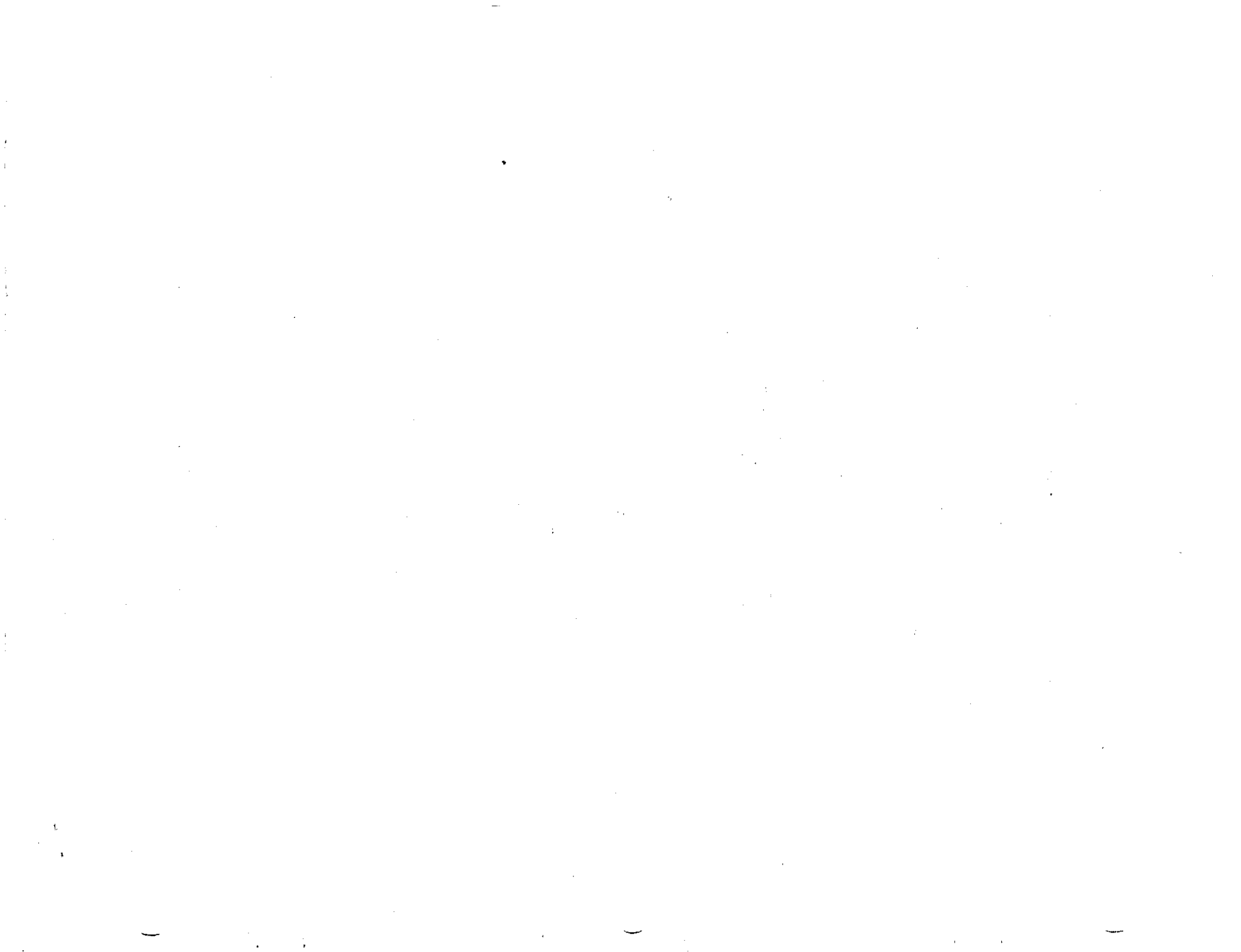


MODELS
350 & 350D
MC-40



VACUUM PACKAGING MACHINE

MODEL 350, 350D

(MC-40)

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- I- 350D: cover assembly drawing
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VACUUM PACKAGING MACHINES

OPERATION INSTRUCTIONS

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 - 3.4 Daily cleaning
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 - 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
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 - 4.5 Control board failure
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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.

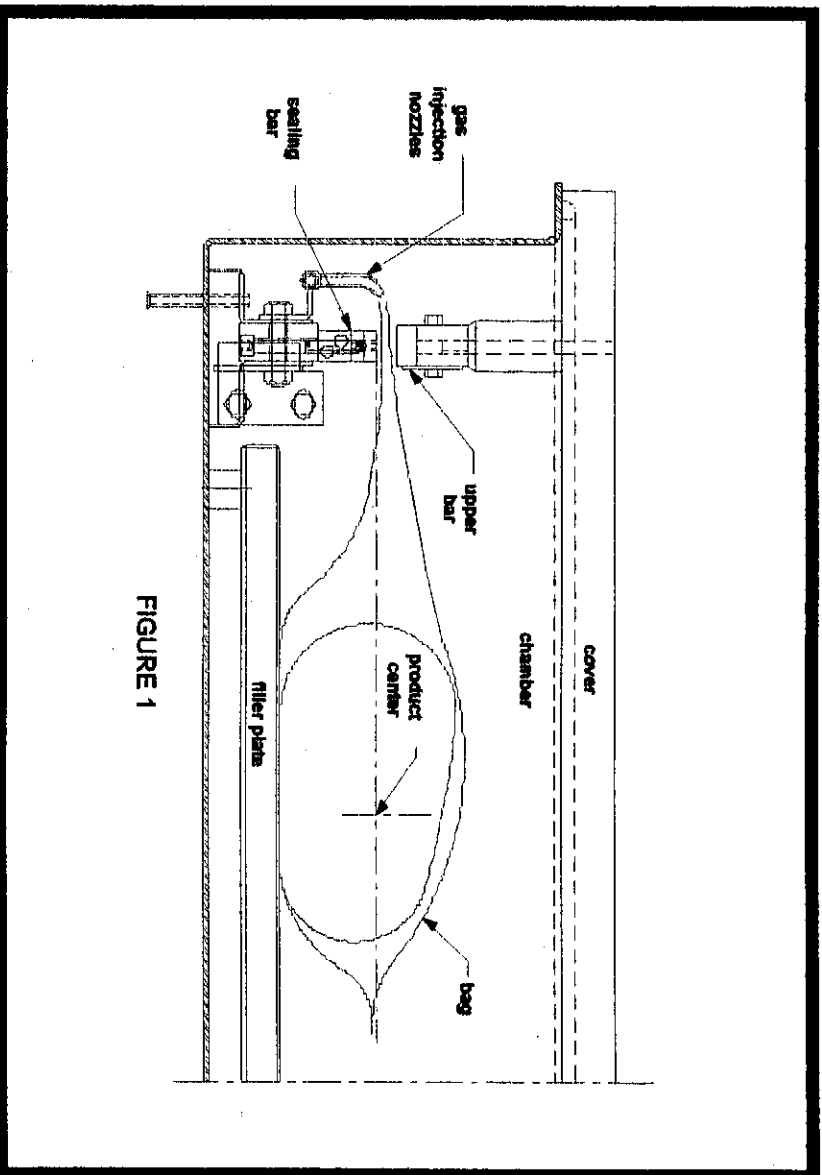


FIGURE 1

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 level (%) can be set in the program menu.

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 Vacuum packaging operation:

Note: Refer to the menus structure on page 9 and the keyboard detail on page 10.

3.3.1 Basics:

Use key "POWER" to power ON / OFF the vacuum packaging machine. When the unit is energized, the identification of the last executed program is displayed on LCD screen.

Use the "ESC" key to change over from the programs menu to the functions menu and from the functions menu to the programs menu.

In functions menu, use key "SELECT" to select a function and key "ENTER" to accede and executed the selection.

In programs menu, use key "SELECT" to select a program and key "ENTER" to accede and modify the selection.

In programs submenu, use key "ENTER" to pass over the parameters and point to the following one; the parameters are blinking to point out the acquisition mode. A return to programs menu is performed automatically following the last parameter acquisition.

In program submenu, use key "ESC" to get back to the programs menu. Strike any key to clear the error messages which may be displayed on LCD screen.

3.3.2 Functions menu:

3.3.2.1 Create a program:

When executing the "create a program" function, the program submenu is acceded, starting with the identification. The initial identification "Pxx NO NAME" is given to the program and all parameters are established to zero; the program number is allocated automatically.

3.3.2.2 Delete a program:

When executing the "delete a program" function, the programs menu is acceded and the number of the first program in memory is blinking to point out the deletion mode. Use key "SELECT" to select a program and key "ENTER" to accede and confirm deletion of the selection. Use key "ESC" to unconfirm a deletion and to leave the function. When leaving the function, the number of the actual program on LCD screen cease to blink.

3.3.2.3 Select operating mode:

When executing the "select operating mode" function, which is available only for the automatic units, the actual selection is blinking to point out the acquisition mode. Use key "SELECT" to get through the operating modes, which are automatic, semi-automatic and manual; the validation of the selected operating mode is performed automatically. Use key "ESC" or "ENTER" to leave the function and get back to the program menu.

3.3.3 Programs menu:

3.3.3.1 Program identification:

For a selected program, set the identification, using the numeric keyboard characters chart; press numeric key until the desired character is selected (4 times for the numeric value). Use key "ENTER" to validate the character and to validate the characters string at the end(the new characters string is blinking). In a middle of an acquisition, use key "ESC" to come backward and erase one or several characters.

Example: EXAMPLE 1 → keys 2, 2, ENTER → E
(9 characters) keys 8, 8, 8, ENTER → X
keys 1, ENTER → A
keys 5, ENTER → M
keys 6, ENTER → P
keys 4, 4, 4, ENTER → L
keys 2, 2, ENTER → E
keys 9, 9, 9, ENTER → space
keys 1, 1, 1, 1, ENTER → 1
key ENTER to validate the characters string

3.3.3.2 Vacuum level setting:

For a selected program set the vacuum level, starting with the values; the decimal point is automatically inserted following the second digit entry and the validation is automatically performed following the third digit entry (the new vacuum level is blinking). The vacuum level is truncated to the nearest half value. In the middle of an acquisition, use key "ENTER" to validate the vacuum level and key "ESC" to come backward and start over with a new acquisition (the old vacuum level is blinking). Set vacuum level to zero to bypass the pressure transducer and proceed only using the vacuum plus time.

Examples: 90.0% → keys 9, 0, 0 or 9, 0, ENTER or
keys 9, 0, 1 or 9, 0, 2 or 9, 0, 3 or 9, 0, 4
97.5% → keys 9, 7, 5 or
keys 9, 7, 6 or 9, 0, 7 or 9, 0, 8 or 9, 0, 9
0.0% → keys 0, 0, 0 or 0, ENTER

3.3.3.3 Vacuum plus time setting:

For a selected program set the vacuum plus time, in seconds; the validation is automatically performed following the second digit entry (the new vacuum plus time is blinking). In a middle of an acquisition, use key "ENTER" to validate the vacuum plus time and key "ESC" to come backward and start over with a new acquisition (the old vacuum plus time is blinking).

Examples: 1s → keys 0, 1 or 1, ENTER
15s → keys 1, 5

3.3.3.4 Gas flush level setting:

For a selected program set the gas flush level following the same procedure as for the vacuum level; the maximum gas flush level setting is 10% below the vacuum setting.

3.3.3.5 Sealing time setting:

For a selected program set the sealing time, starting with the seconds; the decimal point is automatically inserted following the first digit entry and the validation is automatically performed following the third digit entry (the new sealing time is blinking). The sealing time is truncated to the nearest half hundredth. In a middle of an acquisition, use key "ENTER" to validate the sealing time and key "ESC" to come backward and start over with a new acquisition (the old sealing time is blinking).

Examples: 4.50s → keys 4, 5, 0 or 4, 5, ENTER or
keys 4, 5, 1 or 4, 5, 2 or 4, 5, 3 or 4, 5, 4
2.35s → keys 2, 3, 5 or
keys 2, 3, 6 or 2, 3, 7 or 2, 3, 8 or 2, 3, 9
0.00s → keys 0, 0, 0 or 0, ENTER

3.3.4 Vacuum cycle execution:

For the manual units and the automatic units set on manual, close the cover to initiate a vacuum cycle. For the automatic units set on semi-automatic or on automatic, use push button "STOP / START" to initiate or interrupt a vacuum cycle. A selected program can be initiated only in the programs menu, when no modifications are in progress, and the access to the other programs and functions is denied. During cycle execution the operation status is sequentially displayed on LCD screen, except for the parameters established to zero, which are not displayed:

- chamber vacuum level during vacuum sequence,
- vacuum plus time status during vacuum plus sequence,
- chamber vacuum level during gas flush sequence,
- sealing time status during sealing sequence,
- chamber vacuum level during atmosphere sequence. 7

During cycle execution, use key "1" to abort the vacuum sequence and execute the following sequence, which is gas flush or sealing, and key "ENTER" to accede and modify the program; the parameters become valid only for the following vacuum cycles.

