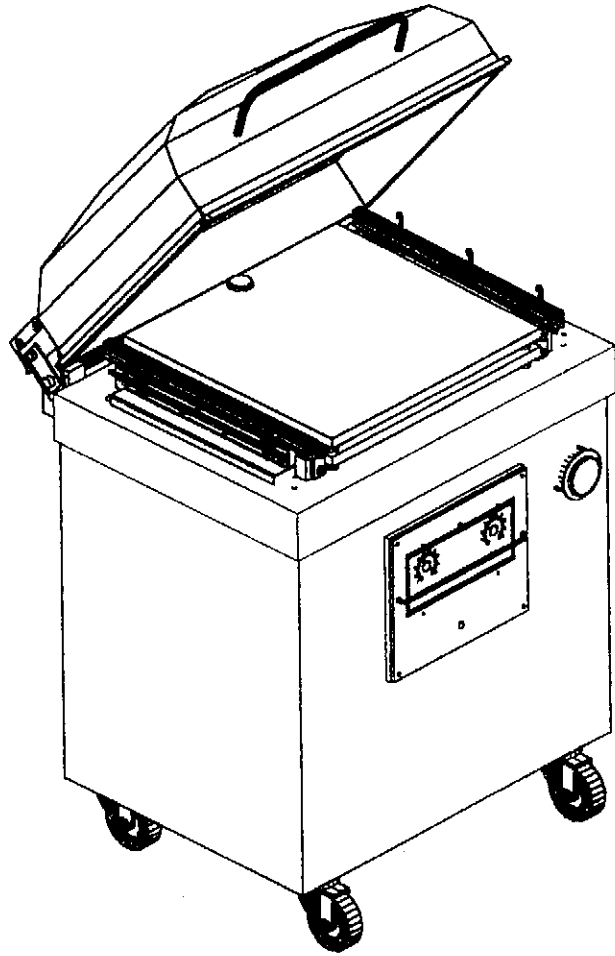
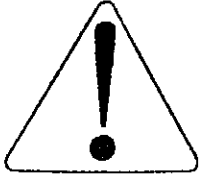


# 400





## 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 instructions regarding this machine in the owners manual.



# VACUUM PACKAGING MACHINE

## **MODEL 400**

- I OPERATION INSTRUCTIONS
- II MECHANICAL
  - A- Front view general assembly drawing
  - B- Rear view general assembly drawing
  - C- Seal bar assembly drawings
- III ELECTRICAL
  - A- Electrical drawing low voltage

### OPERATION INSTRUCTIONS

#### TABLE OF CONTENTS

- 1. Setting up the machine
- 2. Electrical connection
- 3. Operation
  - 3.1 Working principles
  - 3.2 Setting of controls.
  - 3.3 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
- 5. Regular maintenance





# 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:

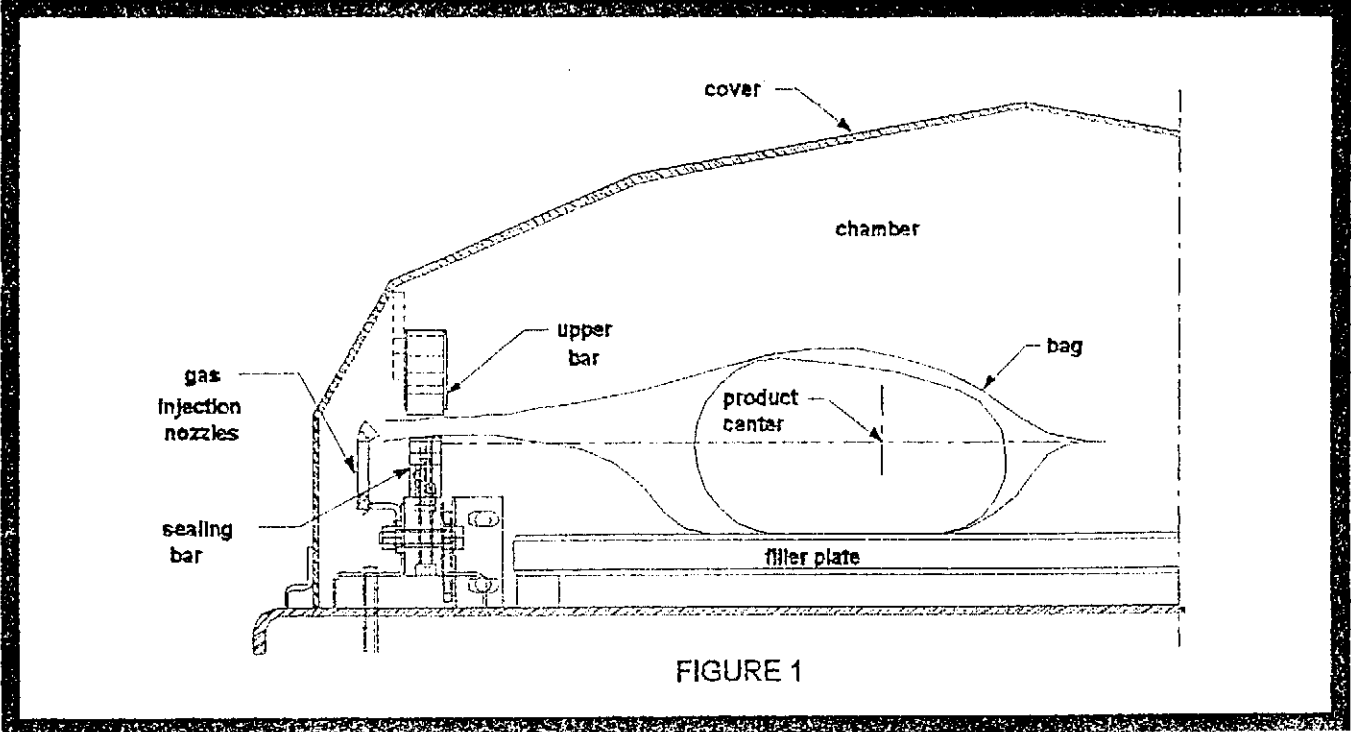
### 3.1 Working principles:

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.

