER 1/4" S.S.	4
7	051-0180	HEX.BOLT 1/4"-20 x 1/2" S.S.	4
8	004-0273	E-BOX COVER PRE-ASSY.	1
9	005A0533	GAS INJECTION BAR ASSY.(OPT.)	2
10	008-0464	GAS INJECTION CONNECTION TUBE	2
11	005-0323	GAS INLET ASSEMBLY	1
12	051-0180	HEX. BOLT 1/4"-20 x 3/4" S.S.	1
13	051-0580	HEX. NUT 1/4"-20 S.S.	1
14	106-0010	SOLENOID VALVE 2 WAY 1/4"NPT W/ SUPP.	1
15	051-0100	RND.H.SCREW #8-32 x 3/8" S.S.	2
16	051-0720	FLAT WASHER #8 S.S.	2
17	051-0550	HEX.NUT #8-32 S.S.	2
18	101-0036	STRAIGHT 1/4"MNPT x 3/8" T.P.COMP.	1
19	101-0065	T 3/8" T.P.COMP.x 1/4" MNPT x 3/8" T.P.COMP.	1
20	104-0060	TUBE 3/8"ODx1/4"ID(POLY.) x mm LG.	1
21	104-0060	TUBE 3/8"ODx1/4"ID(POLY.) x mm LG.	2
22	105-0200	COLLARS 3/8" #	3

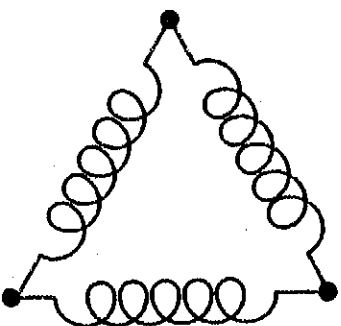
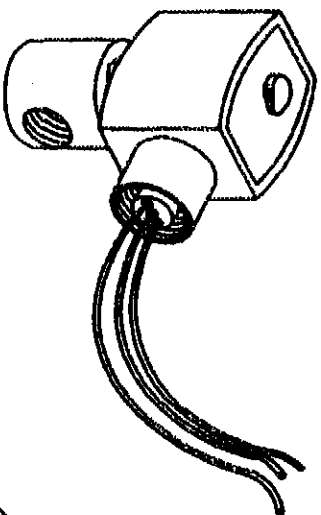
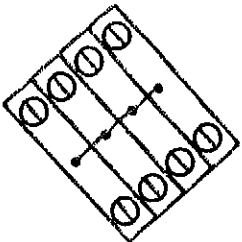
MACHINE	450A	METRIC TOLERANCE 0 ± .5 .5 ± .05 .05 ± .005 .005 ± .0005 ANGLE ± 1°	INCH TOLERANCE 0 ± .015 .015 ± .005 .005 ± .0005 N.T.S.	SIPROMAC
PART	GAS INJECTION KIT INSTALLATION			ST-GERMAIN DE GRANTHAM QUEBEC CANADA
ITEM:	CHG:	SCALE	QT.	1
MAT:	APP. BY A. PROVENCER	DATE	97-10-21	NO. 010-0029

B	REDRAWN/ MODIF. NO. A-0226	97-10-21	A.P.
LET.	MODIFICATION	DATE	INT.

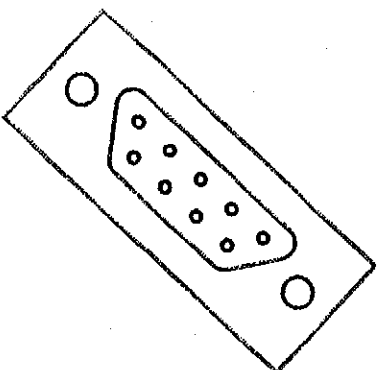
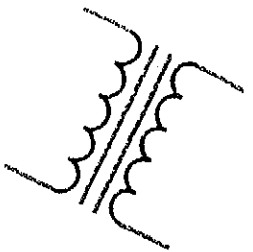
1010-0029