3.3.5 System monitor:

To accede the diagnostics menu, power up the vacuum packaging machine while keeping pushed in the "ESC"key. Use key "SELECT" to select the system monitor function and key "ENTER" to accede and visualize the monitored parameters. Use key "SELECT" to change over from the software revision, the amount of working hours done and the amount of complete cycles performed since first initialization.

-MENUS STRUCTURE-

- Functions menu:
 - "F1 CREATE A PRGM"
 - "F2 DELETE A PRGM"
 - "F3 SELECT OPMODE" (automatic units only)

- Programs menu:

"Pxx NAME"

Program submenu:

"VACUUM: xx.x%" (10.0% - 99.5%)
"VACUUM PLUS: xxs" (0s - 99s)
(units with gas option) "GAS FLUSH: xx.x%" (0.0% - 10% below the vacuum level)
"SEAL TIME: x.xxs" (0.00s - maximum unit allocated setting)
"Pxx NAME" (12 characters)

- Diagnostics menu (keys "ESC" & "POWER" for access):

"DIAGNOSTICS MENU" (access code required)

"D1 INPUTS TEST"

"D2 OUTPUTS TEST"

"D3 MODEL SELECT"

"D4 GAS OPTION"

"D5 SEALING TIME"

"D6 COOLING TIME"

"D7 LOADING TIME" (automatic units only)

"D8 UNLOADNG TIME" (automatic units only)


"SYSTEM MONITOR" (no access code required)

"SOFTWARE: R x.xx"


"WORK HRS: xxxxx"

"CYCLES: xxxxxxx"

-KEYBOARD DETAILS-



A WORLD OF LEADING EQUIPMENT



ABC 1	DEF 2	GHI 3
JKL 4	MNO 5	POQ 6
STU 7	VWX 8	Y&space 9

ESC **0** **ENTER**

ON **OFF**

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 packaging cycle:

4.1.1 "VACUUM ERROR" message is displayed on LCD:

No pressure variation is picked up by the PCB transducer during the vacuum sequence within a preset period of time.

- Check vacuum lines for potential leaks or kinks.

4.1.2 "GAS FLUSH ERROR" message is displayed on LCD:

No pressure variation is picked up by the PCB transducer during the gas flush sequence within a preset period of time.

- Check gas flush and vacuum lines for potential leaks or kinks.

4.1.3 "ATMOSPHERE ERROR" message is displayed on LCD:

No pressure variation is picked up by the PCB transducer during the atmosphere sequence within a preset period of time.

- Check vacuum lines for potential leaks or kinks.

4.1.4 "COVER DOWN ERROR" message is displayed on LCD(manual units):

The input signal of the down position switch has been lost during cycle execution.

- Check limit switch adjustment.

4.2 Insufficient vacuum:

4.2.1 Leakage in the bag:

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).

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.

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.

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.

Contact or does not work.

4.3.3 Permanent sealing current:

Contact or 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 MC40 Control board failure

NOTE: Refer to menu structure on page 9.

This board software is allowing access to a "Diagnostics Menu". Only qualified service technicians are authorized to access this menu by entering a security password.

By acceding either the "D1 input test" feature or the "D2 output test" feature, a trained technician will be able to quickly know the origin of the problem: pump, sealing system, pneumatic problem, security switches problem, etc. . . .

Keep in mind that in most cases trouble is due to a leakage, loose electrical connection or evident damage to the main component: vacuum pump, valves. . . , electrical contactors, thermal overload, fuses holder or transformer.

For assistance do not hesitate to contact your local service technicians.

5. Regular maintenance:

Routine controls to be made at regular intervals:

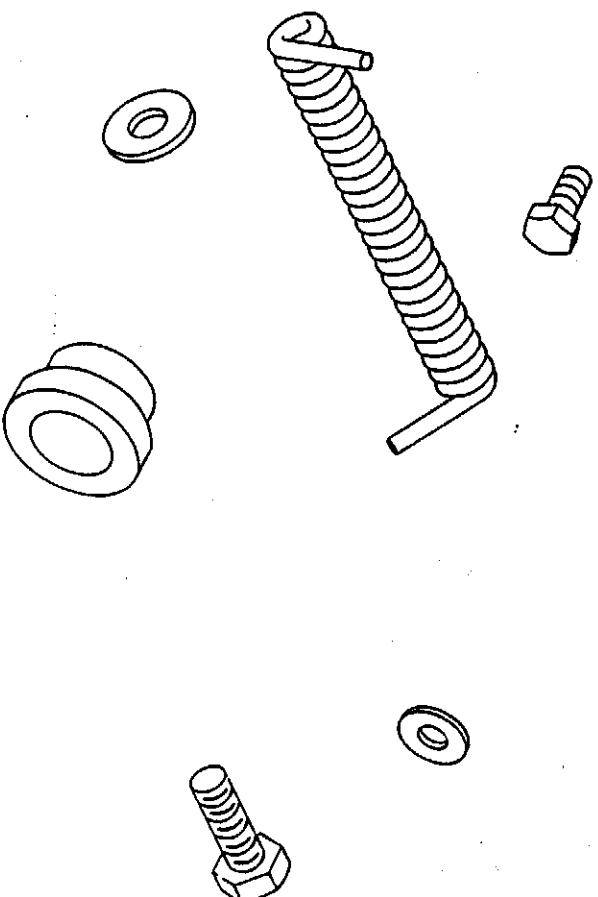
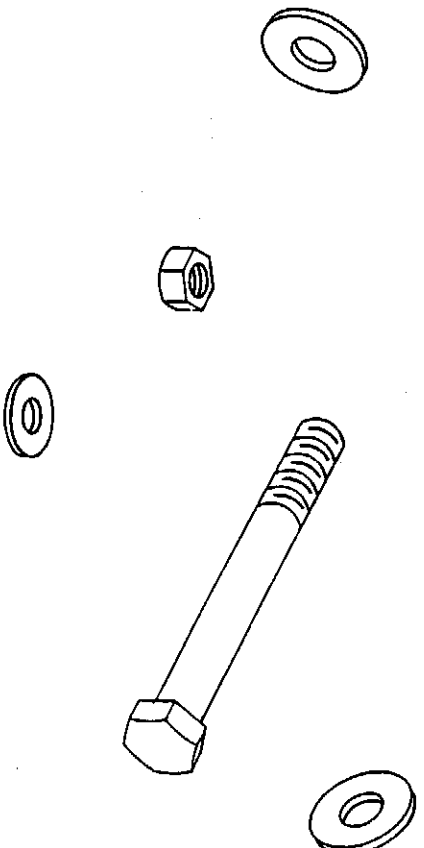
- Check teflon for wear.
- Check silicone rubber for burnt spots and smooth even position.
- Check pressure bar for jamming.
- Check lid sealing for damage and hardened spots.
- Check switch-point of micro switch, adjust if necessary.
- Check evacuation hose for damage (contraction of diameter, or abrasions).
- 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 vacuummeter.
- Check function of cycle with various settings of timers.

INSTALLATION NOTICE FOR MODELS: 250,350,350D,450T

IN ORDER TO RESPECT NSF REGULATIONS:

The table on which the machine has to be installed, should be of open frame type, to avoid dirt accumulation, and to allow easy cleaning under the machine.

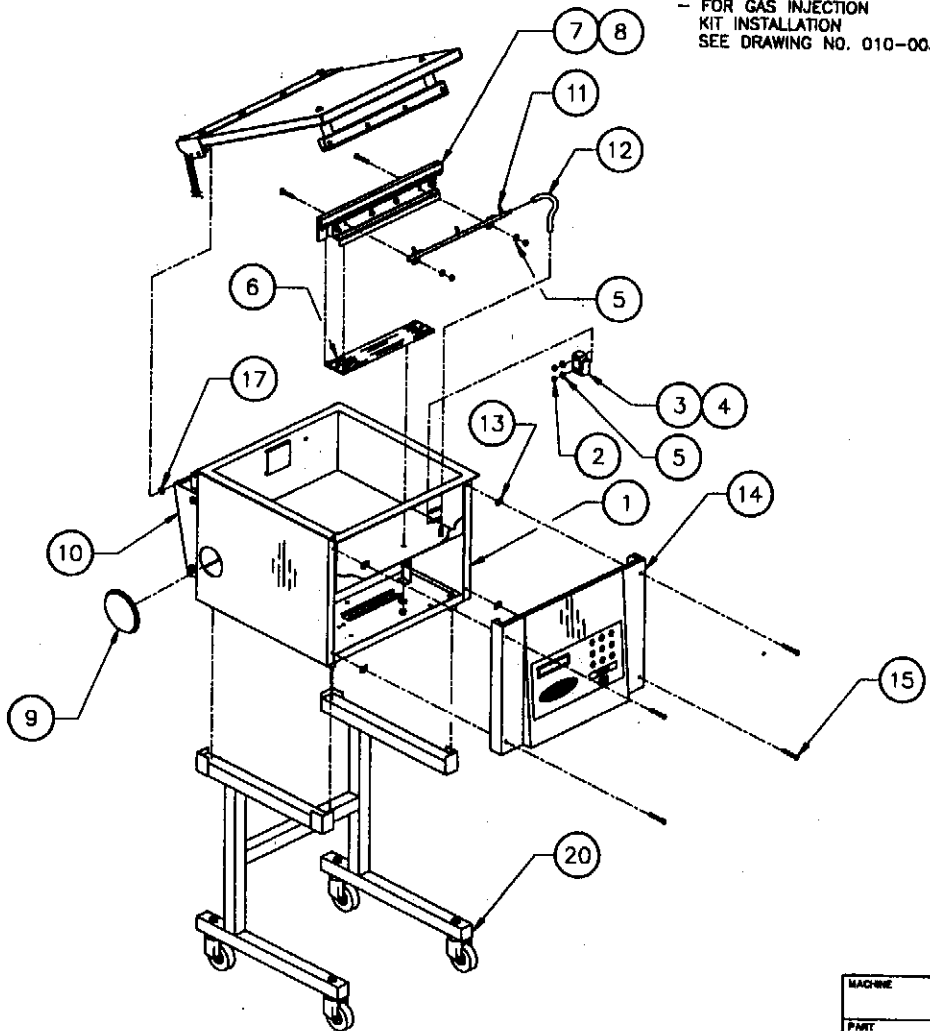
MECHANICAL DRAWING



19

NOTE:
 - FOR GAS INJECTION
 KIT INSTALLATION
 SEE DRAWING NO. 010-0034

ITEM	PART #	DESCRIPTION	QT.
1	004-0229	VACUUM 350 PRE-ASSEMBLY	1
2	051-0581	HEX. NUT 1/4"-20 NC. NYLON LOCK S/S	4
3	002-0029	LEFT SEAL BAR GUIDE BLOCK	1
4	002-0030	RIGHT SEAL BAR GUIDE BLOCK	1
5	051-0740	FLAT WASHER 1/4" S/S	7
6	005-0045	BELLOWS ASSEMBLY	1
7	005-0046	SEAL BAR ASSEMBLY W/ SUPPORT	1
8	005-0558	BAG CUT SEAL BAR ASSY W/ SUPPORT (OPT.)	1
9	057-0550	PLASTIC PLUG BUTTON 3 1/2" Ø	1
10	004-0448	REAR PANNEL PRE-ASSEMBLY	1
11	005B0042	GAS INJECTION BAR ASSY (OPT.)	1
12	008-0484	GAS INJECTION CONNECTION TUBE (OPT.)	1
13	058-0020	SPRING NUT 1/4"-20 NC.	4
14	005-0609	MC-40 FRONT PANNEL ASSEMBLY	1
15	051-0264	SCREW 1/4"-20 NC. X 2" PAN PHIL S/S	4
16	005-0268	COVER ASSEMBLY	1
17	058-0030	SPACERS	2
18	005-0278	FILLER PLATE ASSEMBLY	1
19	005-0364	HALF FILLER PLATE ASSEMBLY	2
20	005-0037	STAND ASSEMBLY (OPT.)	1



NOTE:
 - USE THIS DRAWING ALONG
 WITH DRAWING NO. 005-0612
 TO ASSEMBLE THE MACHINE.
 NO PARTICULAR ORDER SHOWN.