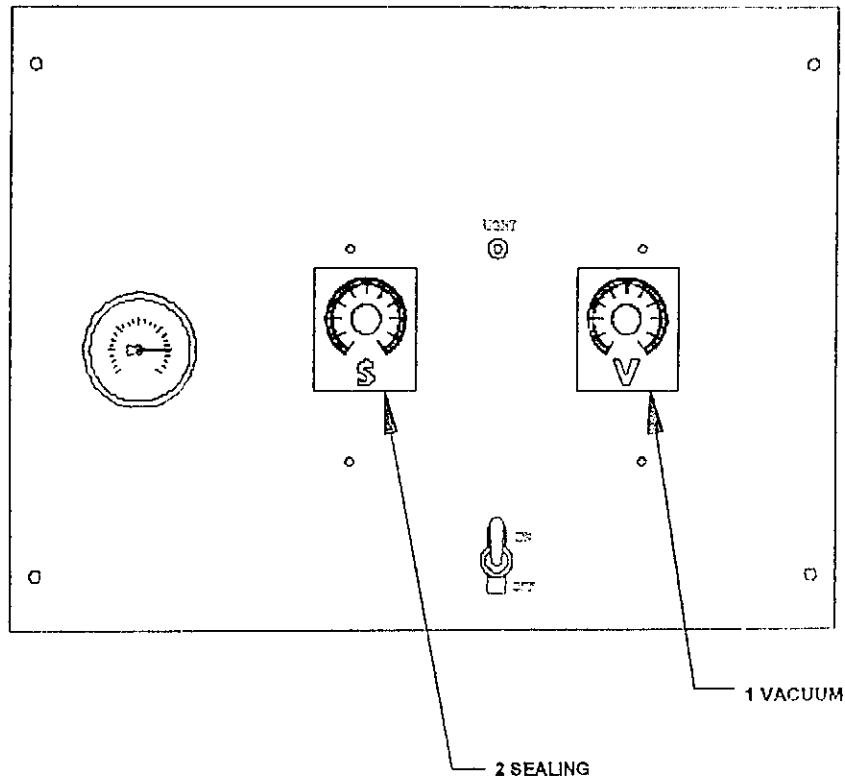
To obtain a good seal, make sure that no residue of fat is left between the bag's inner sides where sealing is done.





### 3.2 Setting of MC-05 controls p.c. board:

Control pannel:



To turn on: Lift on/off switch

To turn off: Lower on/off switch

How to program a complete cycle:

To select the vacuum time:

1. Turn the potentiometer and set the desired timing.

The vacuum setting time can be set between 3 and 100 seconds for a range between step 1 and step 10

To select the sealing time:

2. Turn the potentiometer and set the desired timing.

The sealing time can be set between 1/2 to 10± seconds for a range between step 1 and step 10

DAYM/89



## BASIC PROGRAM TO MODIFY ACCORDING TO THE PRODUCTS

MACHINE	"V"	"S"
VAC 300 <del>400</del>	Step 2,5	Step 2,5

**Warning:** There is no security limit time protection for sealing. Do not increase the sealing time too much to prevent damaging the teflon.

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

### 3.3 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 secondary voltage of transformer (approx. 24 Volt AC);  
Check fuse;  
If none of these apply, change 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:





#### 4.2.2 Cont.

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 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.

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.

Relay does not work.

#### 4.3.3 Permanent sealing current:

Relay 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).

#### 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.



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).

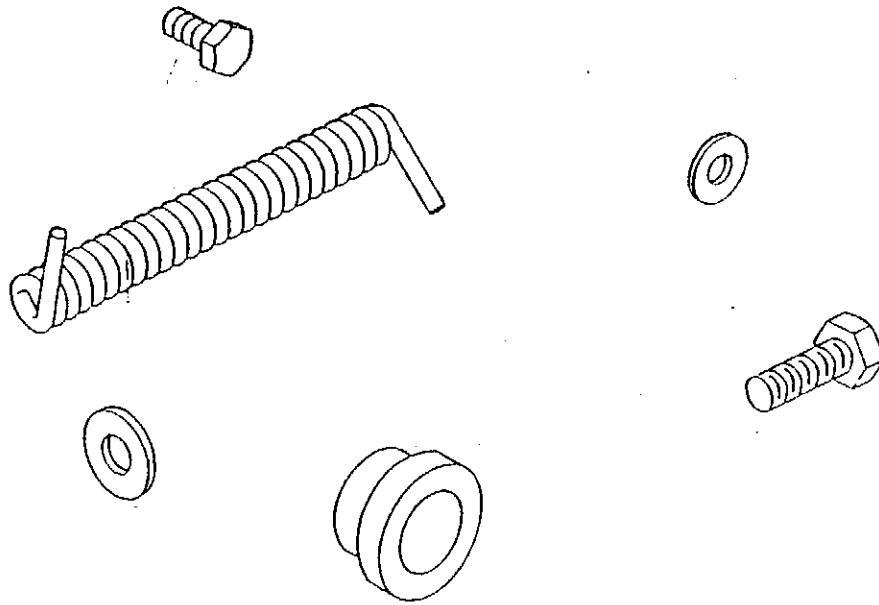
Check vacuum connections for tightness.

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

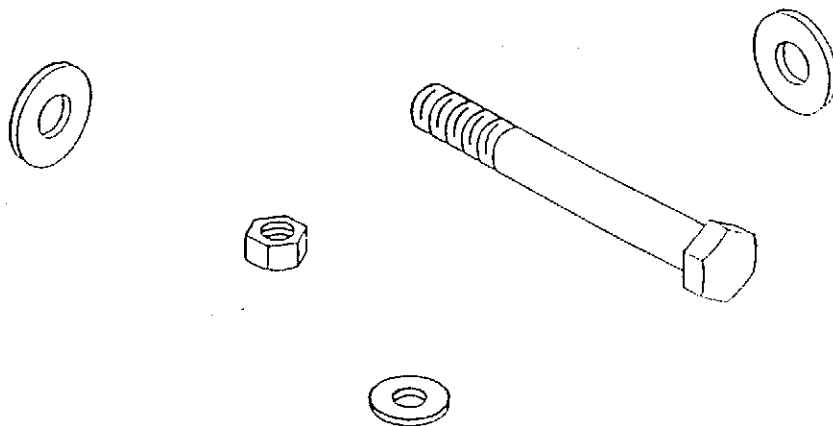
Check vacuum in chamber with precision vacuumeter.

Check function of cycle with various settings.