NOTES

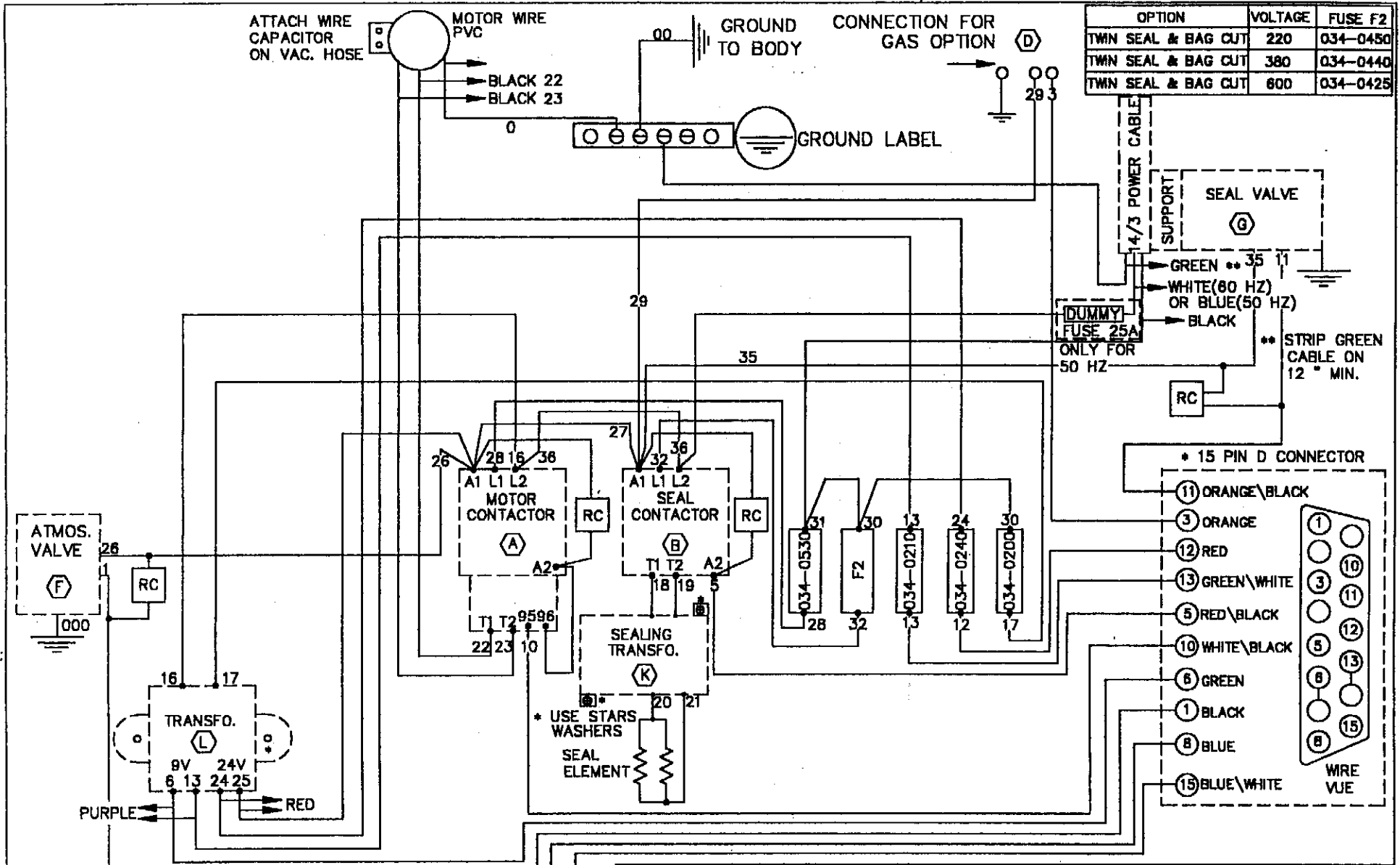
A series of 18 vertical lines forming a ruled area for notes.