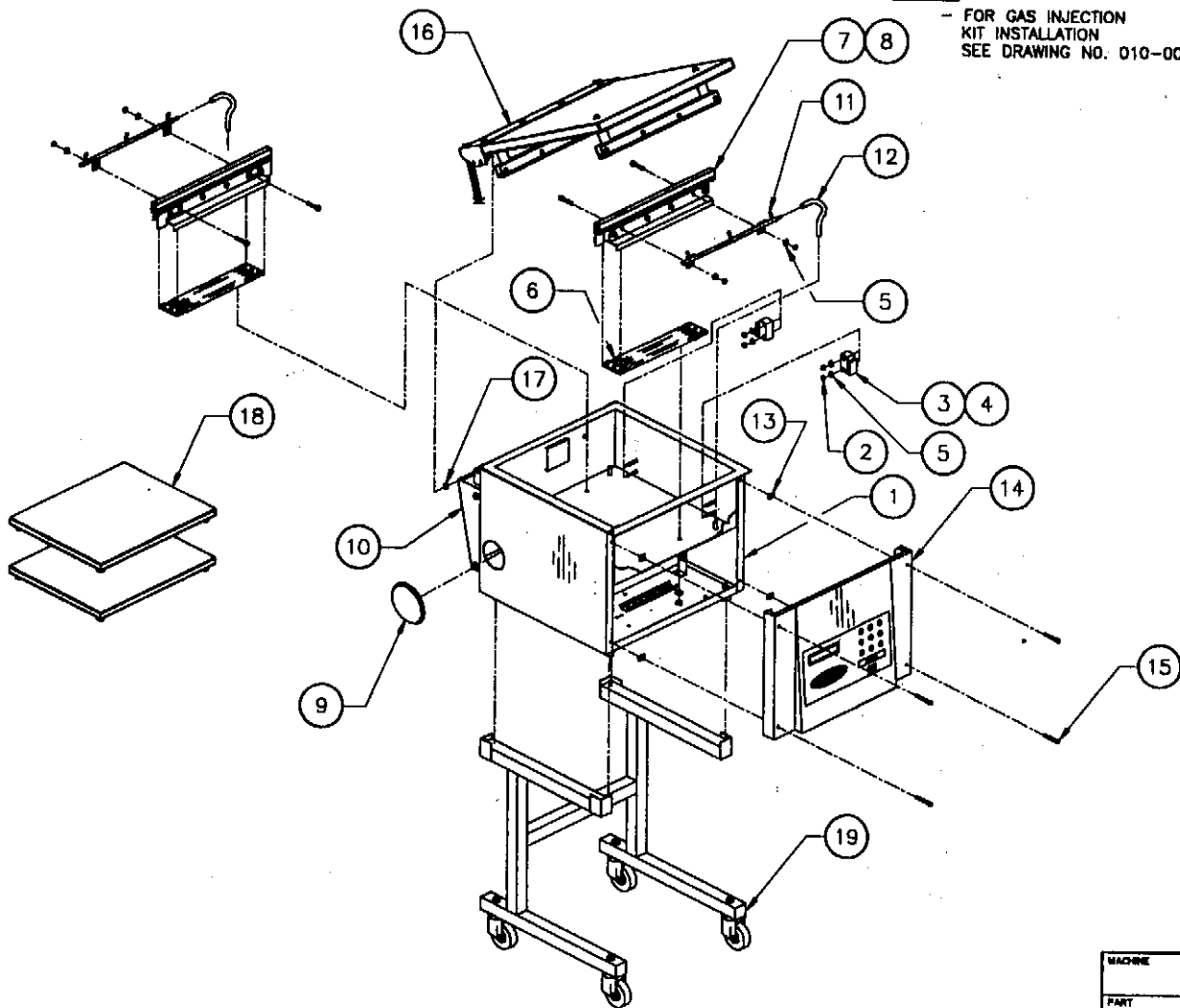
005-0610

LET.	MODIFICATION	DATE	INT.

MACHINE		350		METRIC TOLERANCE		SIPROMAC	
PART		MC-40 FRONT VIEW ASSEMBLY		.0 & .5 .3 & .55 .00 & .008 .000 & .0006 ANGLE & 1'		.0 & .015" .00 & .005" .000 & .0005" N.T.S.	
ITEM:	CNC:	SCALE	ST.	ST-GERMAIN DE GRANTHAM QUEBEC CANADA			
MAT:	BY A. PROVENCER	DATE 88-06-01	NO.	005-0610			
	APP.	DATE					

17

NOTE:
 - FOR GAS INJECTION
 KIT INSTALLATION
 SEE DRAWING NO. 010-0035



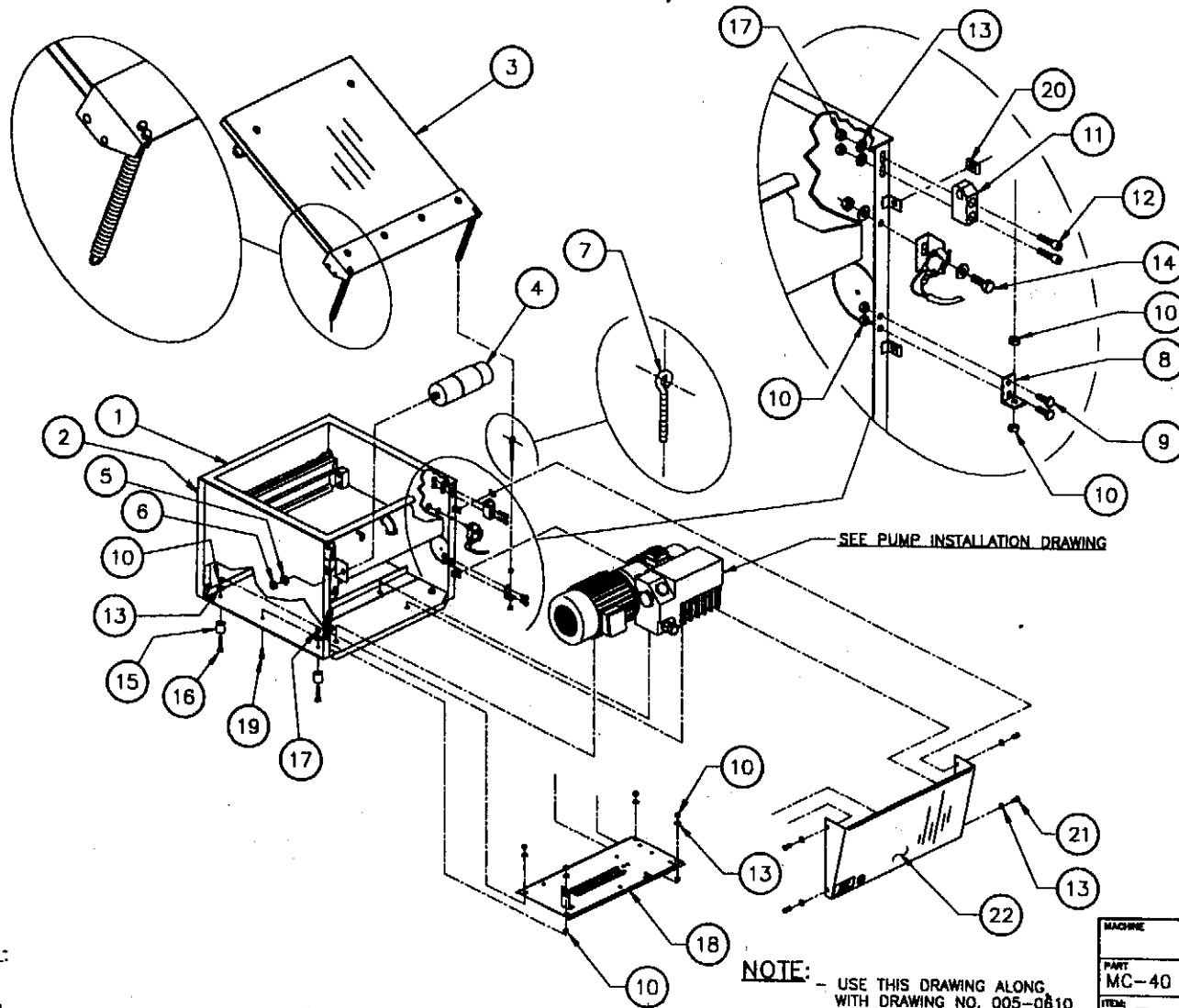
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1	004-0230	VACUUM 3500 PRE-ASSEMBLY	1
2	051-0581	HEX. NUT 1/4"-20 NC. NYLON LOCK S/S	8
3	002-0029	LEFT SEAL BAR GUIDE BLOCK	2
4	002-0030	RIGHT SEAL BAR GUIDE BLOCK	2
5	051-0740	FLAT WASHER 1/4" S/S	14
6	005-0045	BELLOWS ASSEMBLY	2
7	005-0046	SEAL BAR ASSEMBLY W/ SUPPORT	2
8	005-0558	BAG CUT SEAL BAR ASSY W/ SUPPORT (OPT.)	2
9	057-0550	PLASTIC PLUG BUTTON 3 1/2"	1
10	004-0448	REAR PANNEL PRE-ASSEMBLY	1
11	005B0042	GAS INJECTION BAR ASSY (OPT.)	2
12	008-0464	GAS INJECTION CONNECTION TUBE (OPT.)	2
13	056-0020	SPRING NUT 1/4"-20 NC.	4
14	005-0608	MC-40 FRONT PANNEL ASSEMBLY	1
15	051-0264	SCREW 1/4"-20 NC. X 2" PAN PHIL. S/S	4
16	005-0481	COVER ASSEMBLY	1
17	058-0030	SPACERS	2
18	005-0365	FILLER PLATE ASSEMBLY	2
19	005-0037	STAND ASSEMBLY (OPT.)	1

NOTE:
 - USE THIS DRAWING ALONG
 WITH DRAWING NO. 005-0613
 TO ASSEMBLE THE MACHINE.
 NO PARTICULAR ORDER SHOWN.

005-0611

LET.	MODIFICATION	DATE	INT.

MACHINE	3500	METRIC TOLERANCE F & J .0 & .08 .00 & .008 ANGLE & P	INCH TOLERANCE F & J .00 & .005 .000 & .0008 N.T.S.	SIPROMAC ST-GERMAIN DE BRANTHAM QUEBEC CANADA
PART	MC-40 FRONT VIEW ASSEMBLY	ITEM:	CNC	SCALE
MAT		DATE	88-06-01	QT. 1
		APP. <i>[Signature]</i>	DATE	005-0611