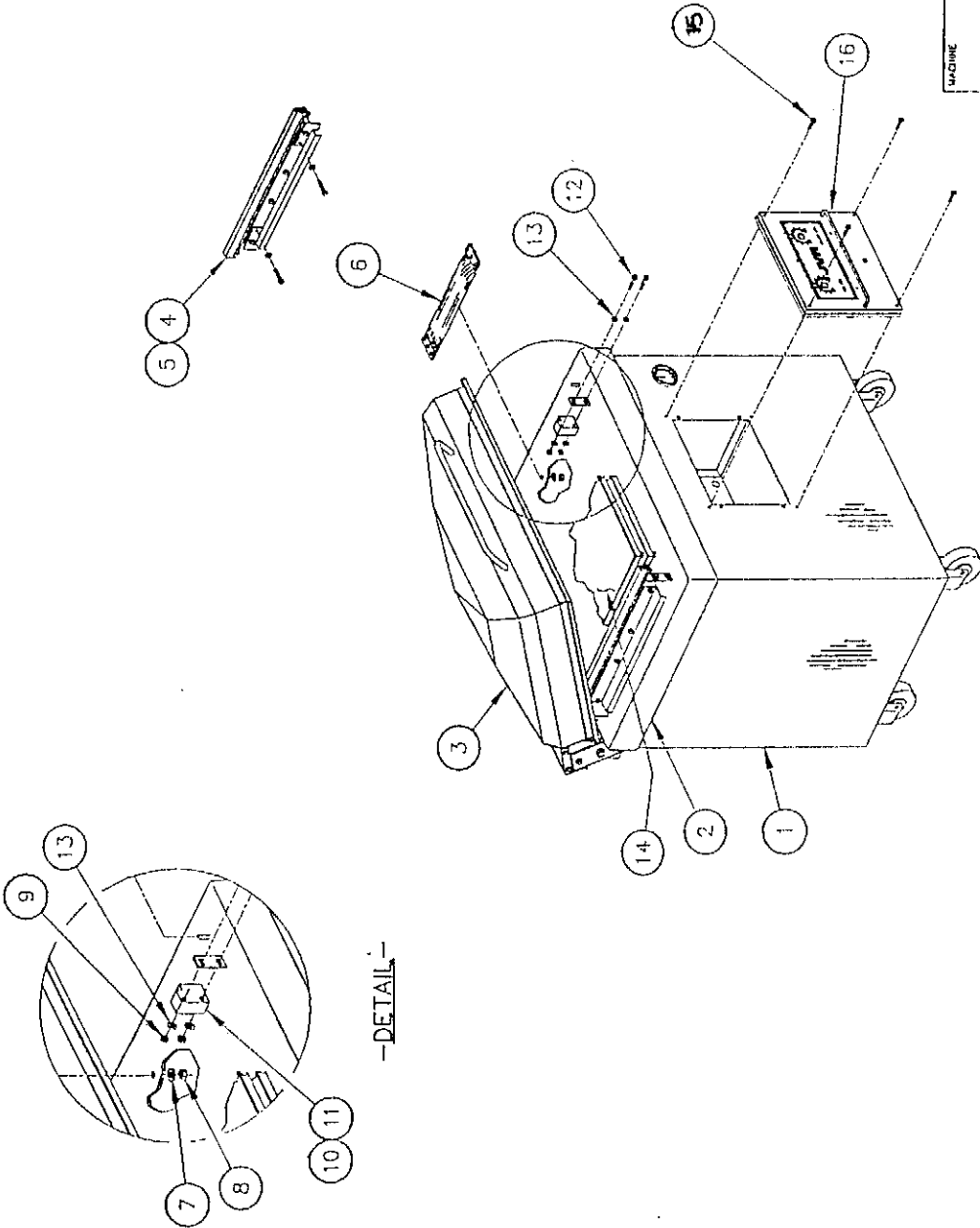
# MECHANICAL DRAWING







ITEM	PART #	DESCRIPTION	QTY
1	005-0638	STRUCTURE ASSEMBLY	1
2	005-0531	TABLE ASSEMBLY	1
3	005-0540	COVER ASSEMBLY	1
4	005-0564	SEAL BAR ASSEMBLY W/ SUPPORT	2
5	005-0565	SEAL BAR ASSY W/ SUPPORT (BAG CUT OPT.)	2
6	005-0532	BELLOWS ASSEMBLY	2
7	051-0780	FLAT WASHER 3/8" S/S	2
8	051-0620	HEX. NUT 3/8"-16 NC. S/S	2
9	051-0581	HEX. NUT 1/4"-20 NC. NYLON LOCK S/S	8
10	002-0326	LEFT/SEAL BAR GUIDE BLOCK	2
11	002-0327	RIGHT/SEAL BAR GUIDE BLOCK	2
12	051-0250	HEX. BOLT 1/4"-20 NC. X 1 1/2" S/S	8
13	051-0740	FLAT WASHER 1/4" S/S	16
14	005-0534	FILLER PLATE ASSEMBLY	2
15	051-0212	BOLT 1/4"-20 x 1" PAN PHIL S/S	4
16	005-0639	P.C. BOARD SUPPORT ASSEMBLY	1



-DETAIL-

MACHINE	400	UNIT	BT
PART	MACHINE ASSEMBLY FRONT VIEW	DATE	99-05-03
ITEM	BTG	DATE	99-05-03
SCALE	1	NO.	005-0637
SIPROMAC		ST-GERMAIN DE GRANTHAM QUEBEC CANADA	

LET. 1

APPROVAL

DATE

BT



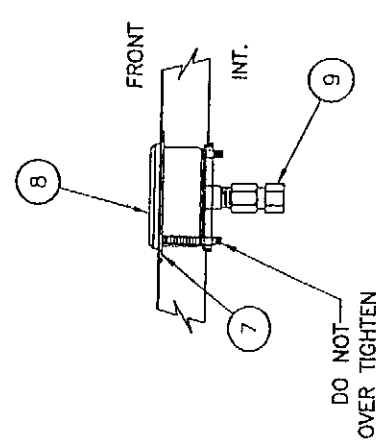
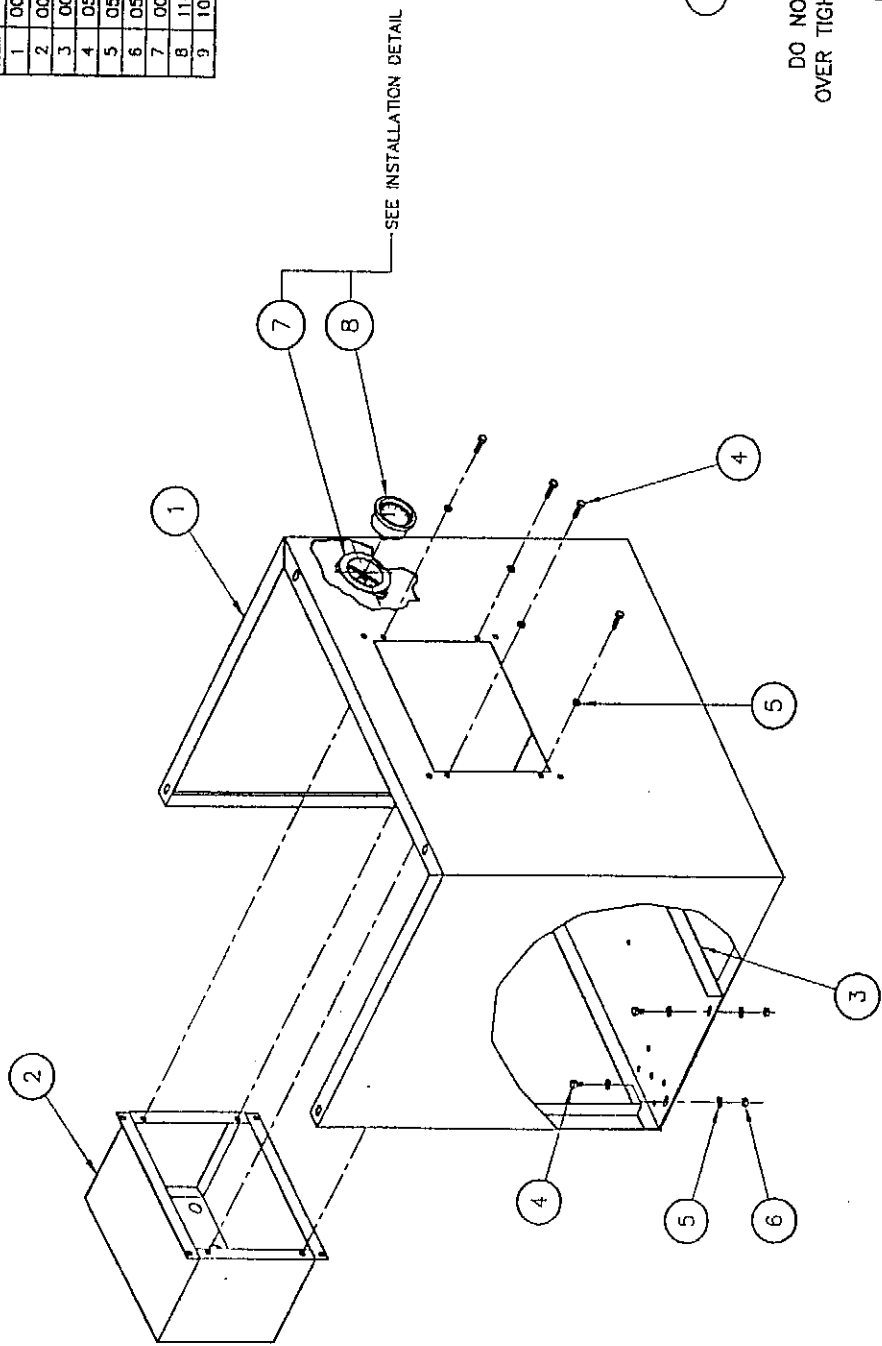