# ELECTRICAL DRAWING



1006-0111



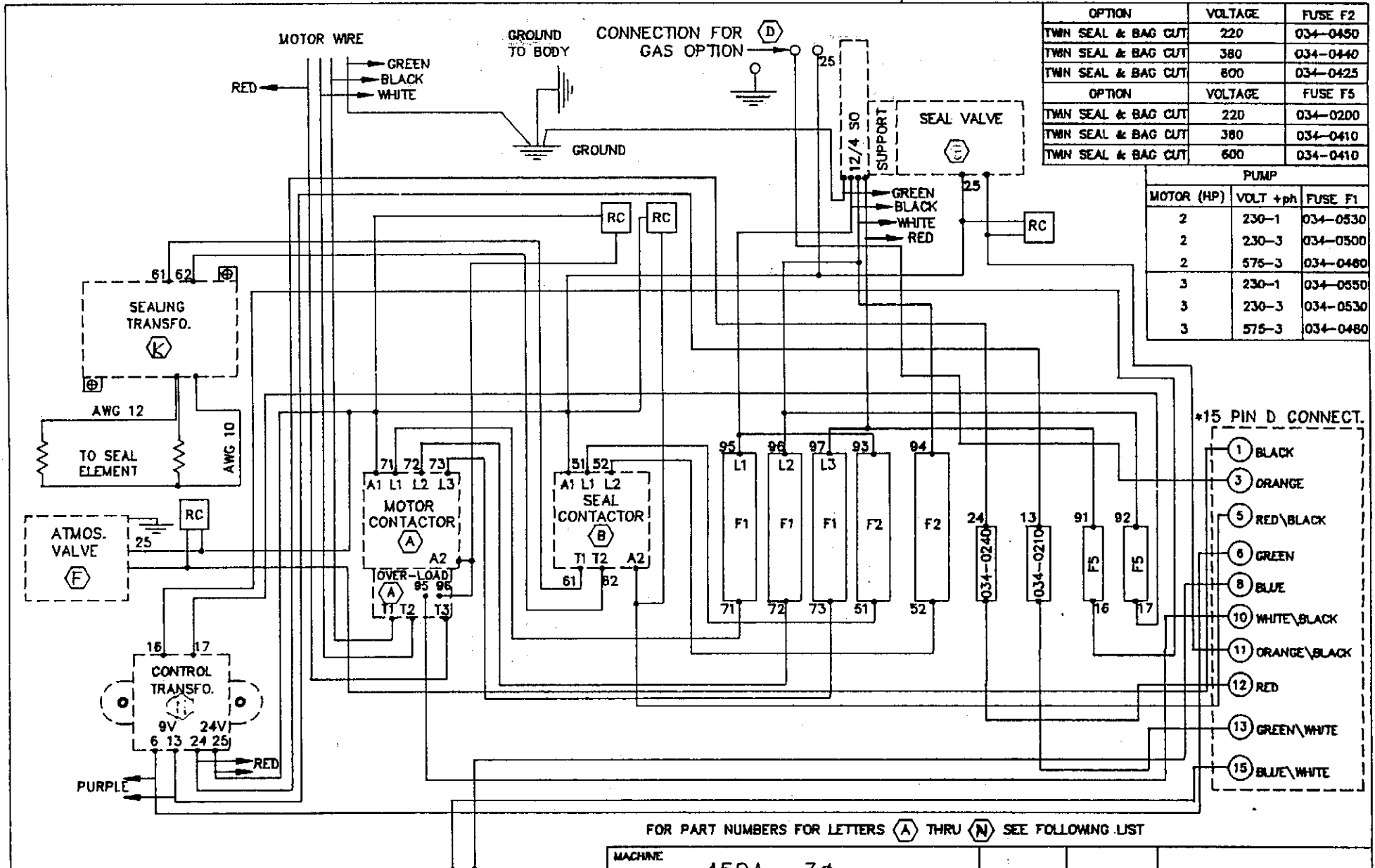
\*USE STARS WASHERS

TO MICRO SWTH (H)

