OWNER'S MANUAL

VACCUM MACHINE

420A

IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS

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 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. Save these instructions for future reference.

VACUUM PACKAGING MACHINE

MODEL 420A

(MC-40 SIPROMAC)

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VACUUM PACKAGING MACHINES

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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 recommanded by the producer. Never exceed maximum quantity of oil indicated, when adding or changing oil. Verify weekly.

Normal ambient temperature for the vacuum pump is between 10 to 70^{o}C.For temperature below 10^{o}C; it is recommended to use synthetic oil. Please consult factory and pump manufacturer manual for more information or when ambient temperature are outside normal limits

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. GROUNDING INSTRUCTIONS: This appliance must be connected to a grounded, metal, permanent wiring system; or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the appliance. A qualified electrician should be consulted if there is any doubt as to whether an outlet box is properly grounded.

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.

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 completly 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 50 cm(2") 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.

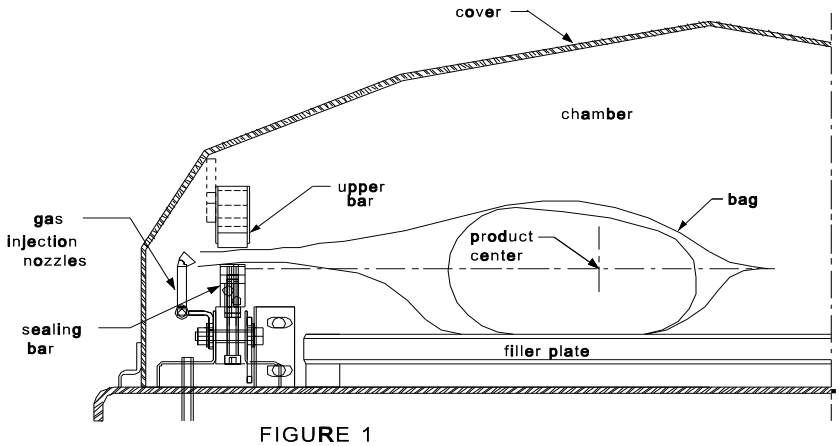


FIGURE 1

3.2 Special packaging:

3.2.1 Gas flushing (option):

There is an atmospheric pressure of 1 kg/ sq. cm (14 lbs/sq. inch) 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 counterbalance 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 (sec.) can be set in the program menu.

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

3.2.2 Top and bottom sealing (optional):

When sealing aluminium laminate bags (especially bags for e.g. coffee) it is imperative to have an upper and a lower sealing bar.

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:

3.3 Vacuum packaging operation:

Note: Refer to the menus structure on page 14 and the keyboard detail on page 15.

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:

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 untill 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 ➔ (9 characters)

keys 2, 2, ENTER ➔ E
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 rounded off 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 sequencally 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:

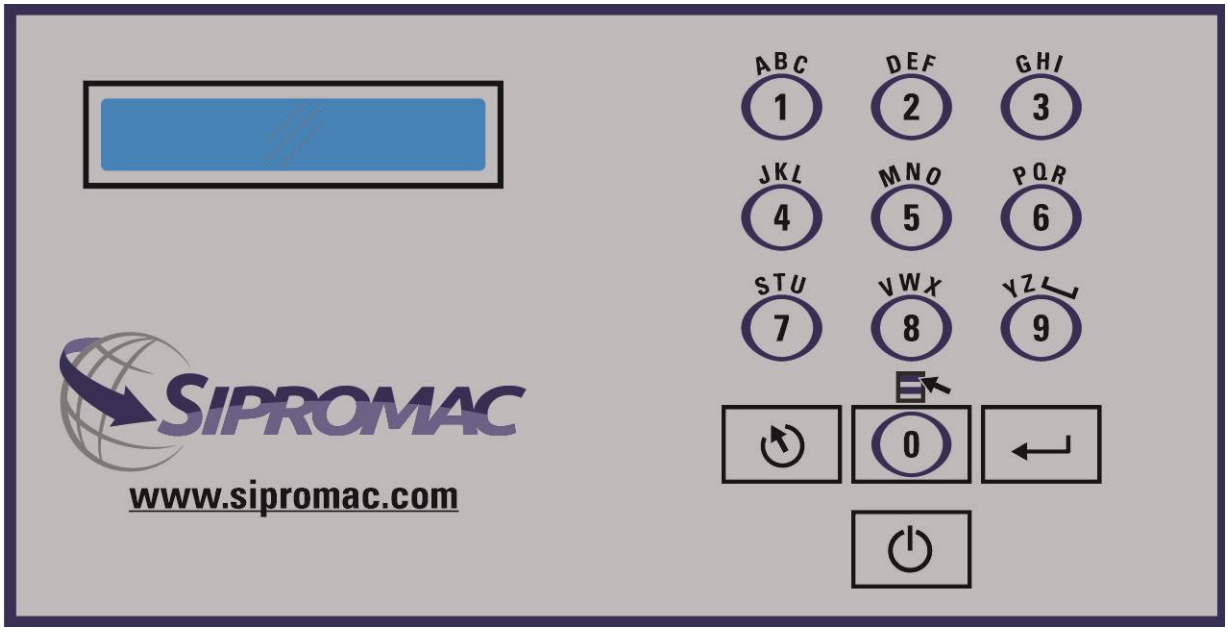
  "VACUUM: xx.x%" (10.0% - 99.5%)
  "VACUUM PLUS: xxs" (0s - 99s)
  "GAS FLUSH: xx.x%" (0.0% - 10% below the vacuum level) (units with gas option)
  "SEAL TIME: x.xxs" (0.00s - maximum unit allocated setting)
  "Pxx NAME" (12 characters)

- **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 OFFSET CALIB."
  "D8 VACUUM SENSOR"
  "D9 SIPROMAC PUB"
  "D10 LOADING TIME" (automatic units only)
  "D11 UNLOADNG TIME" (automatic units only)
  "SYSTEM MONITOR" (no access code required)
  "SOFTWARE: R x.xx"
  "WORK HRS: xxxxx"
  "CYCLES: xxxxxxx"

-KEYBOARD DETAILS-

MC-40 CONTROLS



WARNING: All electrical work described in this brochure should be done by a QUALIFIED and AUTHORIZED technician.

3.4 Daily cleaning:

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

Cleaning instructions for gas injection nozzles: Periodically on a regular basis the gas injection nozzles must be removed with the connection tube and soaked in a food grade soap and water solution, then dried and re-installed.