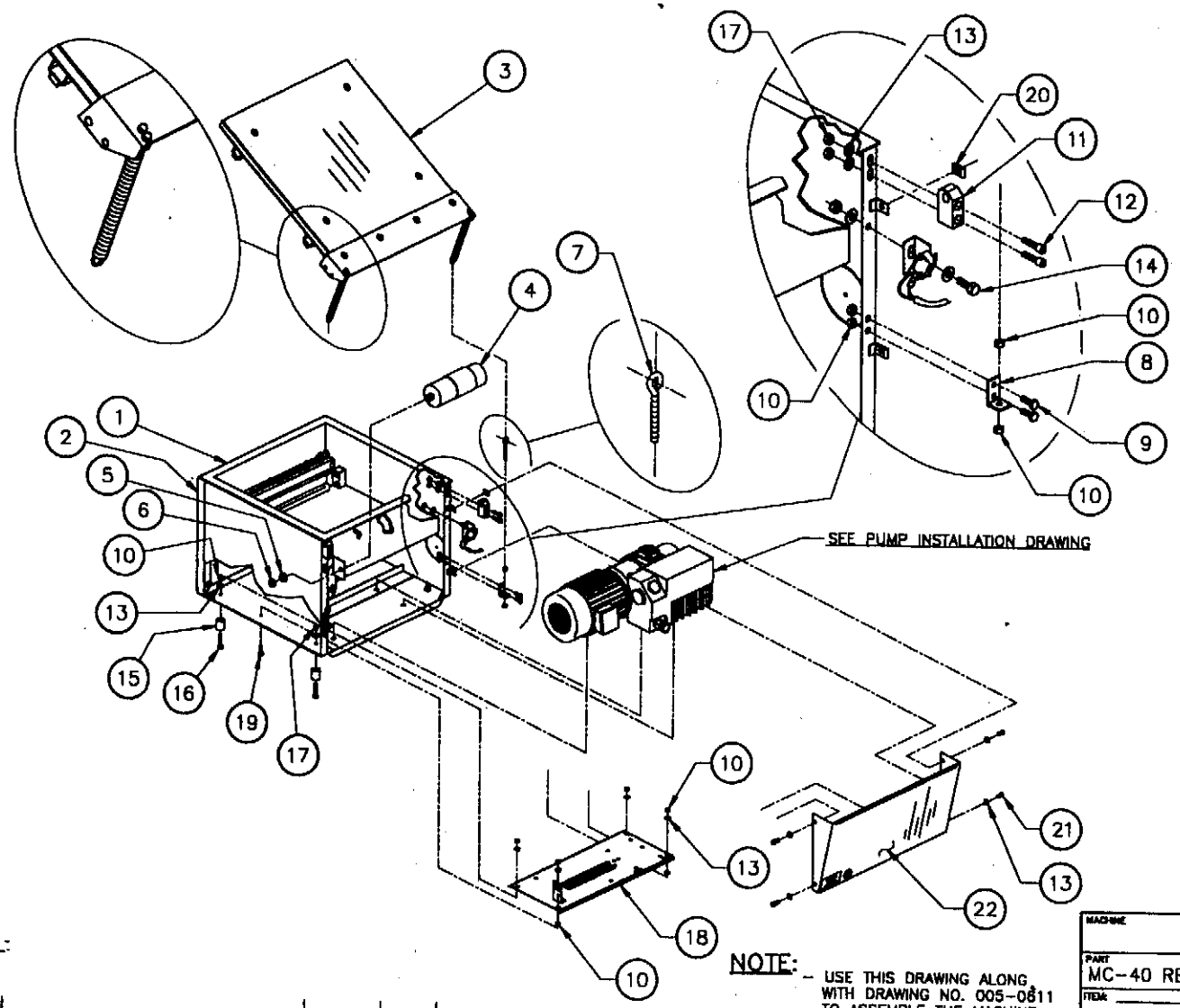
ITEM	PART #	DESCRIPTION	QTY.
1	004-0228	VACUUM 350 PRE-ASSEMBLY	1
2	004-0445	MC-40 FRONT PANNEL PRE-ASS'Y	1
3	005-0266	COVER ASSEMBLY	1
4	-----	CONDENSATOR	1
5	-----	LOCK WASHER 1/2"	1
6	-----	HEX. HALF NUT 1/2"-13 NC.	1
7	058-0015	EYE BOLT #1/4"-20 NC. X 3" S/S	2
8	001-1337	SPRING SUPPORT	2
9	051-0180	HEX. BOLT 1/4"-20 NC. X 1/2" S/S	4
10	051-0580	HEX. NUT 1/4"-20 NC. S/S	18
11	002-0024	HINGE BLOCK	2
12	051-0251	SCREW 1/4"-20 NC. X 1 1/2" SKT CAP S/S	4
13	051-0740	FLAT WASHER 1/4"	18
14	004-0281	LIMIT SWITCH ASSEMBLY	1
15	002-0022	FEET	4
16	051-0250	HEX. BOLT 1/4"-20 NC. X 1 1/2" S/S	4
17	051-0581	HEX. NUT 1/4"-20 NC. MYLON LOCK S/S	6
18	004-0042	ELECTRICAL SUPPORT PRE-ASS'Y	1
19	051-0190	HEX. BOLT 1/4"-20 NC. X 3/4" S/S	2
20	058-0002	SPRING NUT 1/4"-20 NC.	4
21	051-0185	SCREW 1/4"-20 NC. X 1/2" PAN PHIL S/S	4
22	004-0446	REAR PANNEL PRE-ASSEMBLY	1

SEE PUMP INSTALLATION DRAWING

NOTE: - USE THIS DRAWING ALONG WITH DRAWING NO. 005-0810 TO ASSEMBLE THE MACHINE. NO PARTICULAR ORDER SHOWN.

MACHINE	350	METRIC TOLERANCE G & S H & JS M & JS P & JS R & JS S & JS T & JS V & JS W & JS X & JS Y & JS Z & JS ANGLE & 1'	INCH TOLERANCE F & S H & JS M & JS P & JS R & JS S & JS T & JS V & JS W & JS X & JS Y & JS Z & JS ANGLE & 1'	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART	MC-40 REAR VIEW ASSEMBLY	N.T.S.		
ITEM:		ENG:	SCALE	DT. 1
DATE:		APP. A. PROVENCHE	DATE 88-06-02	NO. 005-0612

19



ITEM	PART #	DESCRIPTION	QT.
1	004-0230	VACUUM 350D PRE-ASSEMBLY	1
2	004-0445	MC-40 FRONT PANNEL PRE-ASSY	1
3	005-0481	COVER ASSEMBLY	1
4	-----	CONDENSATOR	1
5	-----	LOCK WASHER 1/2"	1
6	-----	HEX. HALF NUT 1/2"-13 NC.	1
7	058-0015	EYE BOLT #1/4"-20 NC. X 3" S/S	2
8	001-1337	SPRING SUPPORT	2
9	051-0180	HEX. BOLT 1/4"-20 NC. X 1/2" S/S	4
10	051-0580	HEX. NUT 1/4"-20 NC. S/S	18
11	002-0024	HINGE BLOCK	2
12	051-0251	SCREW 1/4"-20 NC. X 1 1/2" SKT CAP S/S	4
13	051-0740	FLAT WASHER 1/4"	18
14	004-0281	LIMIT SWITCH ASSEMBLY	1
15	002-0022	FEET	4
18	051-0250	HEX. BOLT 1/4"-20 NC. X 1 1/2" S/S	4
17	051-0581	HEX. NUT 1/4"-20 NC. NYLON LOCK S/S	6
18	004-0042	ELECTRICAL SUPPORT PRE-ASSY	1
19	051-0180	HEX. BOLT 1/4"-20 NC. X 3/4" S/S	2
20	058-0002	SPRING NUT 1/4"-20 NC.	4
21	051-0185	SCREW 1/4"-20 NC. X 1/2" PAN PHIL S/S	4
22	004-0446	REAR PANNEL PRE-ASSEMBLY	1

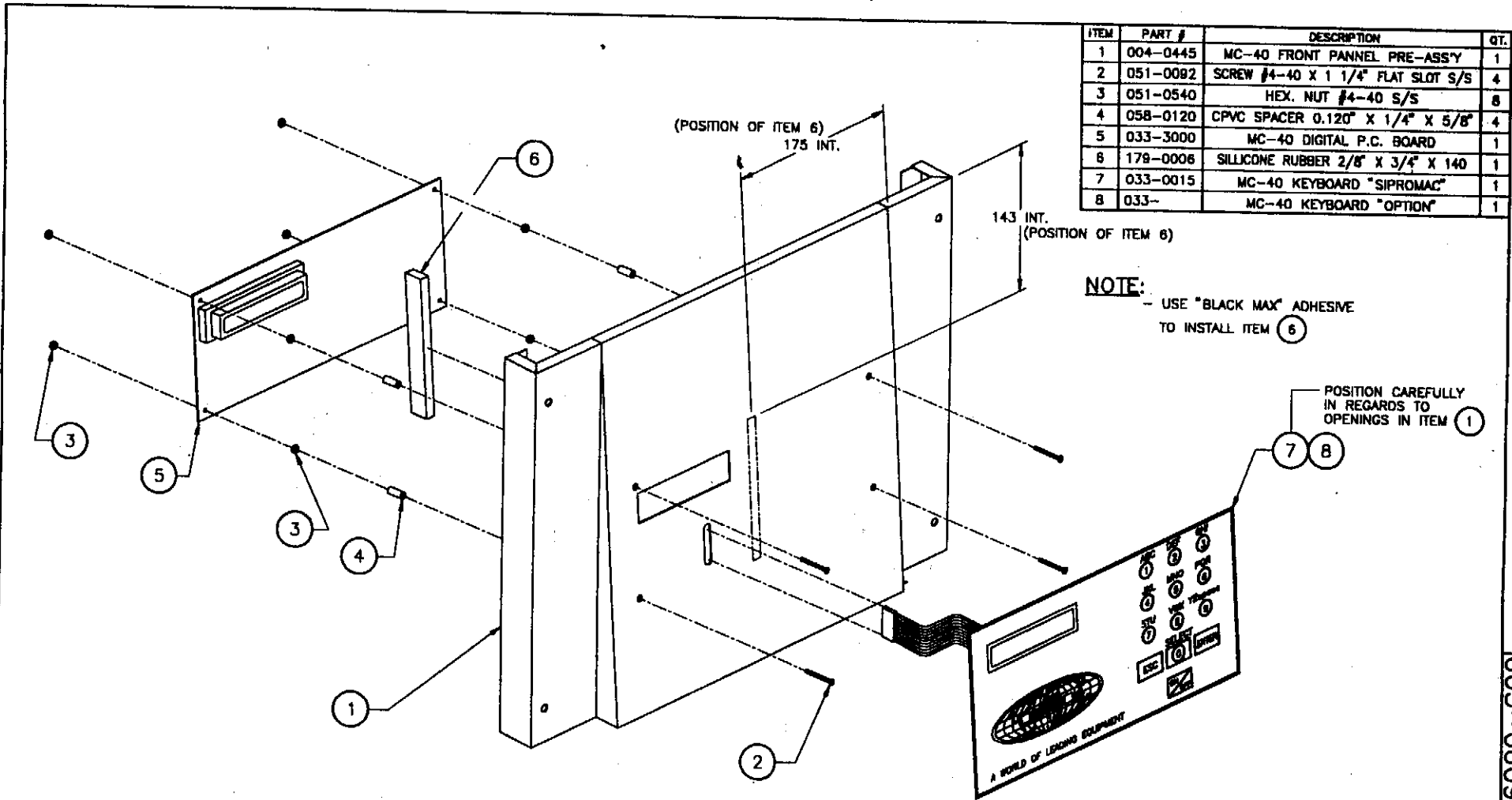
SEE PUMP INSTALLATION DRAWING

NOTE: - USE THIS DRAWING ALONG WITH DRAWING NO. 005-0611 TO ASSEMBLE THE MACHINE. NO PARTICULAR ORDER SHOWN.

LET.	MODIFICATION	DATE	INT.

MACHINE 350D		METRIC TOLERANCE 0.005 0.0025 0.0015 0.001 0.0005 ANGLE ± 1°	NON TOLERANCE 0.00125 0.00075 0.0005 0.000375 0.00025 N.T.S.	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART MC-40 REAR VIEW ASSEMBLY		DATE 98-06-02	SCALE 1	ST. 1
BY A. PROVENCER	DATE	DATE	NO. 005-0613	

005-0613



ITEM	PART #	DESCRIPTION	QT.
1	004-0445	MC-40 FRONT PANNEL PRE-ASS'Y	1
2	051-0082	SCREW #4-40 X 1 1/4" FLAT SLOT S/S	4
3	051-0540	HEX. NUT #4-40 S/S	8
4	058-0120	CPVC SPACER 0.120" X 1/4" X 5/8"	4
5	033-3000	MC-40 DIGITAL P.C. BOARD	1
6	179-0006	SILICONE RUBBER 2/8" X 3/4" X 140	1
7	033-0015	MC-40 KEYBOARD "SIPROMAC"	1
8	033--	MC-40 KEYBOARD "OPTION"	1

NOTE:
 -- USE "BLACK MAX" ADHESIVE
 TO INSTALL ITEM (6)