ITEM	PART #	DESCRIPTION	QT.
1	004-0507	STRUCTURE PRE-ASSY	1
2	005-0642	ELECTRICAL BOX PRE-ASSY	1
3	001-2156	PUMP SUPPORT	1
4	051-0180	BOLT 1/4" - 20 x 1/2"	8
5	051-0740	FLAT WASHER 1/4"	12
6	051-0580	NUT 1/4" - 20 S/S	4
7	001-1869	HOLDING WASHER (FOR VAC. GAUGE)	1
8	114-0260	VACUUM GAUGE W/ SUPPORT	1
9	101-0038	STR. 1/4" FNPT x 3/8" T.P. COMP. BR.	1



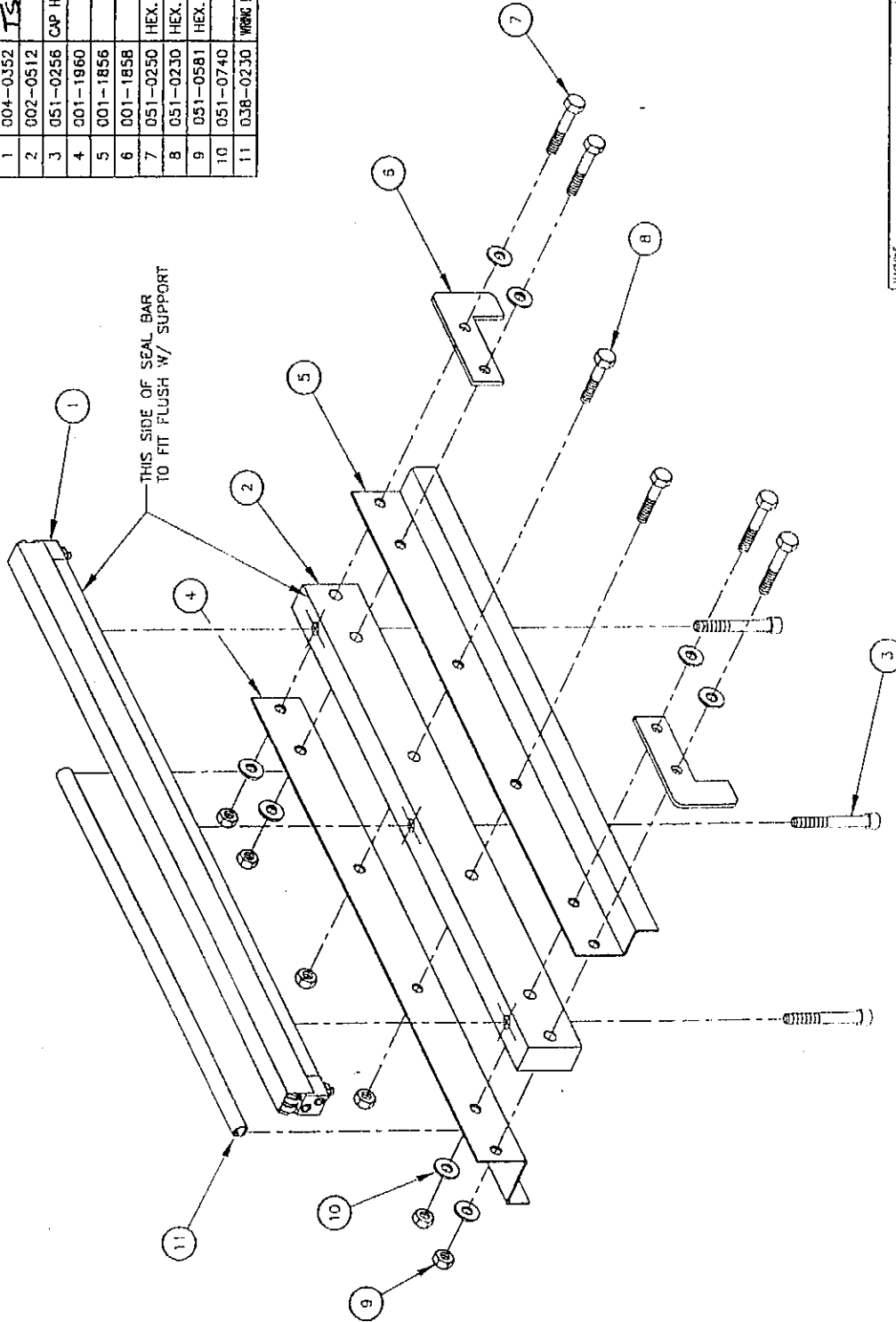
-INSTALLATION DETAIL-

WORKING	400	SYMBOL	SYMBOL	SYMBOL	SYMBOL
PART	STRUCTURE ASS'Y	SYMBOL	SYMBOL	SYMBOL	SYMBOL
ITEM		SYMBOL	SYMBOL	SYMBOL	SYMBOL
DATE	99-05-05	DATE	99-05-05	DATE	99-05-05
APP.		APP.		APP.	
SCALE		SCALE		SCALE	
QTY.	1	QTY.	1	QTY.	1
SIPROMAC					
ST-GERMAIN DE GRANTHAM					
QUEBEC CANADA					
005-0638					