MACHINE		450A 1Ø	
PIECE		SCHEMATIC DIAGRAM	
QT. _____	ECH. SCALE _____	NE PAS MESURER /N.T.S.	
MAT: _____	DESS. D. LETOURNEAU	DATE 98-04-29	NO. 006-0111
	APP. _____	DATE _____	

FOR PART NUMBERS FOR LETTERS (A) THRU (L) SEE FOLLOWING LIST.

1006-0079



OPTION	VOLTAGE	FUSE F2
TWIN SEAL & BAG CUT	220	034-0450
TWIN SEAL & BAG CUT	380	034-0440
TWIN SEAL & BAG CUT	600	034-0425
OPTION	VOLTAGE	FUSE F5
TWIN SEAL & BAG CUT	220	034-0200
TWIN SEAL & BAG CUT	380	034-0410
TWIN SEAL & BAG CUT	600	034-0410

PUMP		
MOTOR (HP)	VOLT +ph	FUSE F1
2	230-1	034-0530
2	230-3	034-0500
2	575-3	034-0480
3	230-1	034-0550
3	230-3	034-0530
3	575-3	034-0480

- +15 PIN D CONNECT.
- ① BLACK
  - ③ ORANGE
  - ⑤ RED\BLACK
  - ⑥ GREEN
  - ⑧ BLUE
  - ⑩ WHITE\BLACK
  - ⑪ ORANGE\BLACK
  - ⑫ RED
  - ⑬ GREEN\WHITE
  - ⑮ BLUE\WHITE

FOR PART NUMBERS FOR LETTERS (A) THRU (N) SEE FOLLOWING LIST

MACHINE		450A , 3φ	
PIECE		SCHEMATIC DIAGRAM	
QT.	ECH. SCALE	NE PAS MESURER /N.T.S.	
MAT:	DESS. D. LETOIRNEAU	DATE 98-10-02	NO.
LET.	MODIFICATION	DATE	INT.