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 duringthe 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.

Vacuum level is too low:

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.

Caution: Verify connections of measuring equipment before verifing 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.

Contactor does not work.

4.3.3 Permanent sealing current:

Contactor 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).

Caution: 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 13.

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 dammage to the main components: 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 vacuumeter.

Check function of cycle with various settings of timers.

MODEL 420A
COVER ADJUSTMENT PROCEDURE

Reference Drawing:# 005B0598
004B0124

PROBLEM: MACHINE TABLE AND COVER SEEMS TO BE STRAIGHT, LID GASKET IS GOOD BUT COVER DOES NOT SIT PROPERLY ON BOTH SIDES OF TABLE.

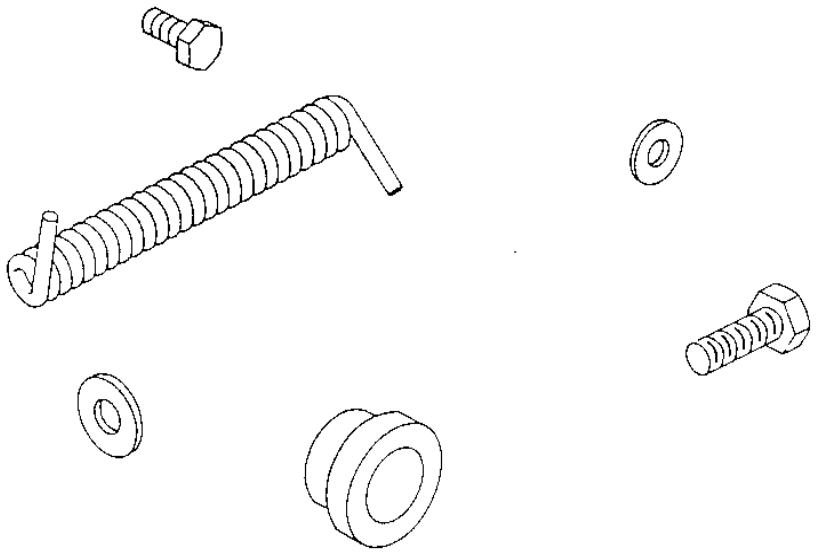
1. Floor should be flat (within 1/8" approx.).

2.2 Loosen the two bolts of the guide arm axis (See drawing #004B0124; items #19).

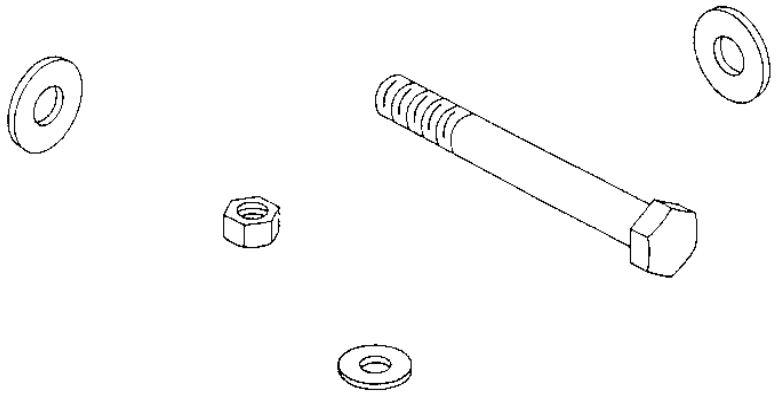
2.3 Now move the cover on each side and check how cover sits on the table. Distance between table and lid gasket should be less than 1/16" approx. If so, go to step 3.0 for guide arm adjustment. Otherwise go to step 2.4 for central arm adjustment.

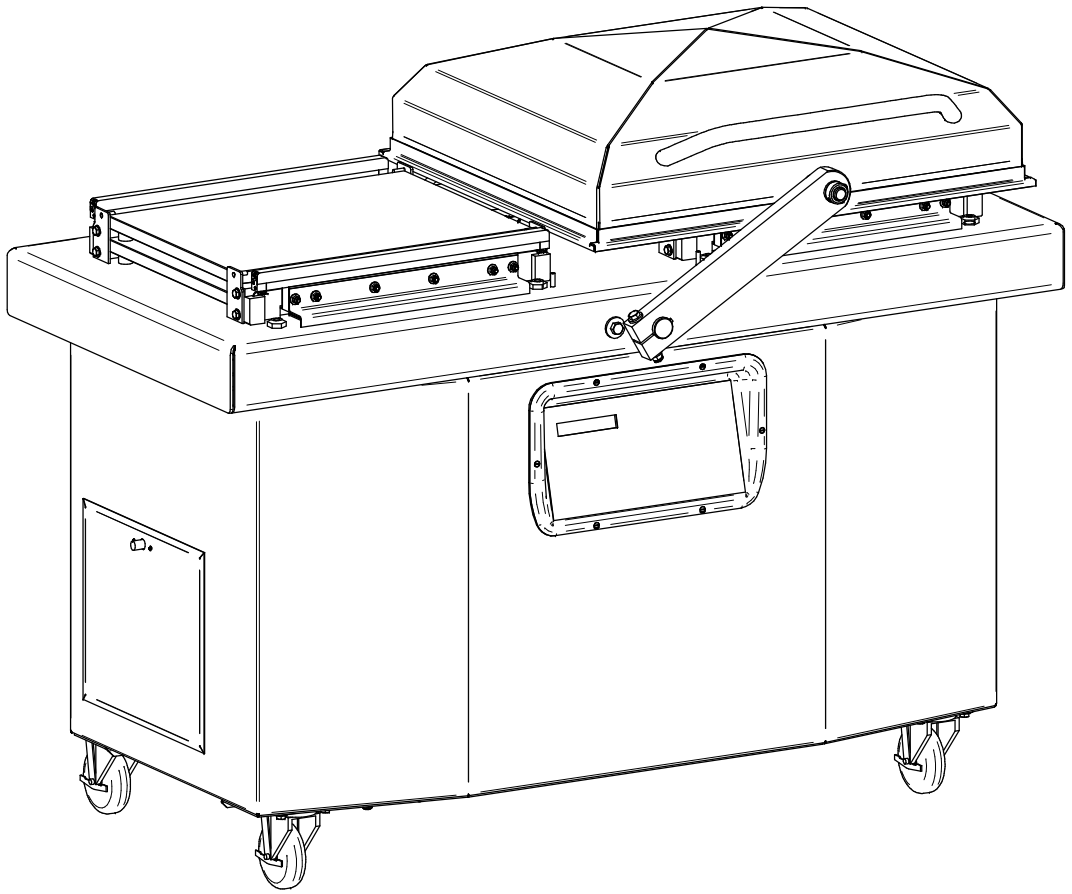
2.5 When closing cover (guide arm axis still loose), if cover is not sitting properly on either the front or rear of the table, you have to change the height of the flange bearings (See drawing # 004B0124; item #27) until cover is seating properly on each side. Normally shaft is centered in the table holes and the height is adjusted in a way that cover will slightly touch the back side of the table first.