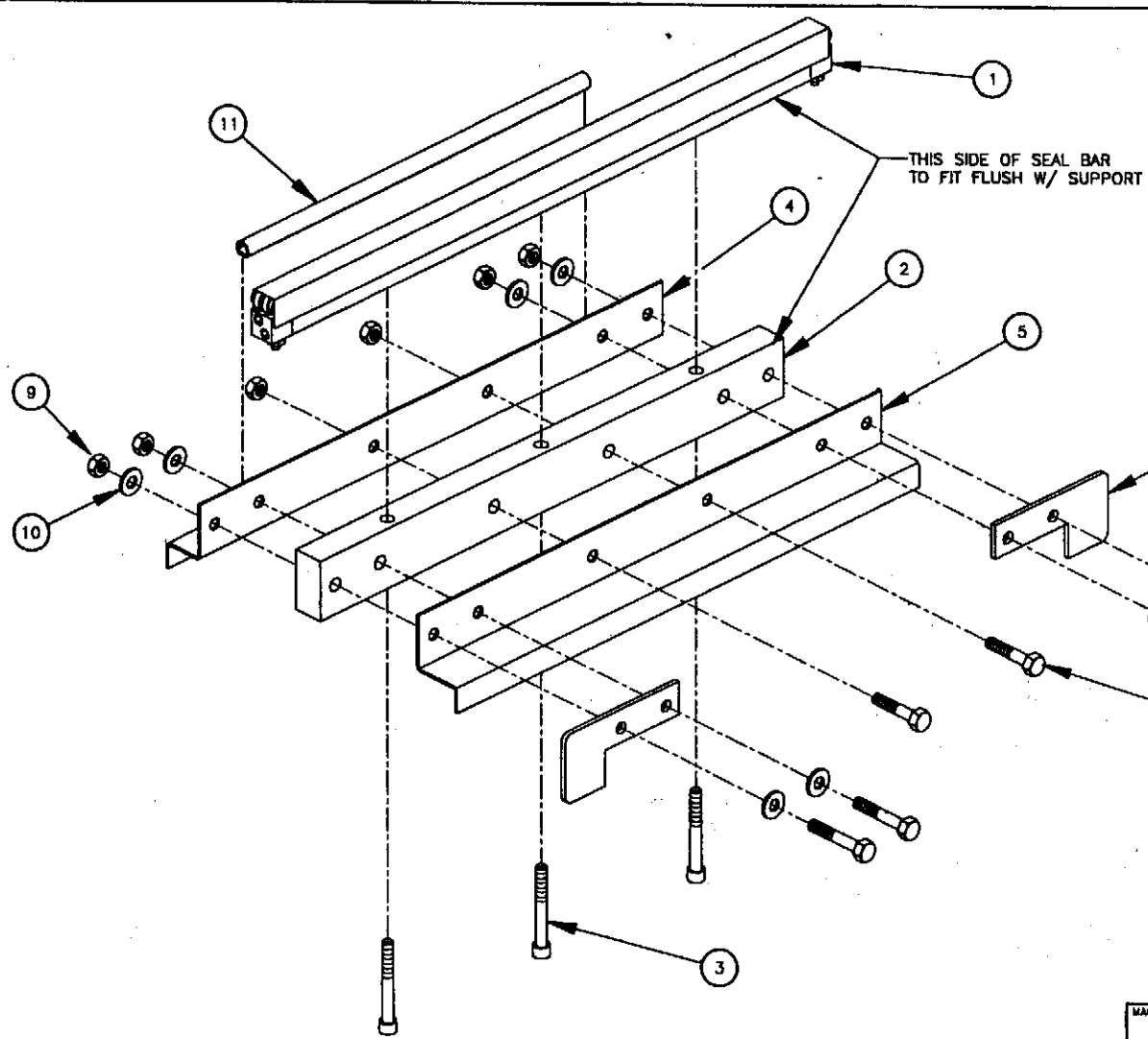
POSITION CAREFULLY
 IN REGARDS TO
 OPENINGS IN ITEM (1)

1005-0609

LET.	MODIFICATION	DATE	INT.
------	--------------	------	------

MACHINE 350 & 350D		METRIC TOLERANCE G & J H & JS K & JS M & JS N & JS P & JS R & JS S & JS T & JS V & JS W & JS X & JS Y & JS Z & JS	ENGLISH TOLERANCE F & Z G & Z H & Z K & Z M & Z N & Z P & Z R & Z S & Z T & Z V & Z W & Z X & Z Y & Z Z & Z	SIPROMAC
PART MC-40 FRONT PANNEL ASS'Y		N.T.S.		ST-GERMAIN DE GRANTHAM QUEBEC CANADA
ITEM:	QTY:	SCALE:	QT.:	1
MAR:	BY: A. PROVENCER	DATE: 88-05-28	NO.:	005-0609

21



ITEM	PART #	DESCRIPTION	QT.
1	005-0287	SEAL BAR PRE-ASSEMBLY	1
2	002-0509	SEAL BAR SUPPORT (TABLE)	1
3	051-0256	CAP HEX. SKT. BOLT 1/4"-20 NC X 1 3/4" S/S	3
4	001-1952	EXTERIOR BELLOWS COVER	1
5	001-1953	INTERIOR BELLOWS COVER	1
6	001-0269	SEAL BAR GUIDE	2
7	051-0250	HEX. BOLT 1/4"-20 NC. X 1 1/2" S/S	4
8	051-0230	HEX. BOLT 1/4"-20 NC. X 1 1/4" S/S	2
9	051-0581	HEX. NUT 1/4"-20 NC. NYLON LOCK S/S	8
10	051-0740	FLAT WASHER 1/4" S/S	8
11	038-0230	WRING DUCT W/ ADHESIVE BACKING (0.35" X 0.5" X 287) PVC	1

NOTE: QTY FOR ONE SEAL BAR ONLY SEE LIST

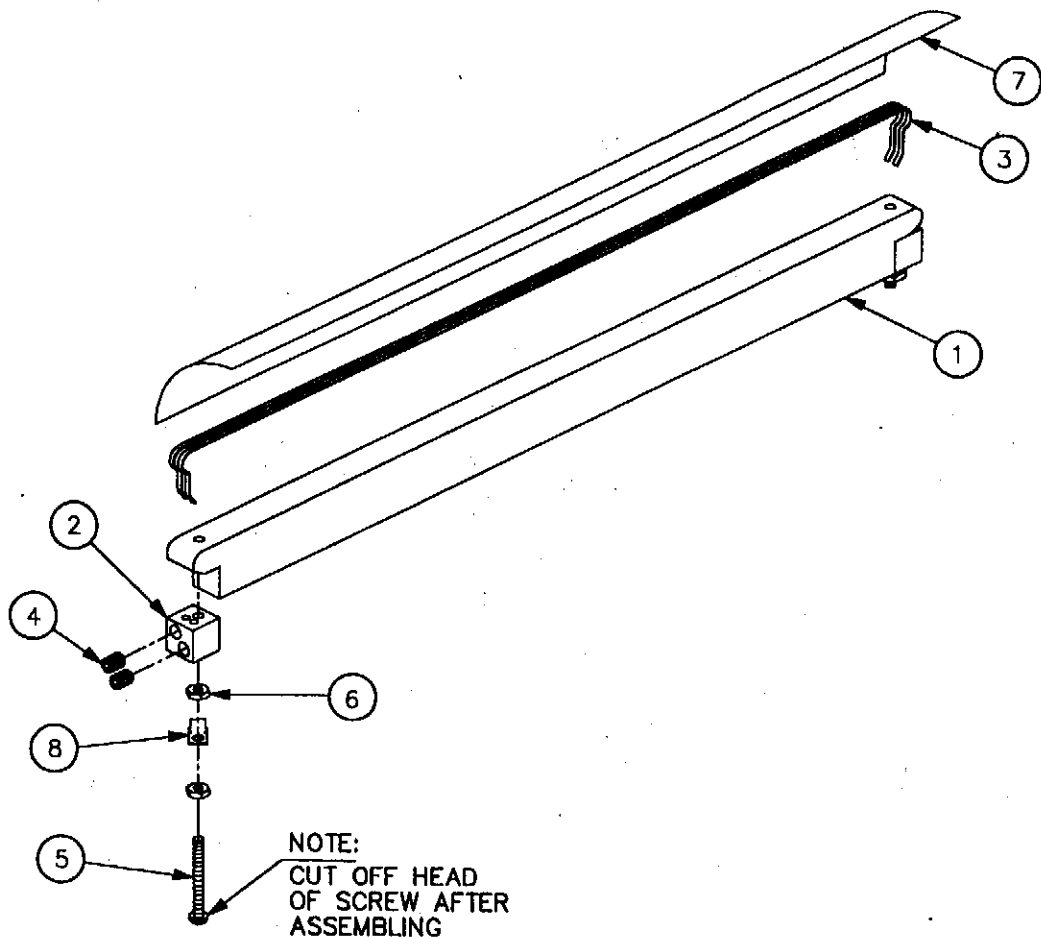
420A	4
350D	2
350	1
MACHINE	QTY

E	420A ADDED/ WAS 005-0329/ MODIF. A-0217	97-08-09	A.P.
D	LOWERED BOLT HOLES	97-08-09	A.P.
C	REDRAWN/ MODIF. A-0218	97-08-29	A.P.
LET.	MODIFICATION	DATE	INT.

MACHINE	350, 350D & 420A		METRIC TOLERANCE	± .005	HIGH TOLERANCE	± .015	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART	SEAL BAR ASSEMBLY W/ SUPPORT		± .002	± .005	N.T.S.		
ITEM:	QTY:	SCALE:	BY:	DATE:	DATE:	QTY:	SEE LIST
MAT:	APP.:		A. PROVENCHER	97-08-29		005-0046	

1005-0046

22



ITEM	PART #	DESCRIPTION	QT.
1	002-0015	SEAL BAR	1
2	002-0031	CONNECTOR	2
3	038-0200	SEALING ELEMENT	2
4	052-0395	SET SCREW 1/4"-20 X 5/16" (OVAL POINT)	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	1
8	027-0400	CONNECTOR ADAPTOR	2

QTY SHOWN IS FOR ONE BAR
SEE LIST FOR QTY.

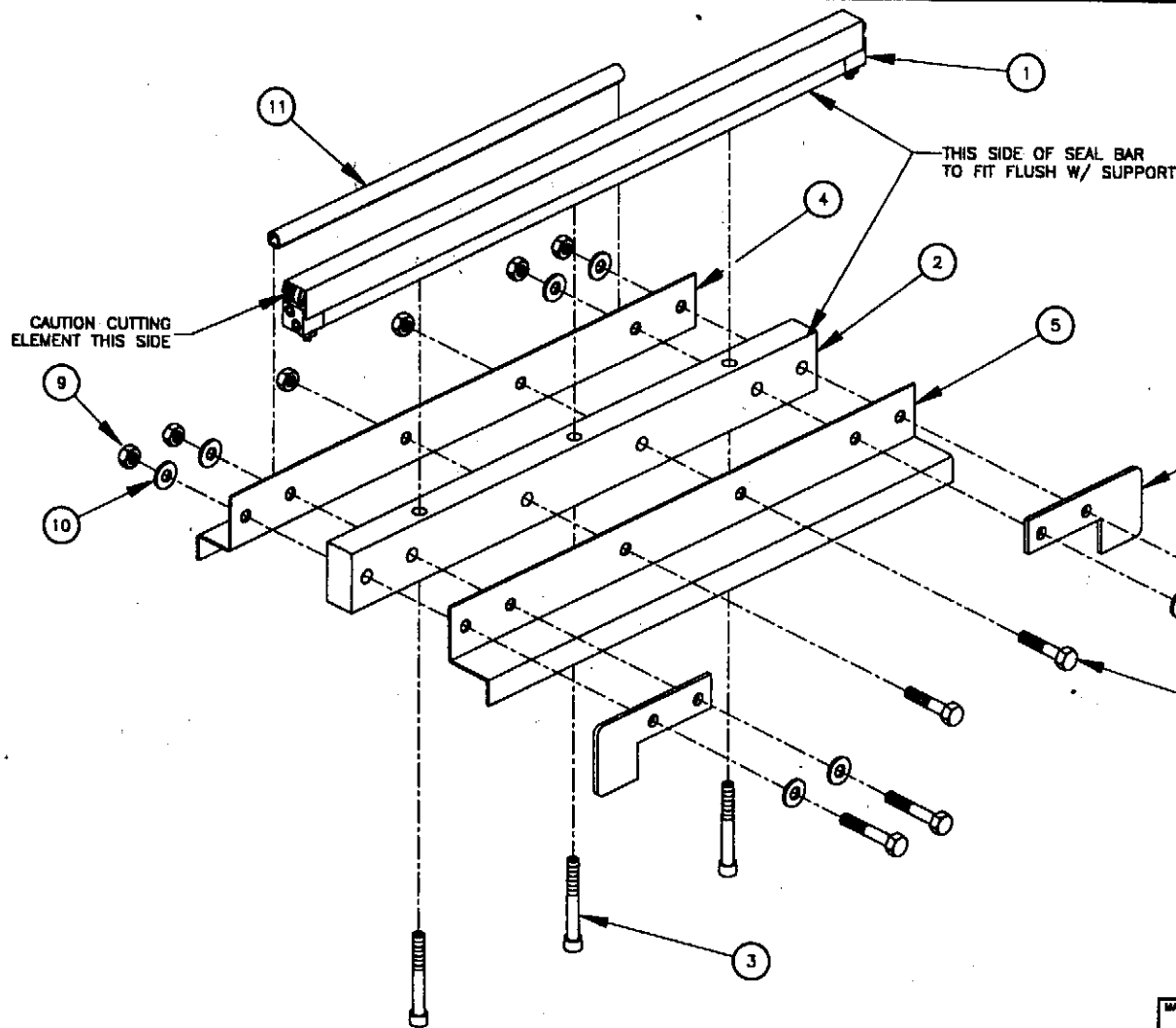
NOTE:
CUT OFF HEAD
OF SCREW AFTER
ASSEMBLING

420A	4
350D	2
350	1
MACHINE	QTY

MACHINE	350, 350D & 420A	METRIC TOLERANCE ± .005 ± .010 ± .020 ± .030 ± .050 ± .0008 ANGLE ± 1°	INCH TOLERANCE ± .010 ± .015 ± .030 ± .0008 N.T.S.	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART	SEAL BAR PRE-ASSEMBLY			
ITEM:		CNC	SCALE	QTY SEE LIST
MAT:		BY A. PROVENCER	DATE 97-09-03	NO. 005-0267

C	REDRAWN/ MODIF. A-0218	97-09-03	A.P.
LET.	MODIFICATION	DATE	INT.