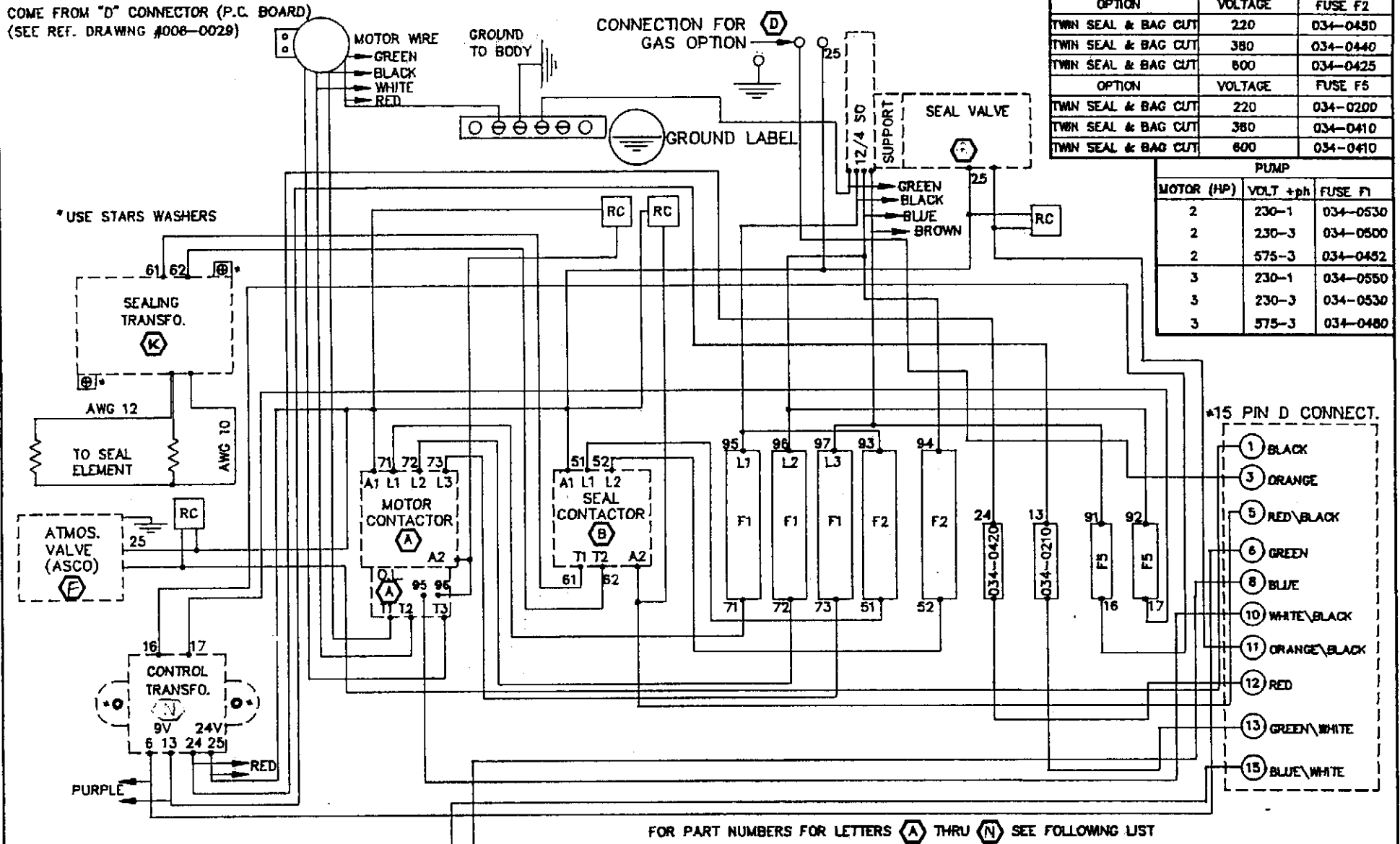
\* COME FROM "D" CONNECTOR (P.C. BOARD)  
(SEE REF. DRAWING #006-0029)

TO MICRO SWITH (H)

20

006-0079

COME FROM "D" CONNECTOR (P.C. BOARD)  
(SEE REF. DRAWING #006-0029)



OPTION	VOLTAGE	FUSE F2
TWIN SEAL & BAG CUT	220	034-0450
TWIN SEAL & BAG CUT	380	034-0440
TWIN SEAL & BAG CUT	600	034-0425
OPTION	VOLTAGE	FUSE F5
TWIN SEAL & BAG CUT	220	034-0200
TWIN SEAL & BAG CUT	380	034-0410
TWIN SEAL & BAG CUT	600	034-0410

PUMP		
MOTOR (HP)	VOLT +ph	FUSE F1
2	230-1	034-0530
2	230-3	034-0500
2	575-3	034-0452
3	230-1	034-0550
3	230-3	034-0530
3	575-3	034-0480

- \*15 PIN D CONNECT.
- ① BLACK
  - ③ ORANGE
  - ⑤ RED\BLACK
  - ⑥ GREEN
  - ⑧ BLUE
  - ⑩ WHITE\BLACK
  - ⑪ ORANGE\BLACK
  - ⑫ RED
  - ⑬ GREEN\WHITE
  - ⑮ BLUE\WHITE

\* USE STARS WASHERS

ATMOS. VALVE (ASCO)

CONTROL TRANSFO.  
9V 24V  
6 13 24 25

FOR PART NUMBERS FOR LETTERS (A) THRU (N) SEE FOLLOWING LIST

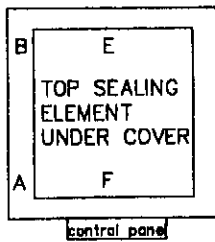
\* COME FROM "D" CONNECTOR (P.C. BOARD)  
(SEE REF. DRAWING #006-0029)