3. Adjustment of guide arm: Both length of the guide arm and position on the guide arm axis have to be adjusted. Each of these should be adjusted separately. Fix the lower axis in a central position (centered in the holes) then adjust guide arm length until cover sit correctly on the right side. Move cover to the left side and check if cover sits correctly, if not move lower axis position and change length of the guide arm. Move the cover back to its original position to confirm, normally multiples tryout is required. Make sure there is no stress is transferred to the guide arm when machine is operating, stress induced arm will cause premature component fail.



MECHANICAL DRAWING





ITEM	PART #	DESCRIPTION	QT.
1	004A4109	VACUUM/ATMOSPHERE VALVE (OPT MUFFLER)	1
2	004A4110	VACUUM/ATMOSPHERE VALVE (OPT SOFT AIR)	1
3	004A4111	VACUUM/ATMOSPHERE VALVE (OPT SOFT AIR+MUFFLER)	1
4	004A4119	PUMP "BUSCH" 40M³ ASSY	1
5	004A4120	PUMP "BUSCH" 63M³ ASSY	1
6	004A4121	PUMP "BUSCH" 2X 20M³	1
7	004A4150	BASE MACHINE ASSEMBLY	1
8	004A4152	AIR REGULATOR VALVE ASSY	1
9	004B0126	UPPER SEAL BAR ASSY	2
10	004B4104	BELLOWS VALVE ASSY	1
11	004B4105	BELLOWS VALVE ASSY (OPT AIR REG)	1
12	004B4113	GAS VALVE ASSEMBLY (OPTION)	2
13	005A0455	COVER 8" ASSY	1
14	005A0533	LEFT GAS INJECTION BAR ASSEMBLY	2
15	005A0808	RIGHT GAS INJECTION BAR ASSEMBLY	2
16	005A1355	SEAL BAR ASSEMBLY W/SUPP. TWIN SEAL	4
17	005A1356	SEAL BAR ASSEMBLY W/SUPP. BAG CUT	4
18	005B0583	MC-40 CONTROL BOARD	1
19	005B1370	SLANTED FILLER PLATE ASS'Y	2
20	033-0014	MC-40 KEYBOARD "FOODPAK"	1
21	033-0015	MC-40 KEYBOARD "SIPROMAC"	1
22	033-0016	MC-40 KEYBOARD "HOLLYMATIC"	1
23	033-0018	MC-40 KEYBOARD "BERKEL"	1
24	033-0019	MC-40 KEYBOARD "BSA"	1
25	033-0021	MC-40 KEYBOARD "SUPPLY ONE"	1
26	039-0191	THERMOSTAT HAMMOND	1
27	039-0192	HEATER 100W HAMMOND	1
28	051-0255	BOLT 1/4-20 x 1-3/4" HEX SS	6
29	051-0300	BOLT 5/16"-18 x 3/4" S/S	16
30	051-0581	NUT 1/4"-20 NYLON LOCK S/S	6
31	051-0601	NUT 5/16"-18 NYLON LOCK S/S	16
32	051-0740	WASHER 1/4" FLAT S/S	12
33	051-0760	WASHER 5/16" FLAT S/S	32
34	104-0064	SILICONE TUBING 3/8" OD x 3/16" ID x 80mm	4
35	130-4PHB	4" PL.CASTER SWIVEL W/BRAKE	4

-OPTION -

LET.	MODIFICATION	DATE	INT.

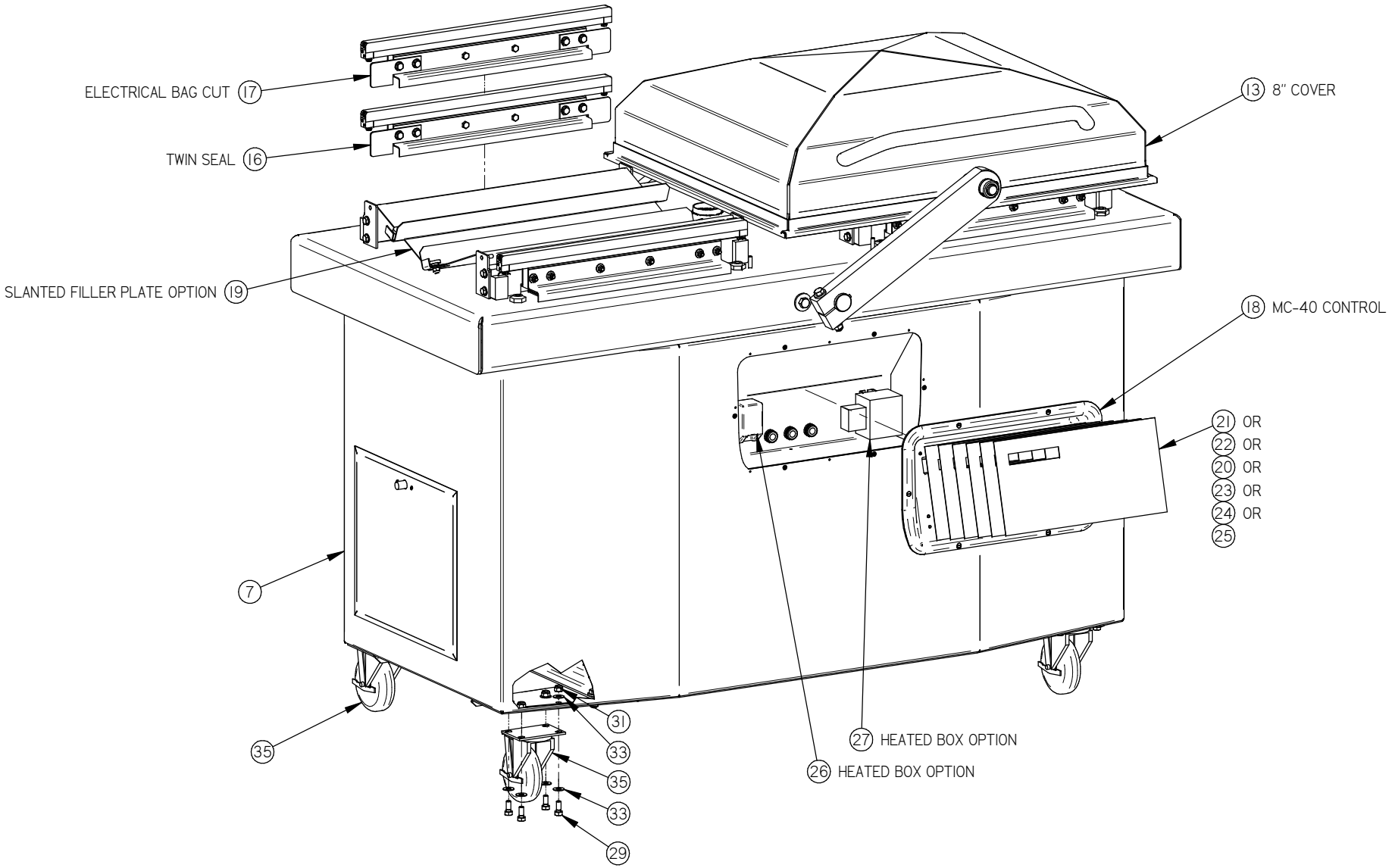
MACHINE: 420A
PART: MACHINE ASSEMBLY
ITEM:
MAT.:
CNC:
DWG BY: SBU
APP. BY:
DATE: 14-02-07
DATE:

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

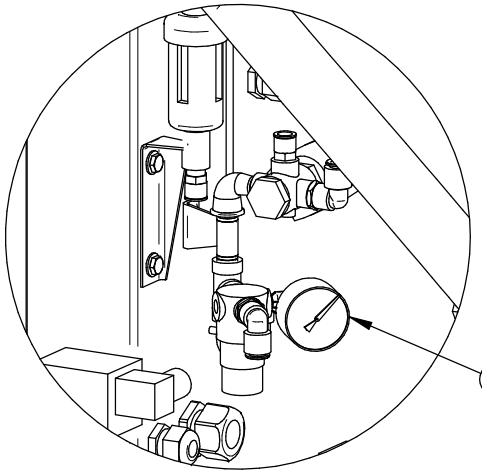
N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

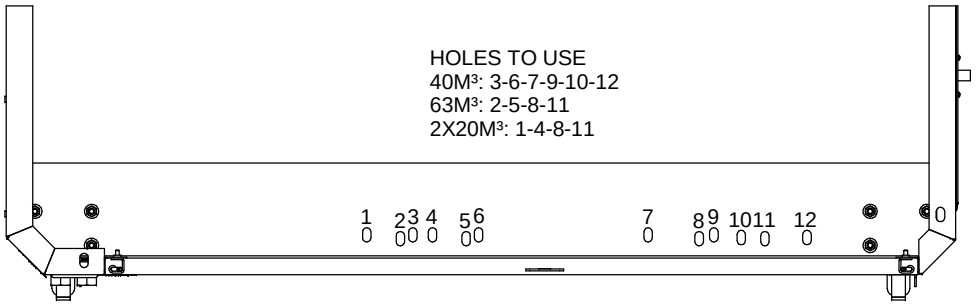
DEPT. M
QTY. 1
NO. 005B0598



MACHINE: 420A	DEPT. TOL	METRIC	INCH	SIPROMAC	
	USINAGE	± 0.1	± 0.004"	ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
	TOLERIE	± 0.5	± 0.020"		
PART: MACHINE ASSEMBLY	SOUDAGE	± 0.5	± 0.020"	N.T.S.	
ITEM	CNC			DEPT. M	QTY. 1
MAT.	DWG BY SBU		DATE 14-02-07	NO. 005B0598	
	APP. BY		DATE		