ITEM	PART #	DESCRIPTION	QTY.
1	004-0352	SEAL BAR PRE-ASSEMBLY	2
2	002-0512	SEAL BAR SUPPORT (TABLE)	2
3	051-0256	CAP. HEX. SRT. BOLT 1/4"-20 NC X 1 3/4" S/S	6
4	001-1860	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	WIRING DUCT W/ ADHESIVE BACKING (0.35" X 0.5" X 300) PVC	2



MACHINE: 400 & 450A  
 PART: SEAL BAR ASSEMBLY W/ SUPPORT  
 ITEM: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 SCALE: \_\_\_\_\_  
 QTY.: 2

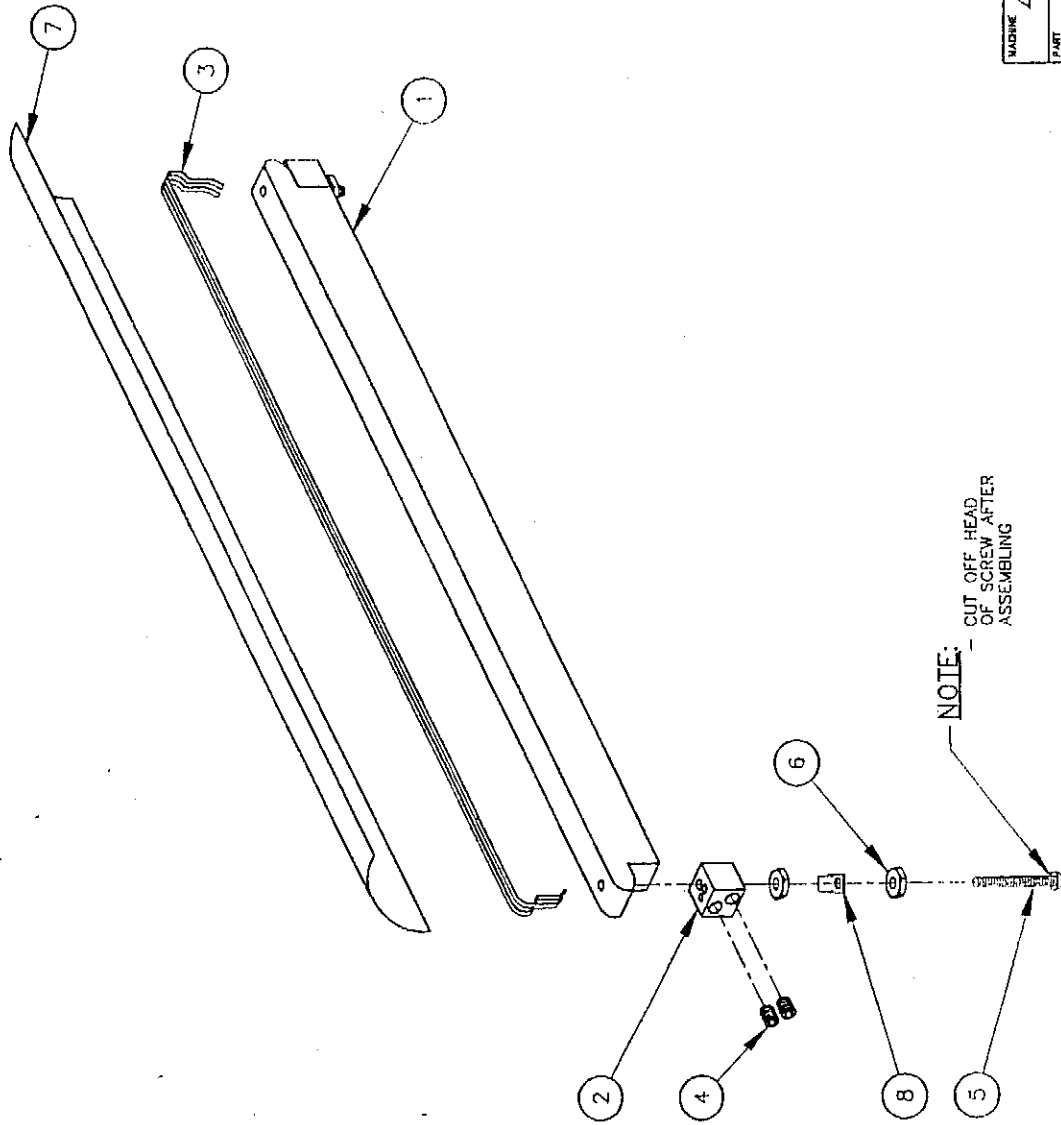
DATE: 97-10-20  
 BY: A. PROVENCHER  
 APP: \_\_\_\_\_  
 DATE: \_\_\_\_\_

S.I.P.M.A.C.  
 ST-GERMAIN DE GRANTHAM  
 QUEBEC CANADA

REV.	DESCRIPTION	DATE	BY	CHK.
B	ADDED 400	99-08-06	S.L.L.	
A	REDRAWN/ WAS 004-0353/ UCDF. NO. A-0226	97-10-20	A.P.	
LET.	MODIFICATION			



ITEM	PART #	DESCRIPTION	QTY.
1	002-0481	SEAL BAR (TABLE)	2
2	002-0031	CONNECTOR	4
3	039-0200	SEALING ELEMENT	4
4	052-0395	SCREW 1/4" - 20 NC. X 5/16" SET HEX SKT OVAL PT	8
5	052-0250	SCREW #8-32 X 1 1/2" RND SLOT BRASS	4
6	051-0550	NUT #8-32 S/S	8
7	176-0200	TEFLON TAPE 55 ADHESIVE X 2" X 650 MM	2
8	027-0400	CONNECTOR ADAPTOR 1/4" X #10 STUD	4