1005-0267



ITEM	PART #	DESCRIPTION	QT.
1	005-0382	SEAL BAR PRE-ASSEMBLY	1
2	002-0509	SEAL BAR SUPPORT (TABLE)	1
3	051-0256	CAP HEX. SKT. BOLT 1/4"-20 NC X 1 3/4" S/S	3
4	001-1952	EXTERIOR BELLOWS COVER	1
5	001-1953	INTERIOR BELLOWS COVER	1
6	001-0269	SEAL BAR GUIDE	2
7	051-0250	HEX. BOLT 1/4"-20 NC. X 1 1/2" S/S	4
8	051-0230	HEX. BOLT 1/4"-20 NC. X 1 1/4" S/S	2
9	051-0581	HEX. NUT 1/4"-20 NC. NYLON LOCK S/S	6
10	051-0740	FLAT WASHER 1/4" S/S	8
11	038-0230	WRING DUCT W/ ADHESIVE BACKING (0.35" X 0.5" X 267) PVC	1

NOTE: QTY FOR ONE SEAL BAR ONLY SEE LIST

420A	4
350D	2
350	1
300	1
MACHINE	QTY

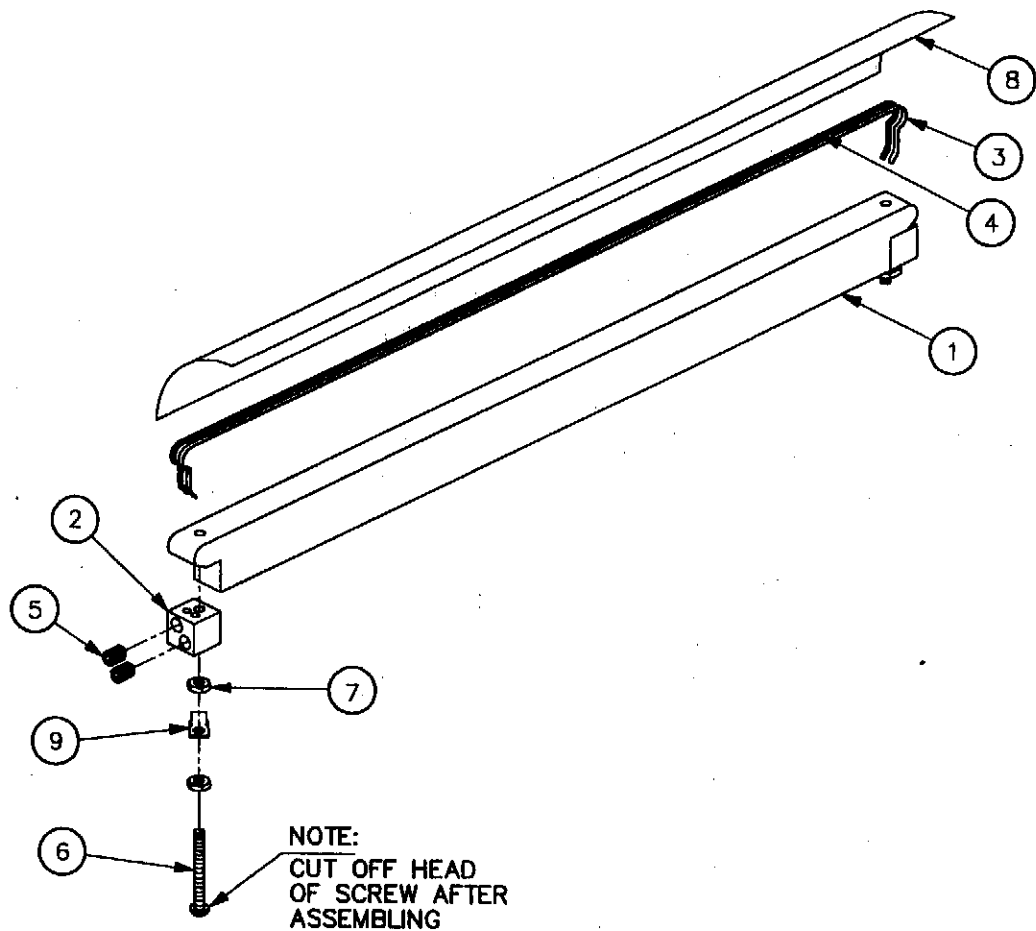
-BAG CUT OPTION-

MACHINE	300, 350, 350D & 420A	METRIC TOLERANCE	± .005	BICH TOLERANCE	± .010	SIPROMAC
PART	SEAL BAR ASSEMBLY W/ SUPPORT	METRIC TOLERANCE	± .005	BICH TOLERANCE	± .008	
ITEM		DATE	07-08-29	SCALE		SEE LIST
DATE		DATE		NO.		005-0558

C	ADDED 300	98-08-03	L.M.
B	420A ADDED/ MODIF. A-0217	97-08-09	A.P.
A	LOWERED BOLT HOLES	97-08-09	A.P.
LET.	MODIFICATION	DATE	INT.

1005-0558

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ITEM	PART #	DESCRIPTION	QT.
1	002-0015	SEAL BAR	1
2	002-0031	CONNECTOR	2
3	039-0230	CONVEX SEALING ELEMENT	1
4	039-0270	"T" PROFILE CUTTING ELEMENT	1
5	052-0395	SET SCREW 1/4"-20 X 5/16" (OVAL POINT)	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 (5S) ADHESIVE	1
9	027-0400	CONNECTOR ADAPTOR	2

QTY SHOWN IS FOR ONE BAR
SEE LIST FOR QTY.

420A	4
350D	2
350	1
300	1
MACHINE	QTY

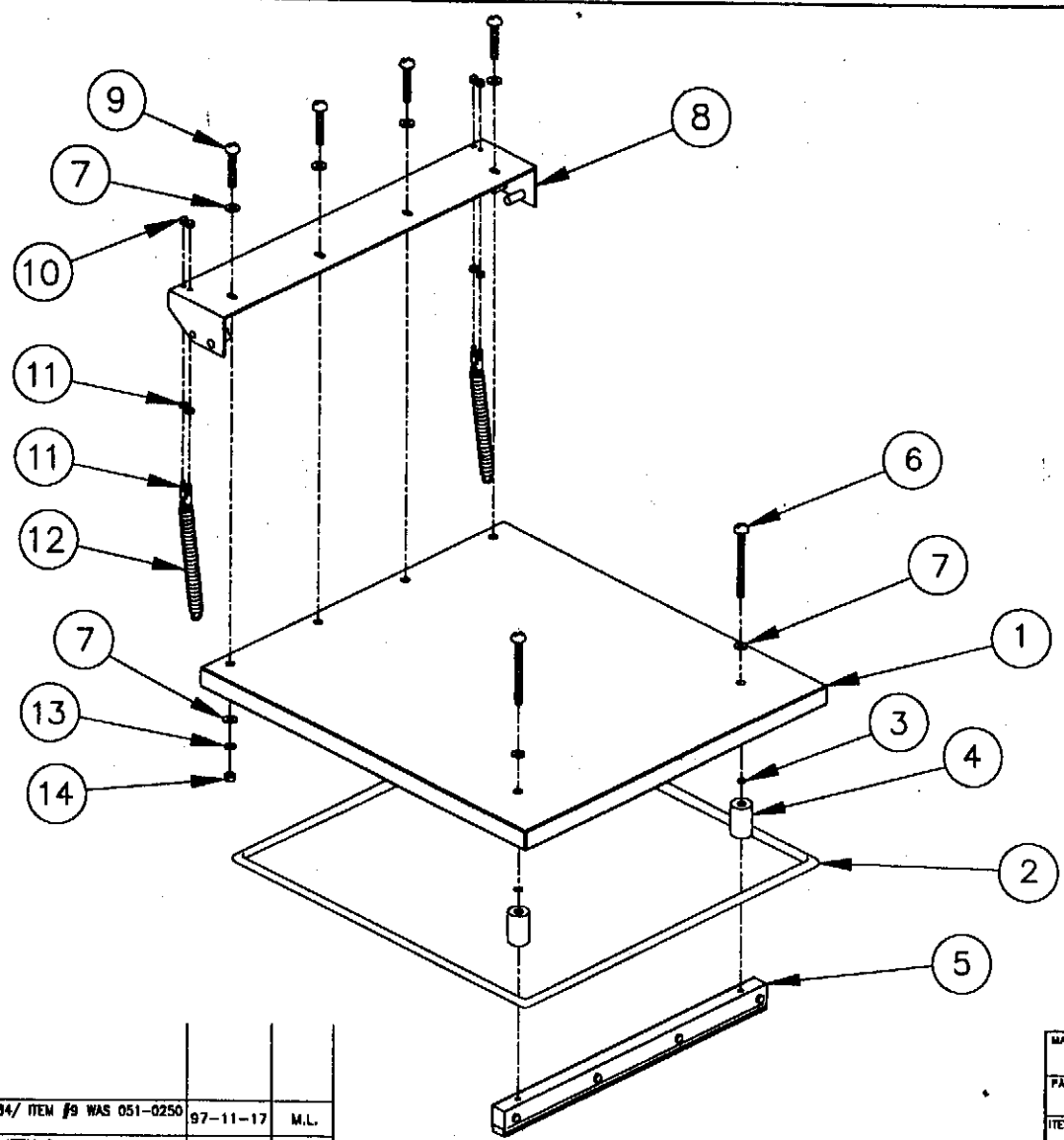
-BAG CUT OPTION-

MACHINE	300, 350, 350D & 420A	METRIC TOLERANCE	ISO # 2	SIEMENS TOLERANCE	AS 10	SIPROMAC
PART	SEAL BAR PRE-ASSEMBLY	ISO # 1	ISO # 2	ISO # 3	ISO # 4	ST-GERMAIN DE GRANTHAM QUEBEC CANADA
ITEM:		ISO # 5	ISO # 6	ISO # 7	ISO # 8	
MAT:		ISO # 9	ISO # 10	ISO # 11	ISO # 12	
DATE	97-08-03	ISO # 13	ISO # 14	ISO # 15	ISO # 16	
APP:	A. PROVENCER	ISO # 17	ISO # 18	ISO # 19	ISO # 20	
SCALE		ISO # 21	ISO # 22	ISO # 23	ISO # 24	
BY		ISO # 25	ISO # 26	ISO # 27	ISO # 28	
DATE		ISO # 29	ISO # 30	ISO # 31	ISO # 32	
NO.	005-0382	ISO # 33	ISO # 34	ISO # 35	ISO # 36	

LET.	MODIFICATION	DATE	INT.
E	ADDED 300	98-08-03	L.M.
D	REDRAWN/ MODIF. A-0218	97-08-03	A.P.