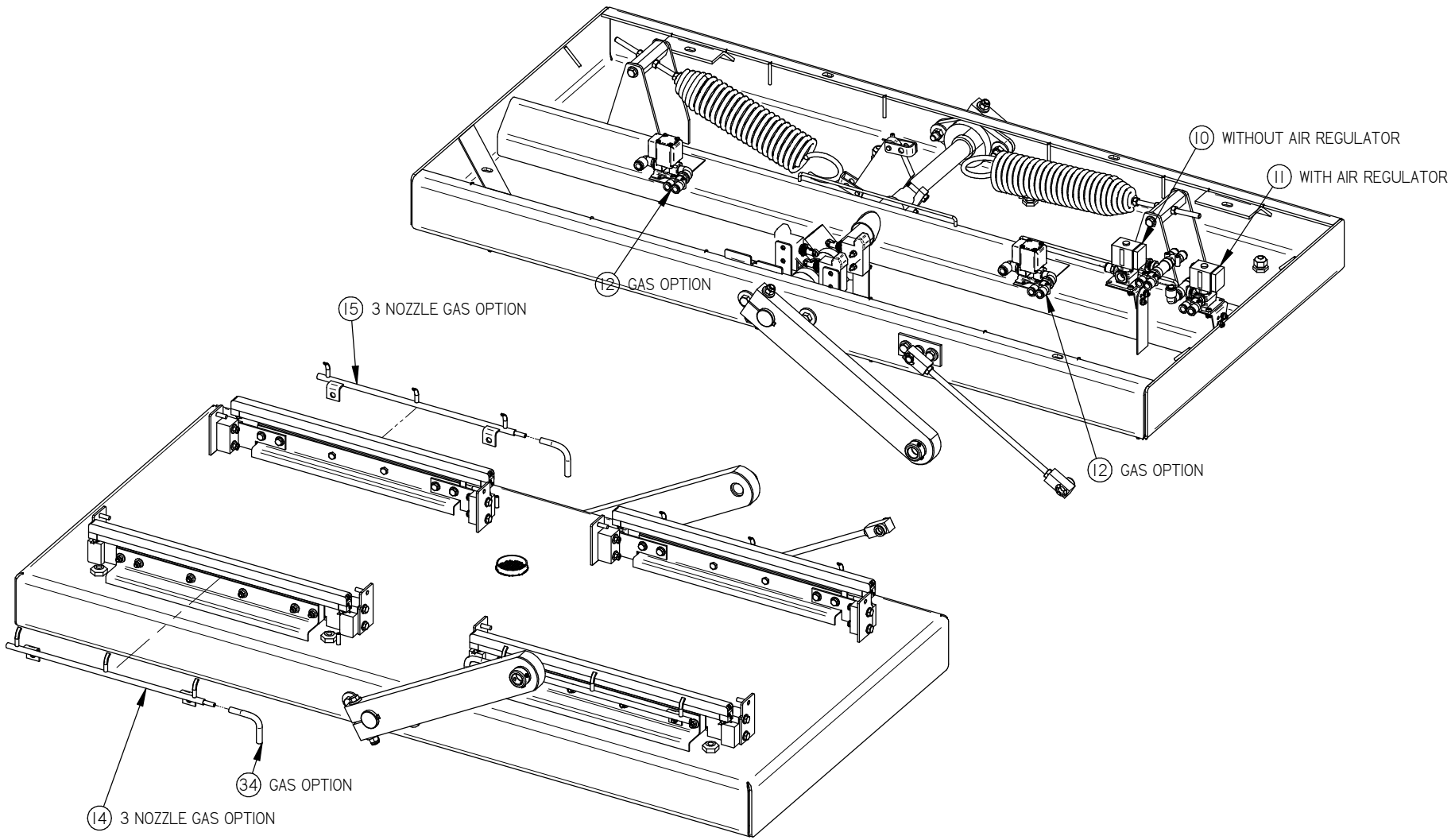
DETAIL A



HOLES TO USE
40M³: 3-6-7-9-10-12
63M³: 2-5-8-11
2X20M³: 1-4-8-11

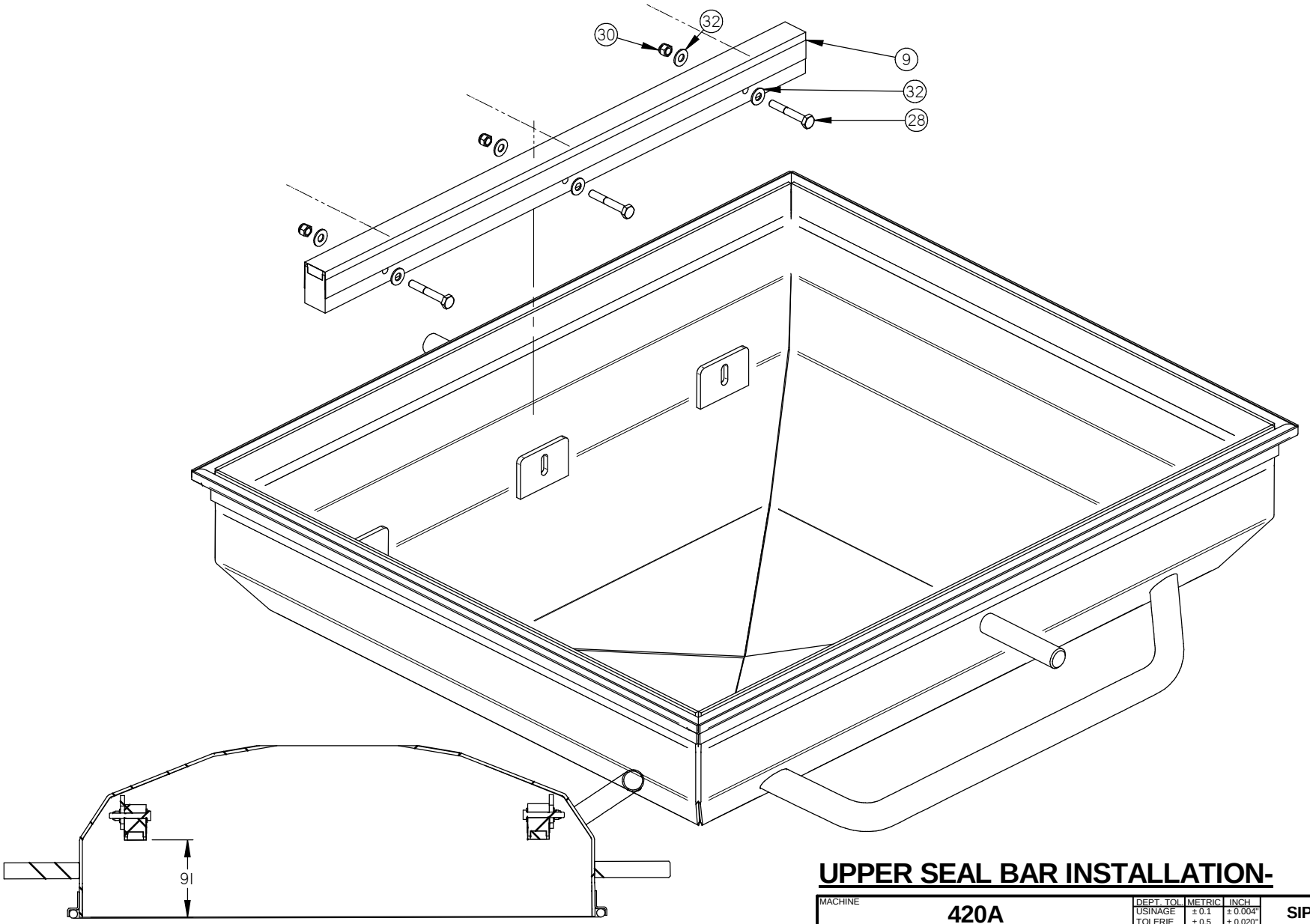
-PUMP + AIR REGULATOR INSTALLATION-

MACHINE: 420A	DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"	SIPROMAC			
	TOLERIE ± 0.5 ± 0.020"	ST-GERMAIN DE GRANTHAM QUEBEC CANADA			
PART: MACHINE ASSEMBLY	SOUDAGE ± 0.5 ± 0.020"	N.T.S.			
ITEM	CNC	DEPT. M	QTY. 1		
MAT.	DWG BY SBU	DATE 14-02-07	NO. 005B0598		
	APP. BY	DATE			



-GAS BAR + BELLOWS VALVE INSTALLATION-

MACHINE: 420A	DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"		SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA		
PART: MACHINE ASSEMBLY		N.T.S.			
ITEM	CNC		DEPT. M	QTY. 1	
MAT.	DWG BY SBU	DATE 14-02-07	NO. 005B0598		
	APP. BY	DATE			