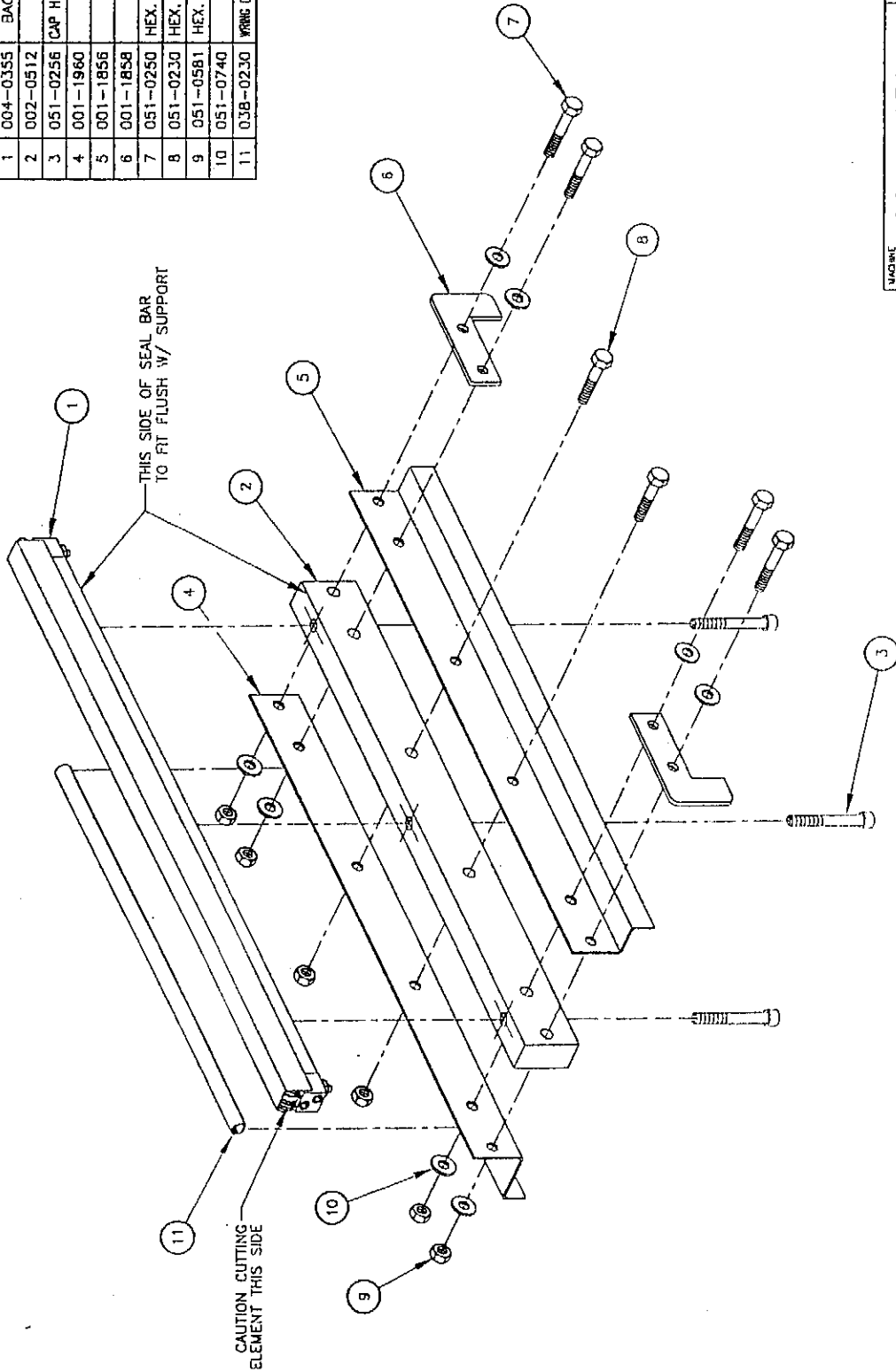
NOTE: CUT OFF HEAD OF SCREW AFTER ASSEMBLING

MACHINE		400 & 450A		SIPROMAC	
PART		SEAL BAR PRE-ASSEMBLY		ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
ITEM:	QTY:	SCALE:	DATE:	REV.:	QTY.
SCALE:	DATE:	DATE:	DATE:	DATE:	DATE:
M.P.L. PROVIDER		98-02-10		1004-0352	
APP.		DATE:		REV.:	

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



ITEM	PART #	DESCRIPTION	QTY.
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	WRING DUCT W/ ADHESIVE BACKING (0.15" X 0.5" X 300) PVC	2