TO MICRO SWITH (H)

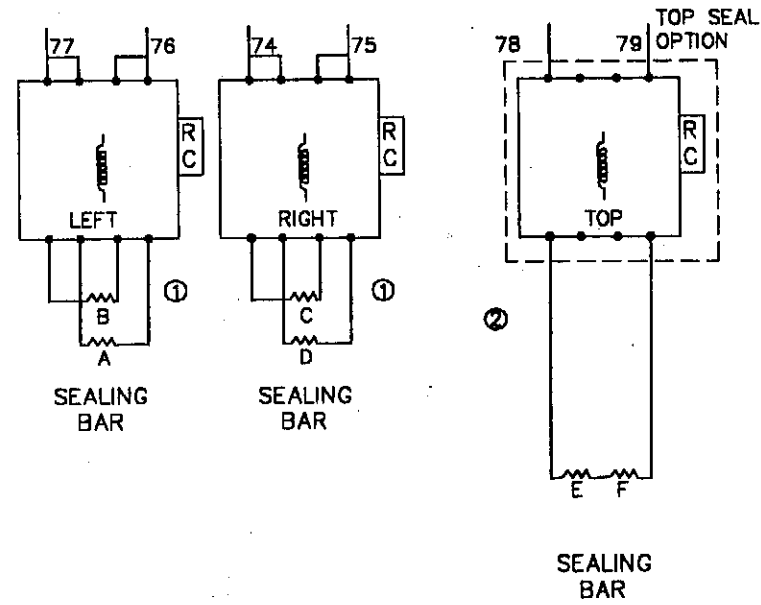
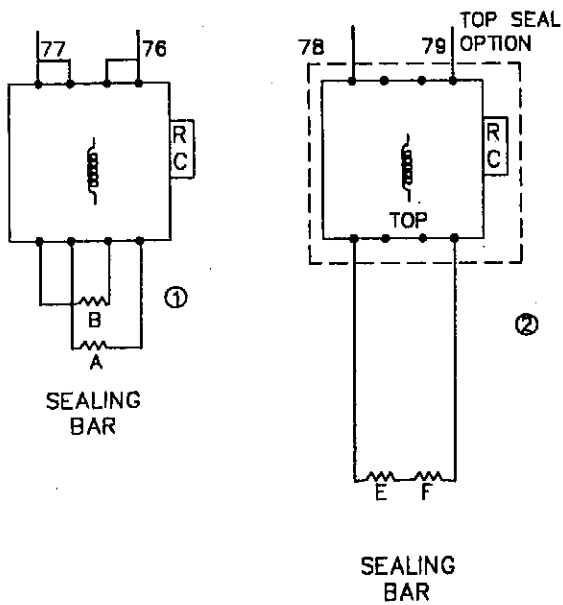
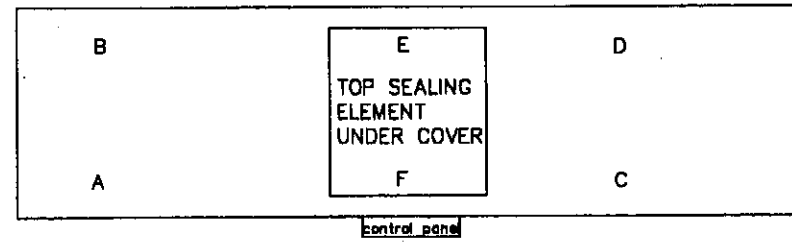
MACHINE		450A 3Ø 50 HZ	
PIECE		SCHEMATIC DIAGRAM	
QT.	ECH. SCALE	NE PAS MESURER /N.T.S.	
MAT.	DESS. D.LETOURNEAU	DATE 97-02-05	NO.
LE.T.	MODIFICATION	DATE	INT.