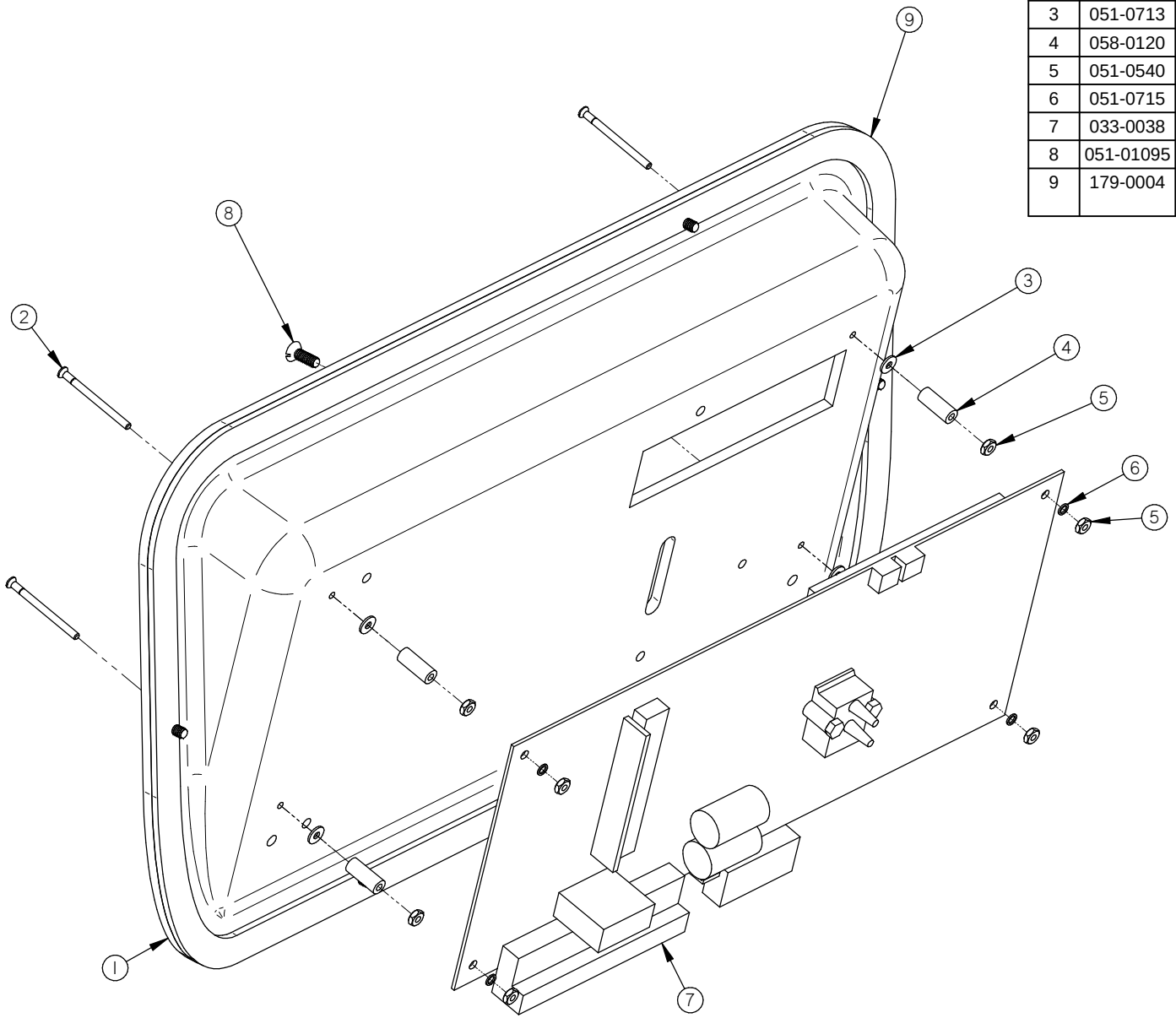


UPPER SEAL BAR INSTALLATION-

MACHINE: 420A	DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"		SIPROMAC	
PART: MACHINE ASSEMBLY	N.T.S.		ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
ITEM	CNC	DEPT. M	QTY. 1	
MAT.	DWG BY SBU / APP. BY	DATE 14-02-07 / DATE	NO. 005B0598	

005B0583

ITEM	PART #	DESCRIPTION	QT.
1	003A0403	CONTROL INSERT	1
2	051-0092	SCREW #4-40 x 1 1/4" FLAT SLT S/S	4
3	051-0713	WASHER #4 FLAT S/S	4
4	058-0120	CPVC SPACER 0.120" x 1/4" x 5/8"	4
5	051-0540	NUT #4-40 HEX S/S	8
6	051-0715	WASHER #4 LOCK SS	4
7	033-0038	MC-40 SENSOR VACUUM	1
8	051-01095	SCREW 8-32 x 1/2 FLAT SLOT SS	6
9	179-0004	NITRILE 1/2" X 1/8" AUTOCOLLANT X 1220mm long	1



LET.	MODIFICATION	DATE	INT.

MACHINE: **VACUUM**

PART: **MC-40 CONTROL BOARD**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