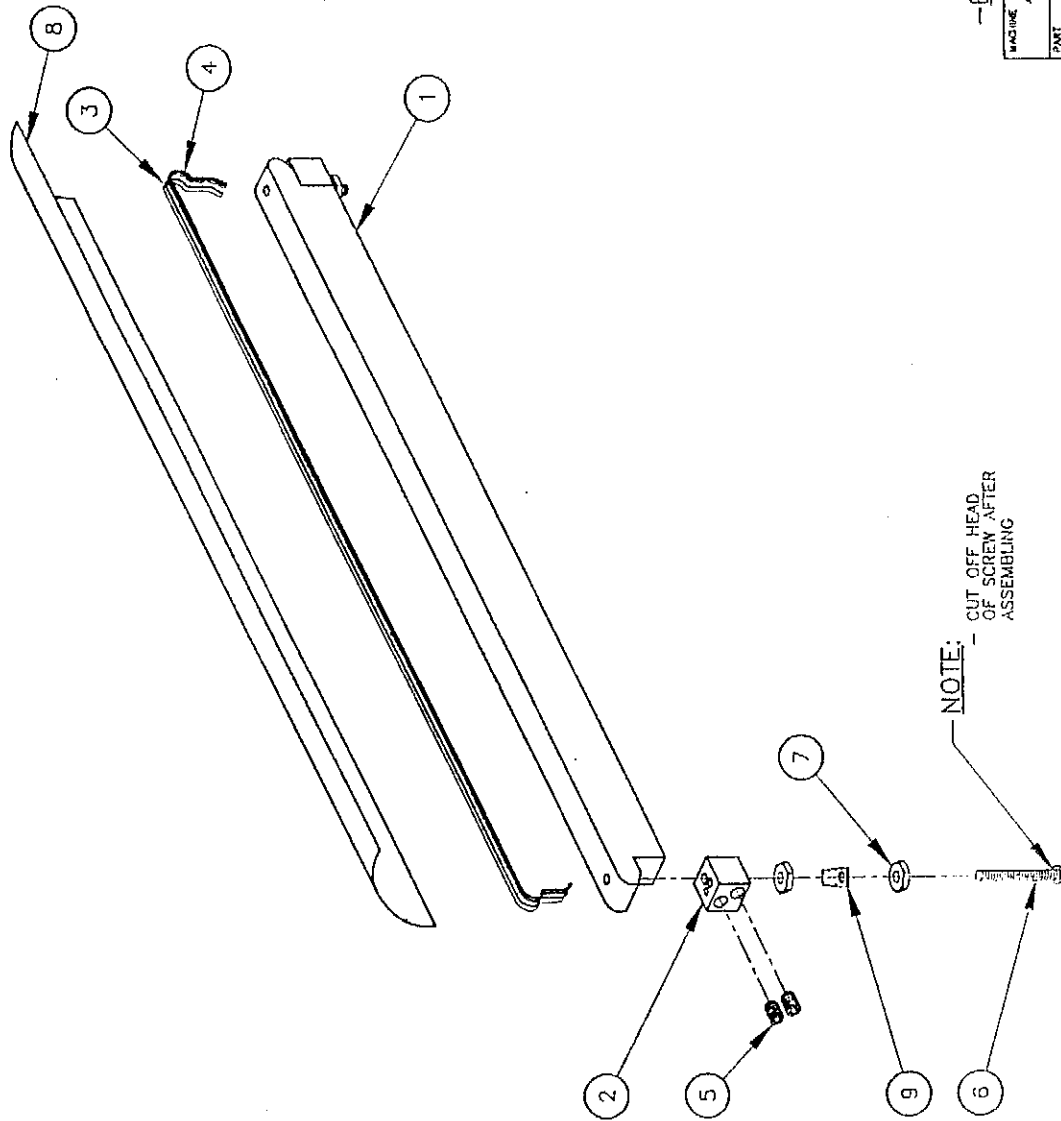
-BAG CUT OPTION-

MACHINE <b>400 &amp; 450A</b>		METER 1 X 5 2 X 10 3 X 15 4 X 20 5 X 25 6 X 30 7 X 35 8 X 40 9 X 45 10 X 50 11 X 55 12 X 60 13 X 65 14 X 70 15 X 75 16 X 80 17 X 85 18 X 90 19 X 95 20 X 100		NOT TO SCALE 1" = 100' 1" = 1000'		SIPROMAC	
PART SEAL BAR ASSEMBLY W/ SUPPORT		DATE 97-10-20		DATE 97-10-20		NO. 2	
ITEM:		SCALE		QTY.		005-0565	
MANUFACTURED BY SIPROMAC		DATE 97-10-20		DATE 97-10-20		NO. 2	
DRAWN BY APP.		DATE 97-10-20		DATE 97-10-20		NO. 2	
MANUFACTURED BY SIPROMAC		DATE 97-10-20		DATE 97-10-20		NO. 2	
DRAWN BY APP.		DATE 97-10-20		DATE 97-10-20		NO. 2	

A	ADDED 400	MODIFICATION	DATE	99-05-08	S.L.	NT.
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ITEM	PART #	DESCRIPTION	QTY.
1	002-0481	SEAL BAR	2
2	002-0031	CONNECTOR	4
3	039-0230	CONVEX SEALING ELEMENT	2
4	039-0270	T" PROFILE CUTTING ELEMENT	2
5	052-0395	SCREW 1/4"-20 MC X 3/16" SET HEX SKT OVAL PT	8
6	052-0250	SCREW #8-32 X 1 1/2" RND SLOT BRASS	4
7	051-0550	NUT #8-32 S/S	8
8	176-0200	TEFLON TAPE 55 ADHESIVE X 2" X 650 MM	2
9	027-0400	CONNECTOR ADAPTOR 1/4" X #10 STUD	4



-BAG CUT OPTION-

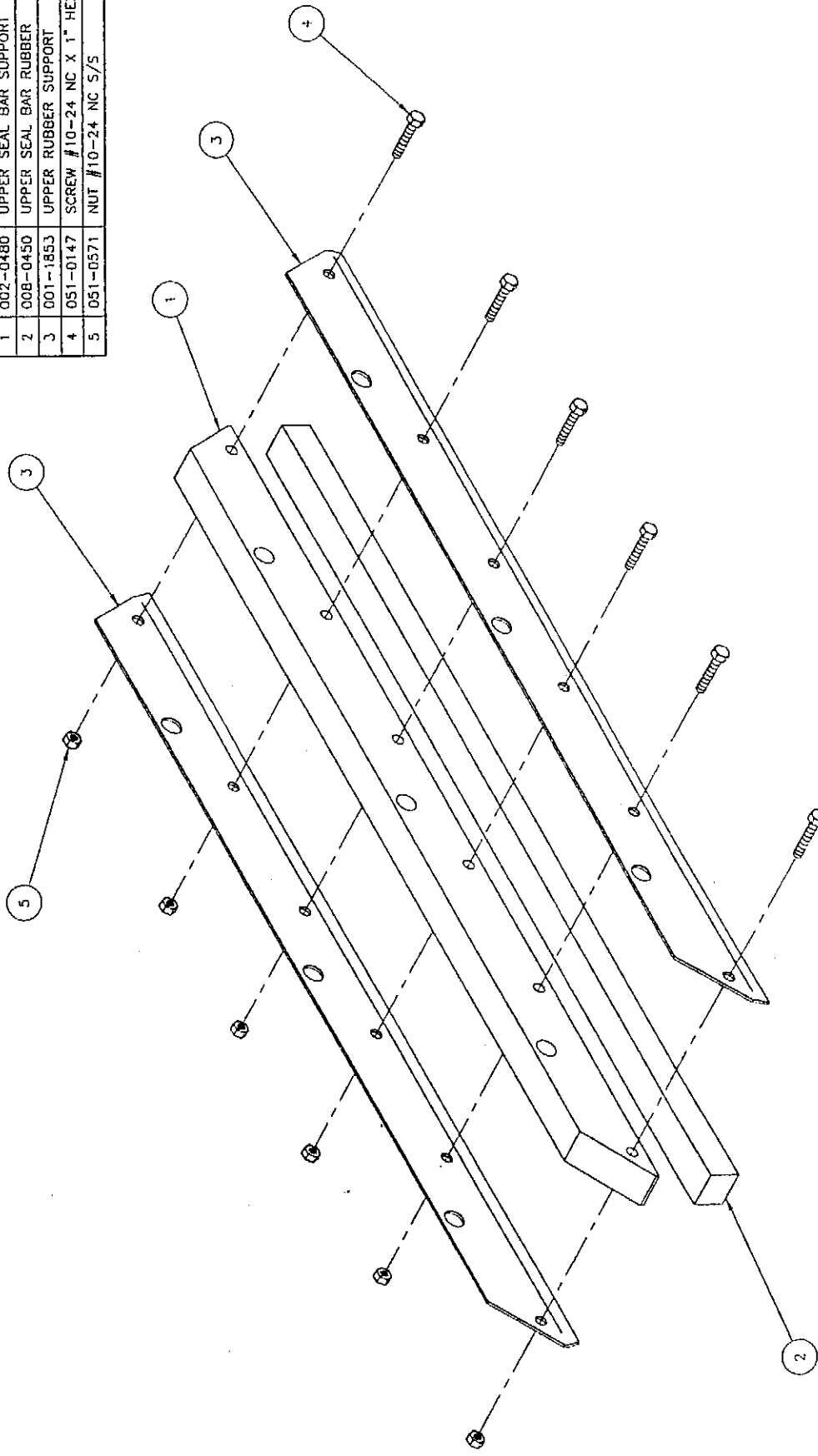
MACHINE	400 & 450A	SCALE	2
PART	SEAL BAR PRE-ASSEMBLY	DATE	98-02-10
ITEM:	ONE	DATE	98-02-10
MAN:	DR. PROVENIER	DATE	98-02-10
SIPROMAC		ST-GERMAIN DE GRANITHAM	
		QUEBEC CANADA	
		004-0355	

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





ITEM	PART #	DESCRIPTION	QTY.
1	002-0480	UPPER SEAL BAR SUPPORT	2
2	008-0450	UPPER SEAL BAR RUBBER	2
3	001-1853	UPPER RUBBER SUPPORT	4
4	051-0147	SCREW #10-24 NC X 1" HEX. S/S	12
5	051-0571	NUT #10-24 NC S/S	12