SINGLE CHAMBER



DOUBLE CHAMBER



① WIRE TEW 12 AWG SIPROMAC # 030-0420

② WIRE CABTIRE 12/3 SJ SIPROMAC # 030-0120  
CONNECTOR CD-13 SIPROMAC # 036-0409

MACHINE		ALL MODEL			
PIECE		WIRING FOR SEALING BAR			
QT.	ECH. SCALE	NE PAS MESURER /N.T.S.			
MAT:		DESS ERIC J. T.P. APP.	DATE 12 DEC 2000 DATE	NO.	006-0131

26

# ELECTRICAL DRAWINGS PARTS LIST

MODEL 450A

A:	VOLT	PHASE	PUMP HP	CONTACTOR	OVERLOAD
	220	1	2	025-0020	025-0190
	220	3	2	025-0010	025-0170
	380	3	2	025-0020	025-0150
	575	3	2	025-0010	025-0140
	220	1	3	025-0040	025-0190
	220	3	3	025-0020	025-0180
	575	3	3	025-0010	025-0150
	220	1	4	025-0050	025-0200
	220	3	4	025-0030	025-0190
	460	3	4	025-0010	025-0170
	575	3	4	025-0010	025-0160
B,C & O:	SEALING CONTACTOR:			025-0020	
D:	OPTIONAL GAZ SOLENOID VALVE:			106-0010	
E:	VACUUM SOLENOID VALVE:			106-0030	
F:	ATMOSPHERE SOLENOID VALVE:			106-0030 WITH PUMPS: 2 HP, 3HP & 4HP	
G:	BELLOWS SOLENOID VALVE:			106-0070	
H, I, J:	COVER SWITCH:			026-0610	
K:	SEALING TRANSFO:				
	TWIN SEAL & BAG CUT:			029-0040, 029-0050	
	TOP & BOTTOM SEALING:			029-0080	
L:	RELAY & BASE:				
	RELAY:			025-0600	
	BASE:			025-0610	
M:	OPTIONAL TOP SEALING CONTACTOR:			025-0020	
N:	CONTROL TRANSFO:			029-0007, 029-0008, 029-0009, 029-0250	