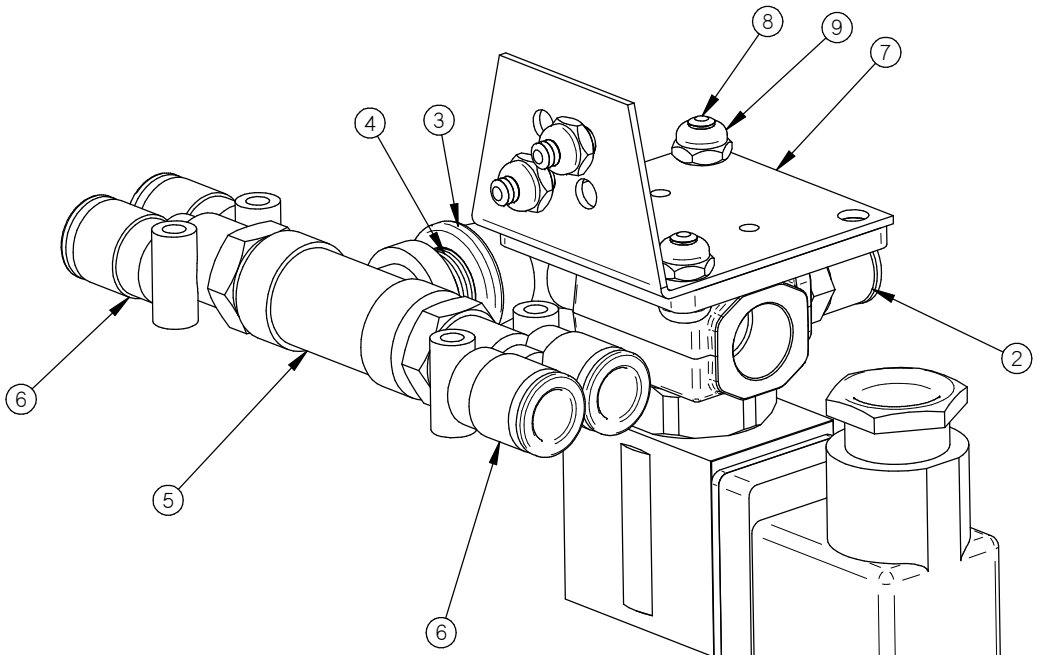
ITEM | CNC | DEPT. **M** | QTY. **1**

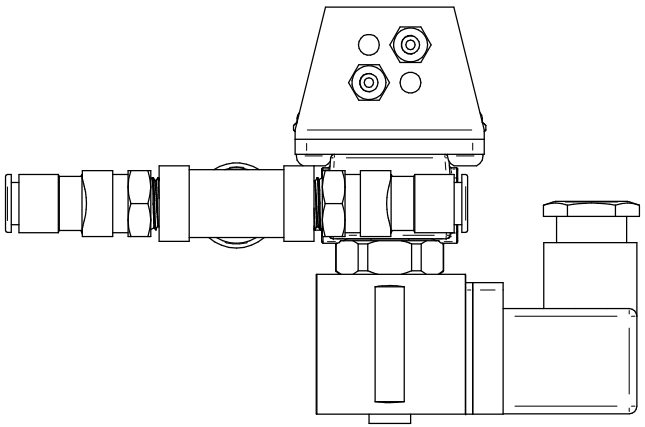
MAT. | DWG BY **SBU** | DATE **13-11-21** | NO. **005B0583**

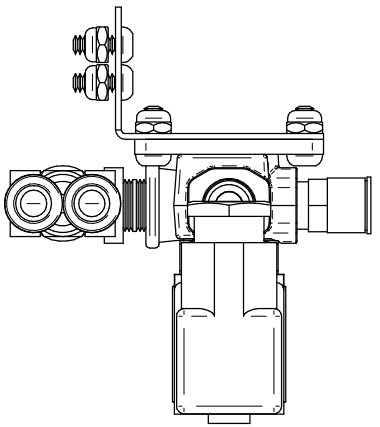
APP. BY | DATE

004B4104

ITEM	PART #	DESCRIPTION	QT.
1	106-00701	VALVE 3WAY 24V 1/4"NPT	1
2	102-0410	MALE CONN.1/4"MNPTx3/8"T.QUICK	1
3	100-0065	STREET ELBOW 1/4" NPT SS	1
4	100-0225	CLOSE NIPPLE 1/4" NPT SS	1
5	100-0463	TEE 1/4" NPT S/S	1
6	102-0361	Y BRANCH 1/4" MNPT X 3/8" T. QUICK	2
7	001B6779	VALVE SUPPORT BRACKET	1
8	051-0144	SCREW #10-24 N.C 1/2"PAN PHIL. S/S	4
9	051-0572	NUT #10-24 NYLON LOCK S/S	4