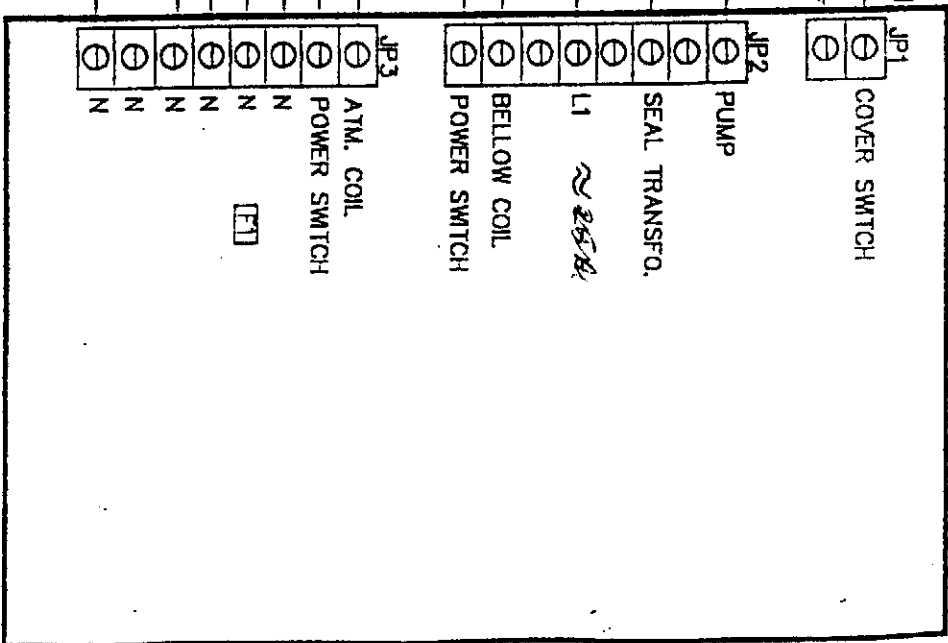
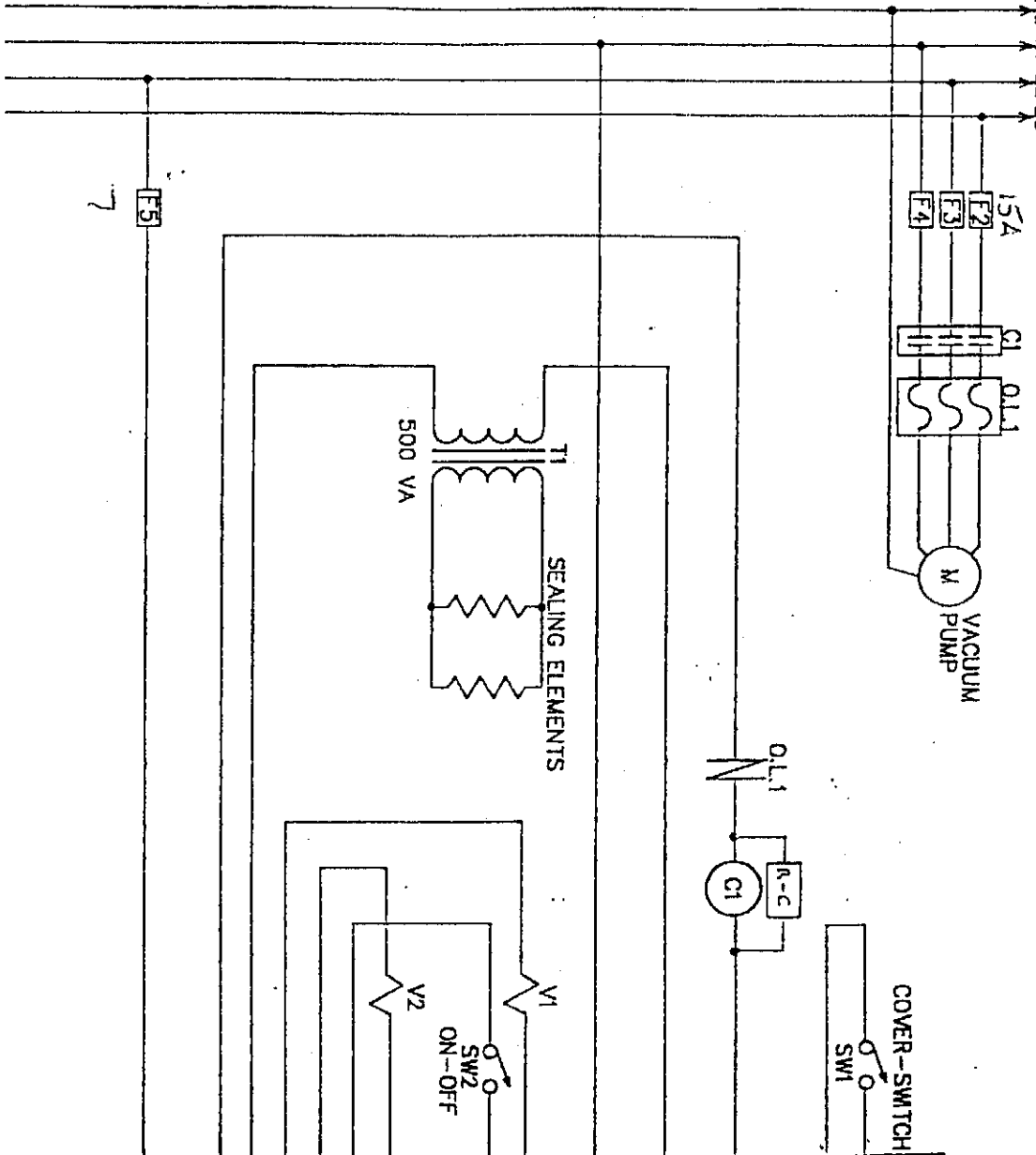


MACHINE	400 & 450A	SIPROMAC
PART	UPPER SEAL BAR PRE-ASSY	ST-GERMAIN DE BRANTHAM QUEBEC CANADA
ITEM	QNC	SCALE
DATE	DATE 96-09-26	DR. 2
DATE	DATE	004-0351

LET.	MODIFICATION	DATE	INT.
B	ADDED 400	96-03-07	S.L.
A	REDRAWN / WAS 004-0161	96-09-26	A.P.



220V, 3 PH, 60 HZ  
 GND L1 L2 L3



LET. \_\_\_\_\_

MODIFICATION \_\_\_\_\_

DATE \_\_\_\_\_

INT. \_\_\_\_\_

MACHINE	VACUUM 400	
PIECE		
DT.		
DATE		
WAT.		
ECH. SCALE		
NE PAS MESURER / N.T.S.		
DESS. D.L.		
App.		
DATE	13/05/99	
NO.	001 05	
ST-GERMAIN DE GRANTHAM QUEBEC CANADA		
SIPROMAC		