1005-0382

25

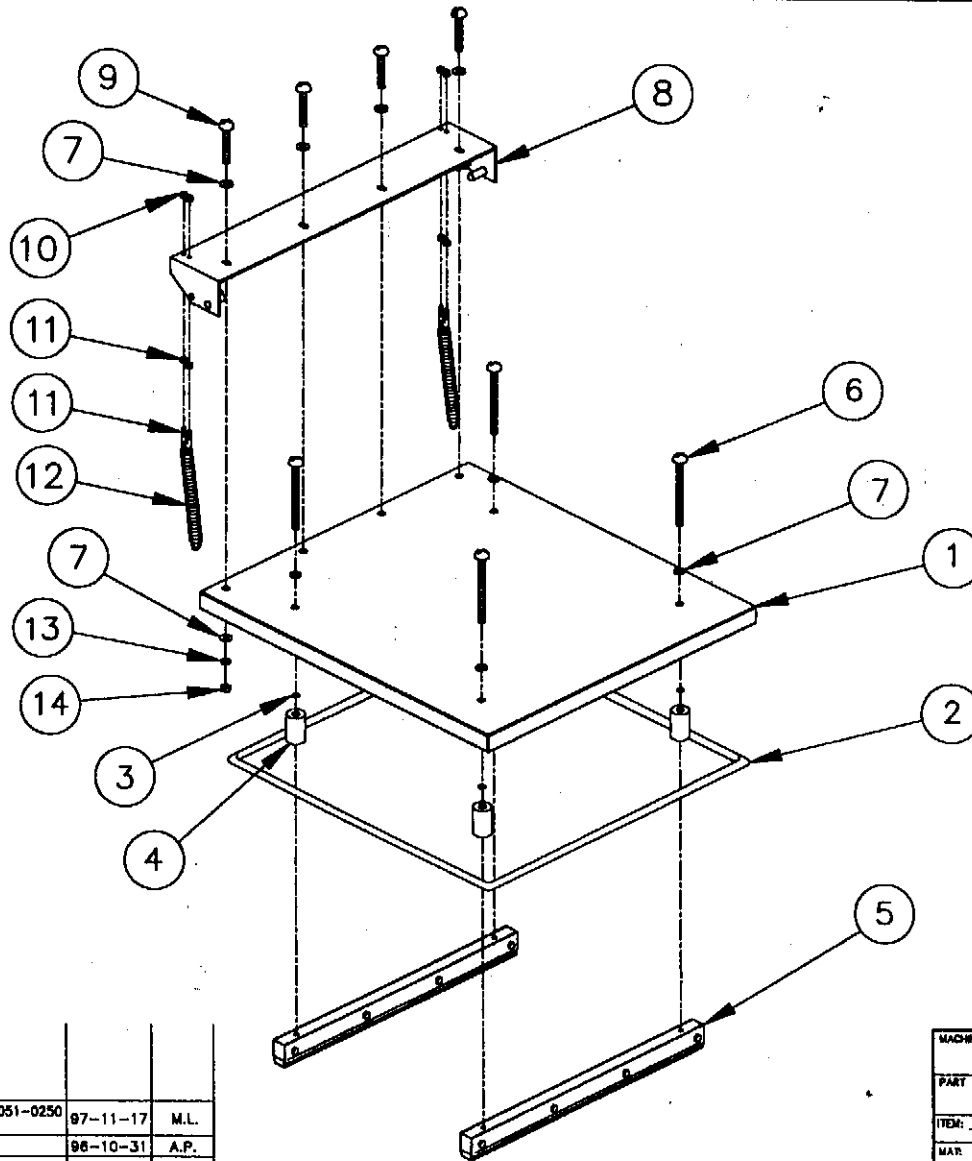


ITEM	PART #	DESCRIPTION	QT.
1	002-0025	COVER	1
2	179-0005	COVER GASKET	1
3	076-0010	"O" RING	2
4	002-0026	UPPER SEAL BAR SPACER	2
5	004-0173	UPPER SEAL BAR ASS'Y	1
6	051-0286	SCREW 1/4"-20 NC. x 3" PAN PHIL S/S	2
7	051-0740	FLAT WASHER 1/4" S/S	10
8	004-0021	COVER HINGE ASS'Y	1
9	051-0249	SCREW 1/4"-20 NC. X 1 1/2" PAN PHIL S/S	4
10	051-0570	ACORN NUT 10-24 NC S/S	4
11	056-2500	U-BOLT 10-24 NC W/NUTS	2
12	077-0002	SPRING	2
13	051-0750	LOCK WASHER 1/4" S/S	4
14	051-0580	HEX. NUT 1/4"-20 NC S/S	4

C	ITEM #8 WAS 051-0284/ ITEM #9 WAS 051-0250 FOR N.S.F.	97-11-17	M.L.
B	REDRAWN/MODIFIED ITEM B	98-10-31	A.P.
LET.	MODIFICATION	DATE	INT.

MACHINE	350	METRIC TOLERANCE 0.0008 0.0016 0.0025 0.0032 0.0040 0.0050 0.0063 0.0080 0.0100 0.0125 0.0160 0.0200 0.0250 0.0315 0.0400 0.0500 0.0630 0.0800 0.1000 0.1250 0.1600 0.2000 0.2500 0.3150 0.4000 0.5000 0.6300 0.8000 1.0000	INCH TOLERANCE 0.0005 0.0010 0.0015 0.0020 0.0030 0.0040 0.0050 0.0060 0.0070 0.0080 0.0100 0.0125 0.0150 0.0200 0.0250 0.0315 0.0400 0.0500 0.0630 0.0800 0.1000 0.1250 0.1600 0.2000 0.2500 0.3150 0.4000 0.5000 0.6300 0.8000 1.0000	ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART	COVER ASSEMBLY	N.T.S.		
ITEM:	CNC	SCALE	QT. 1	
MAT:	APP. A.P.	DATE 96-10-31	NO. 005-0266	

005-0266



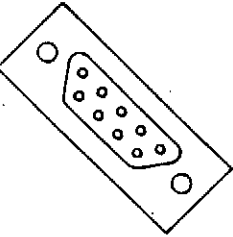
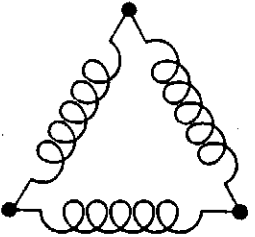
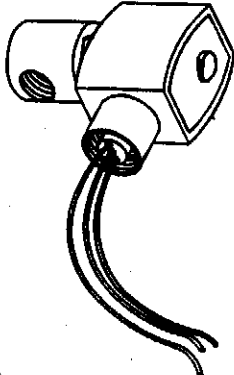
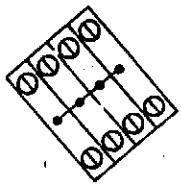
ITEM	PART #	DESCRIPTION	QT.
1	002-0392	COVER	1
2	178-0005	COVER GASKET	1
3	078-0010	"O" RING	4
4	002-0028	UPPER SEAL BAR SPACER	4
5	004-0173	UPPER SEAL BAR ASS'Y	2
6	051-0286	SCREW 1/4"-20 NC. x 3" PAN PHIL. S/S	4
7	051-0740	FLAT WASHER 1/4" S/S	12
8	004-0021	COVER HINGE ASSY	1
9	051-0249	SCREW 1/4"-20 NC. X 1 1/2" PAN PHIL. S/S	4
10	051-0570	ACORN NUT 10-24 NC S/S	4
11	056-2500	U-BOLT 10-24 NC W/NUTS	2
12	077-0002	SPRING	2
13	051-0750	LOCK WASHER 1/4" S/S	4
14	051-0580	HEX. NUT. 1/4"-20 NC S/S	4

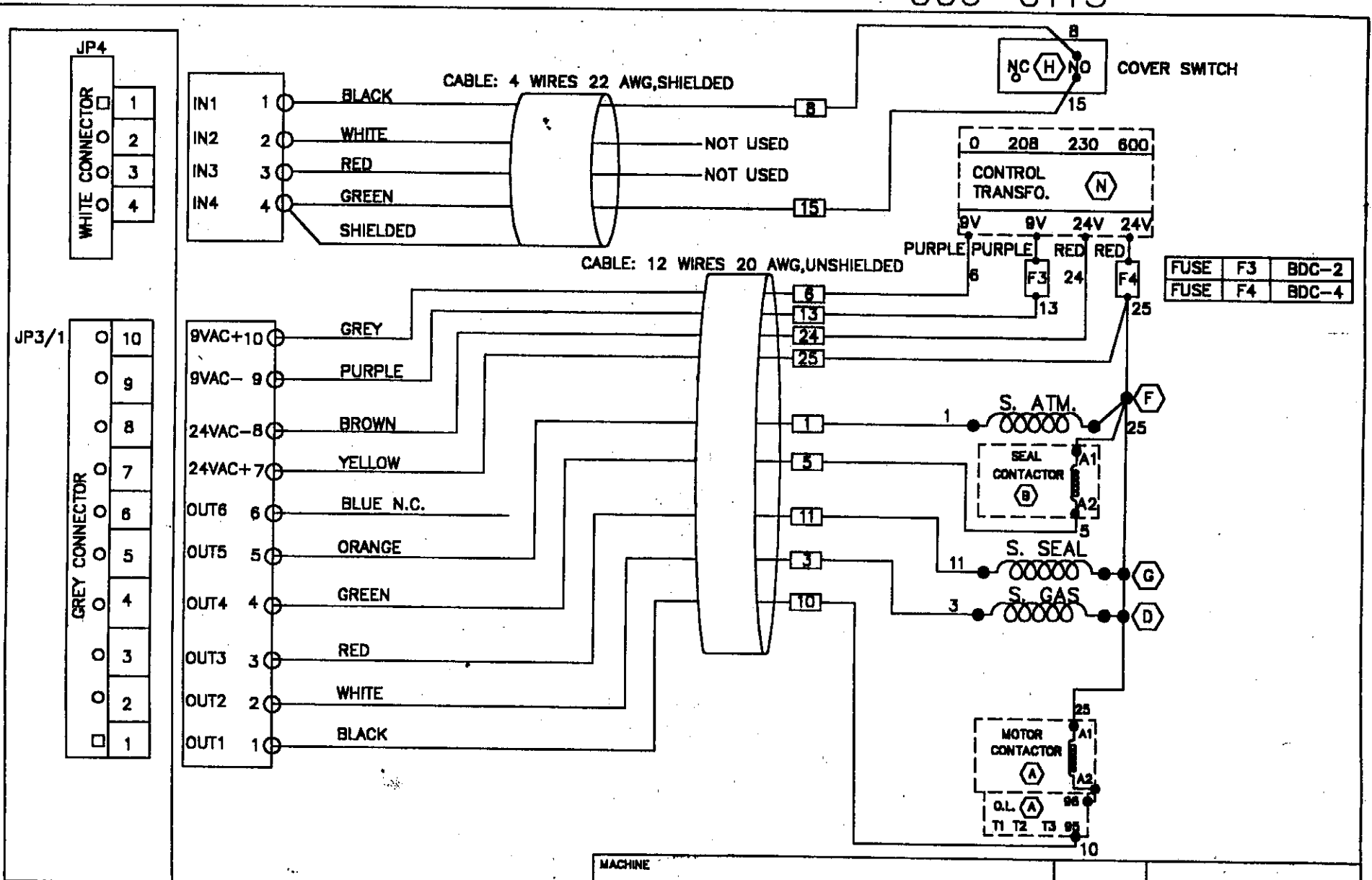
C	ITEM #8 WAS 051-0284/ ITEM #9 WAS 051-0250 FOR N.S.F.	97-11-17	M.L.
B	REDRAWN/MODIFIED ITEM B	96-10-31	A.P.
LET.	MODIFICATION	DATE	INT.

MACHINE	350D	METRIC TOLERANCE 0.005 .0025 .0025 .0025 ANGLE & 1'	INCH TOLERANCE ± .010" ± .005" ± .005" N.T.S.	SIPROMAC
PART	COVER ASSEMBLY	ST-GERMAIN DE GRANTHAM QUEBEC CANADA		
ITEM:	CNC	SCALE	WT.	1
MAR	APP. A.P.	DATE 96-10-31	005-0481	

005-0481

ELECTRICAL DRAWING





FUSE	F3	BDC-2
FUSE	F4	BDC-4

MC-40

MACHINE		VACUUM SINGLE CHAMBER		SIPROMAC	
		LOW VOLTAGE WITH MC-40		ST-GERMAIN DE GRANTHAM, QUEBEC CANADA	
MAT:	DESIGN	DATE	NO.		
	D. LÉTOURNEAU	15 MAY 98	006-0115		
LET.	MODIFICATION	DATE	INT.		