**NOTES**

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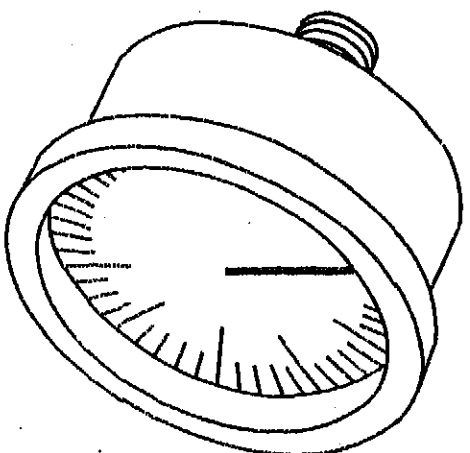
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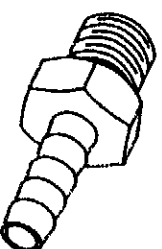
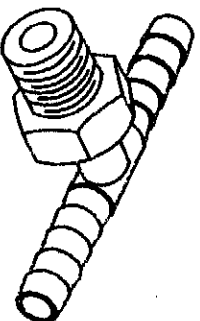
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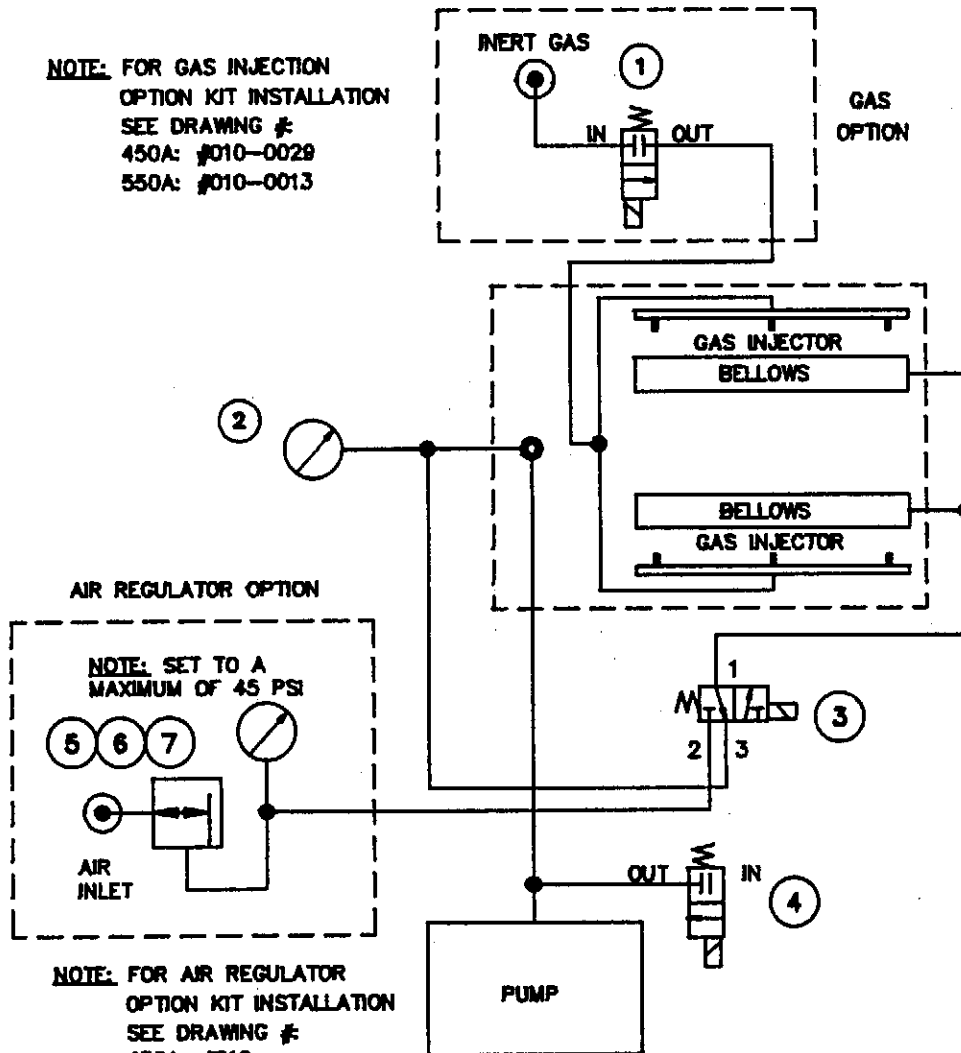
# PNEUMATIC DRAWING



1007-0018

ITEM	PART #	DESCRIPTION	QT.
1	106-0010	GAS VALVE	1
2	114-0280	VACUUM GAUGE	1
3	106-0070	BELLOWS VALVE	1
4	106-0030	ATMOSPHERE VALVE	1
5	114-0147	PRESSURE REGULATOR	1
6	114-0245	PRESSURE GAUGE	1
7	114-0170	PRESSURE REGULATOR SUPPORT	1

**NOTE:** FOR GAS INJECTION  
OPTION KIT INSTALLATION  
SEE DRAWING #:  
450A: #010-0029  
550A: #010-0013



**NOTE:** FOR AIR REGULATOR  
OPTION KIT INSTALLATION  
SEE DRAWING #:  
450A: #010-  
550A: #010-

MACHINE		450A & 550A			
PART		PNEUMATIC DRAWING		N.T.S.	
ITEM:	CNC:	SCALE	QT.	1	
MAT:	DESIGN BY M.LAVIGNE	DATE 97-03-12	NO.	007-0018	
LET.	MODIFICATION	DATE	INT.		

**NOTES**