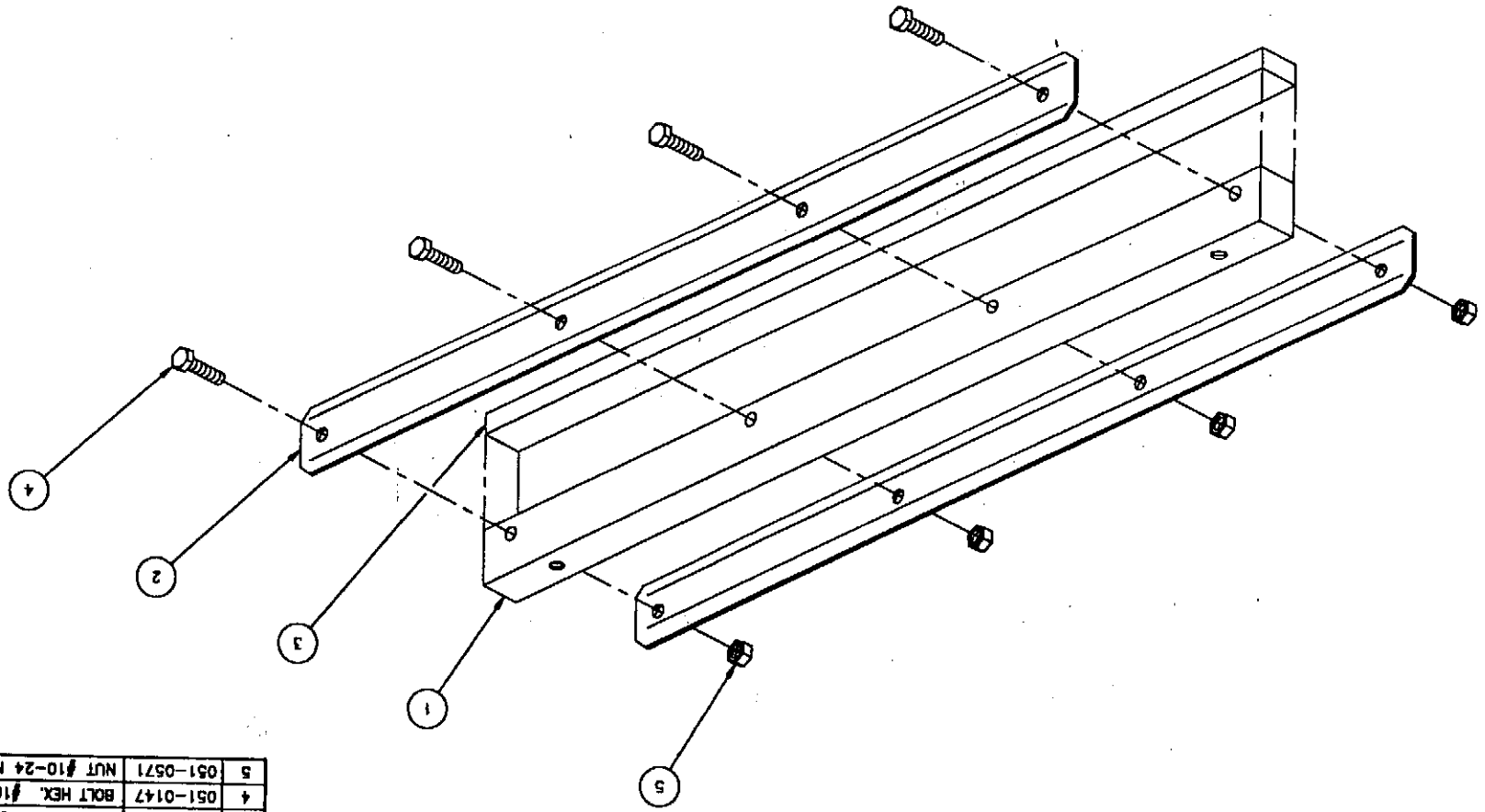
FOR PART NUMBERS FOR LETTERS (A) THRU (N) SEE FOLLOWING LIST

004-0173

22

MACHINE		QTY	
350	1	3500	2
PART # 350 & 3500 UPPER SEAL BAR PRE-ASSY N.T.S. ST-GERMAIN DE GRANBY QUEBEC CANADA SIPROMAC			
DATE	96-11-14	DATE	96-11-14
APR		APR	
SEE LIST		SEE LIST	
004-0173			

8	REDAWN/ADDED 3500	DATE	96-11-14	APR
LET.	MODIFICATION	DATE		APR



ITEM	PART #	DESCRIPTION	QTY
1	002-0377	UPPER SEAL BAR	1
2	001-0096	UPPER SEAL BAR SUPPORT	2
3	008-0291	UPPER SEAL BAR RUBBER	1
4	051-0147	BOLT HEX. #10-24 NC X 1" S/S	4
5	051-0571	NUT #10-24 NC S/S	4

QUANTITY FOR ONE
BAR ONLY.
SEE LIST FOR QTY

ELECTRICAL DRAWINGS PARTS LIST

MODEL: 350 & 350D

A :	VOLT	PHASE	PUMP HP	CONTACTOR	OVERLOAD
	110	1	1	025-0030	025-0190
	220	1		025-0020	025-0190

B,C & O: SEALING CONTACTOR: 025-0020

D: OPTIONAL GAZ SOLENOID VALVE: 106-0010

E: VACUUM SOLENOID VALVE: 106-0030

F: ATMOSPHERE SOLENOID VALVE: 106-0020 WITH PUMP: 1 HP

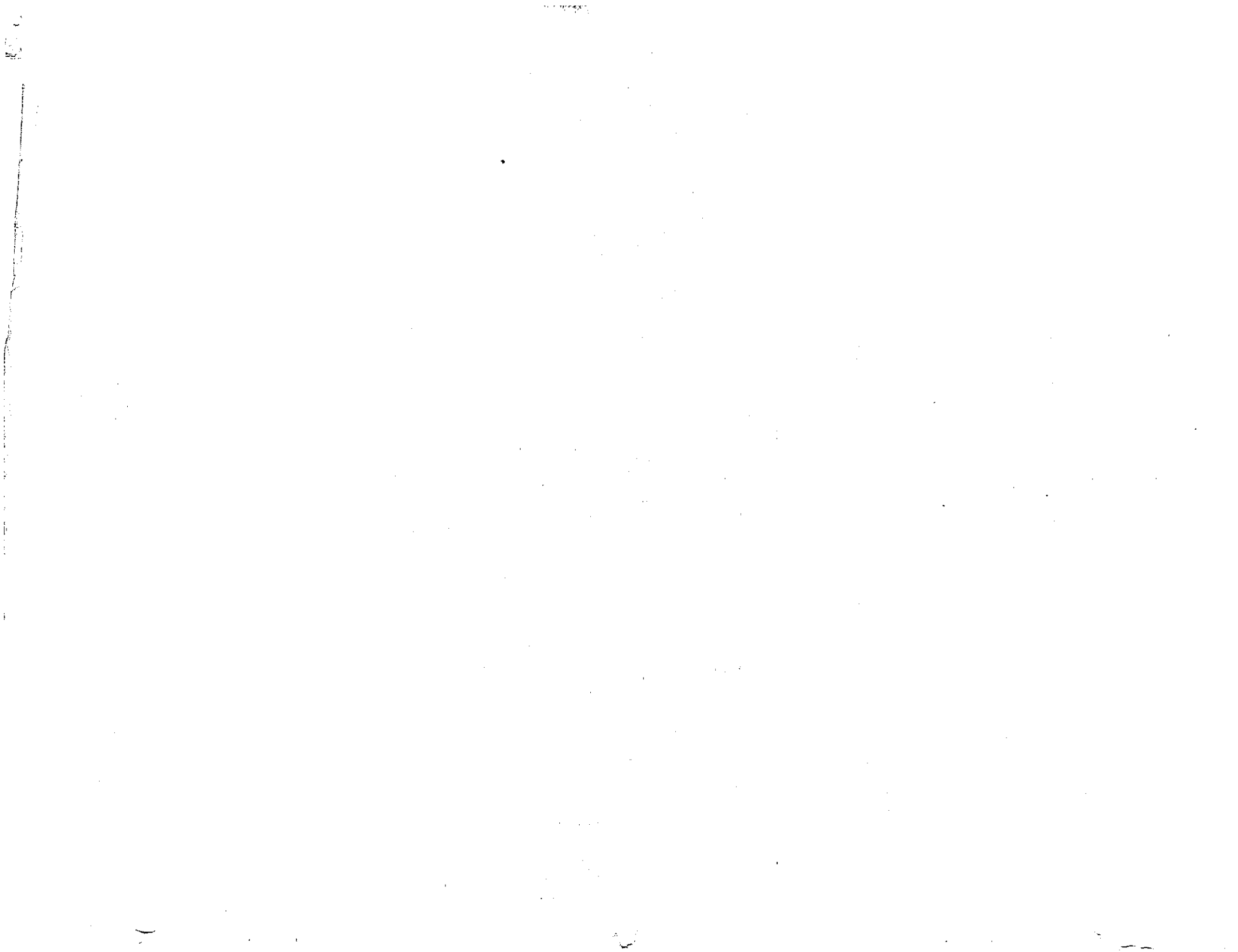
G: BELLOWS SOLENOID VALVE: 106-0070

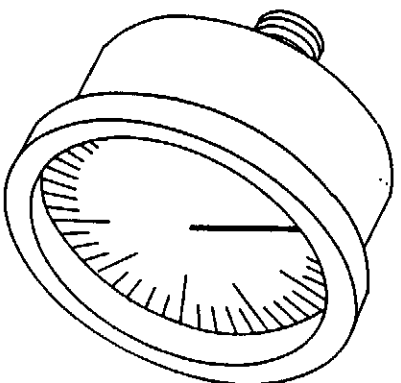
H, I, J: COVER SWITCH: 026-0610

K: SEALING TRANSFO: 029-0014
350D ONE SEAL BAR: 029-0040
350D TWO SEAL BAR:

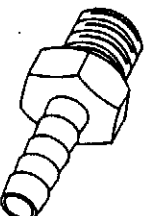
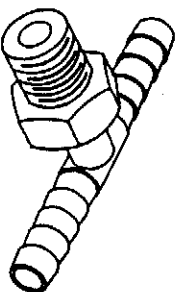
L: RELAY & BASE: 025-0600
RELAY: 025-0610
BASE:

N: CONTROL TRANSFO: 029-0007, 029-0008, 029-0009, 029-0250



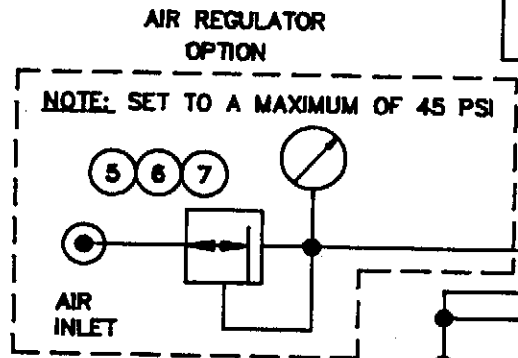
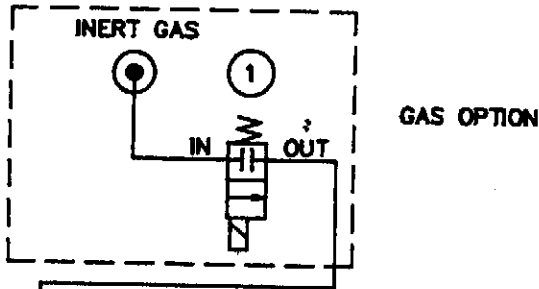


PNEUMATIC DRAWING

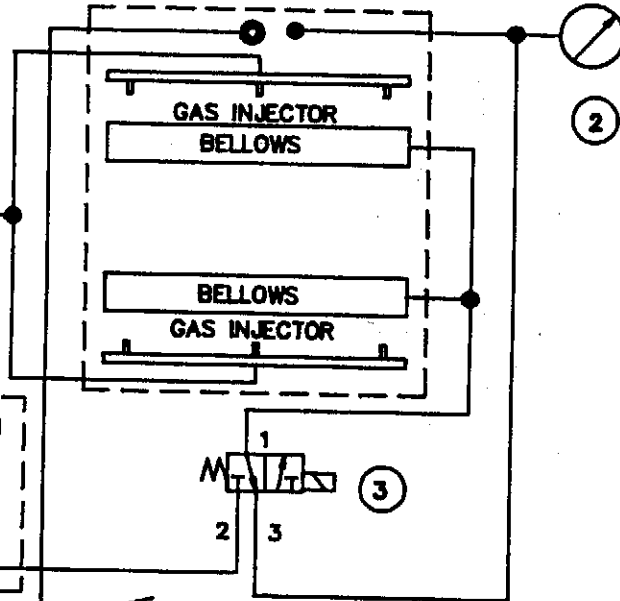


007-0022

-NOTE:
-FOR GAS INJECTION
KIT INSTALLATION
SEE DRAWING #
350: #010-0015
350D: #010-0026



-NOTE:
-FOR AIR REGULATOR
OPTION KIT INSTALLATION
SEE DRAWING #
350 & 350D: 010-0030



ITEM	PART #	DESCRIPTION	QT.
1	106-0010	GAS VALVE	1*
2	114-0280	VACUUM GAUGE	1
3	106-0070	BELLOWS VALVE	1
4	106-0020	ATMOSPHERE VALVE	1
5	114-0147	PRESSURE REGULATOR	1*
6	114-0245	PRESSURE GAUGE	1*
7	114-0170	PRESSURE REGULATOR SUPPORT	1*
*: OPTION			

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MACHINE		350 & 350D		SIPROMAC	
PART		PNEUMATIC		ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
ITEM:		CNC:		SCALE	
MAT:		APP. M.LAVIGNE		DATE 97-03-11	
DATE 97-03-11		DATE		NO. 007-0022	
A	RE-DRAWN	97-03-11	M.L.	1	
LET.	MODIFICATION	DATE	INT.		