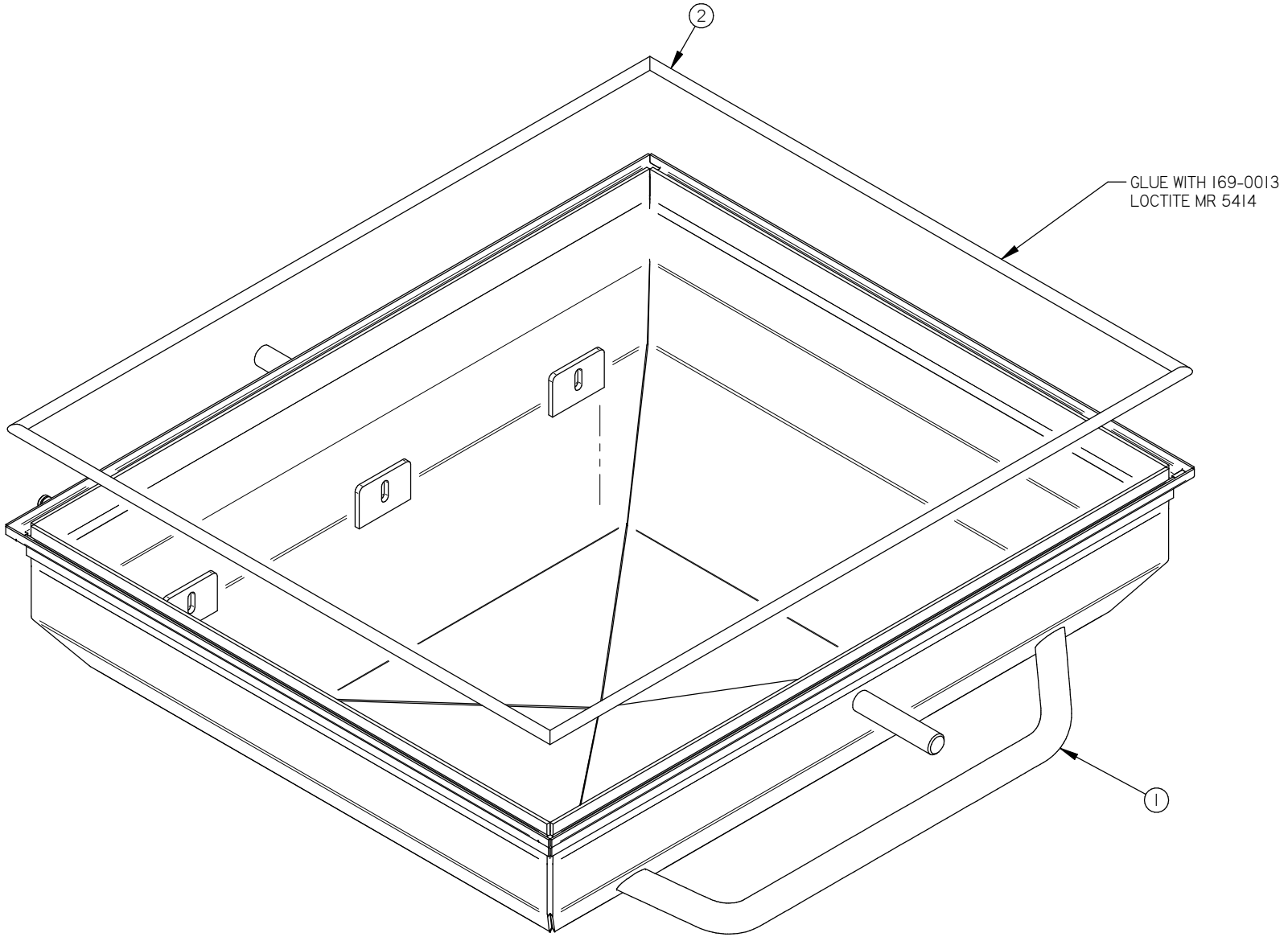


LET.	MODIFICATION	DATE	INT.
A	VALVE UPDATE	14-05-27	SBU

MACHINE: **VACUUM**	DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"	**SIPROMAC** ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
PART: **BELLOWS VALVE ASSY**	**N.T.S.**		
ITEM	CNC	DEPT. **M**	QTY. **1**
MAT.	DWG BY **SBU** / APP. BY	DATE **14-05-27** / DATE	NO. **004B4104**

005A0455

ITEM	PART #	DESCRIPTION	QT.
1	004A0238	COVER 8" WELDED ASSY	1
2	179-0020	NEOPRENE SPONGE 1/2" x 9'	1



C	COLLE ETAIT 169-0010	17-06-01	AG
B	COVER WIDENED BY 54MM FOR 19" BAR	14-01-29	SBU
LET.	MODIFICATION	DATE	INT.

MACHINE **420A**

PART **COVER 8" ASSY**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

ITEM

CNC

DEPT. **M**

QTY. **1**

MAT.

DWG BY **SBU**

DATE **14-01-28**

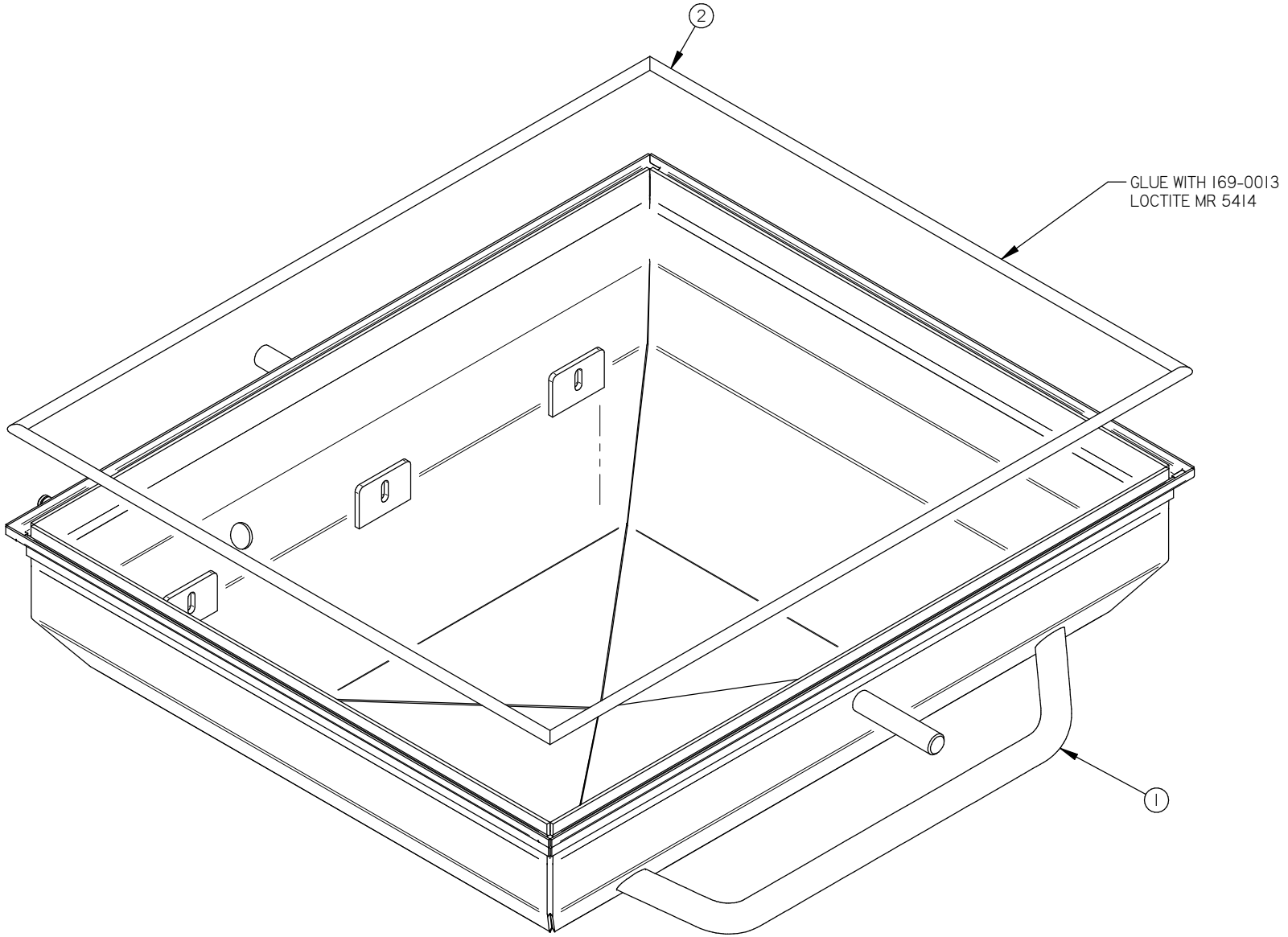
APP. BY

DATE

NO. **005A0455**

005A1874

ITEM	PART #	DESCRIPTION	QT.
1	004A4593	COVER 8" WELDED ASSY (TOP & BOTTOM)	1
2	179-0020	NEOPRENE SPONGE 1/2" x 9'	1

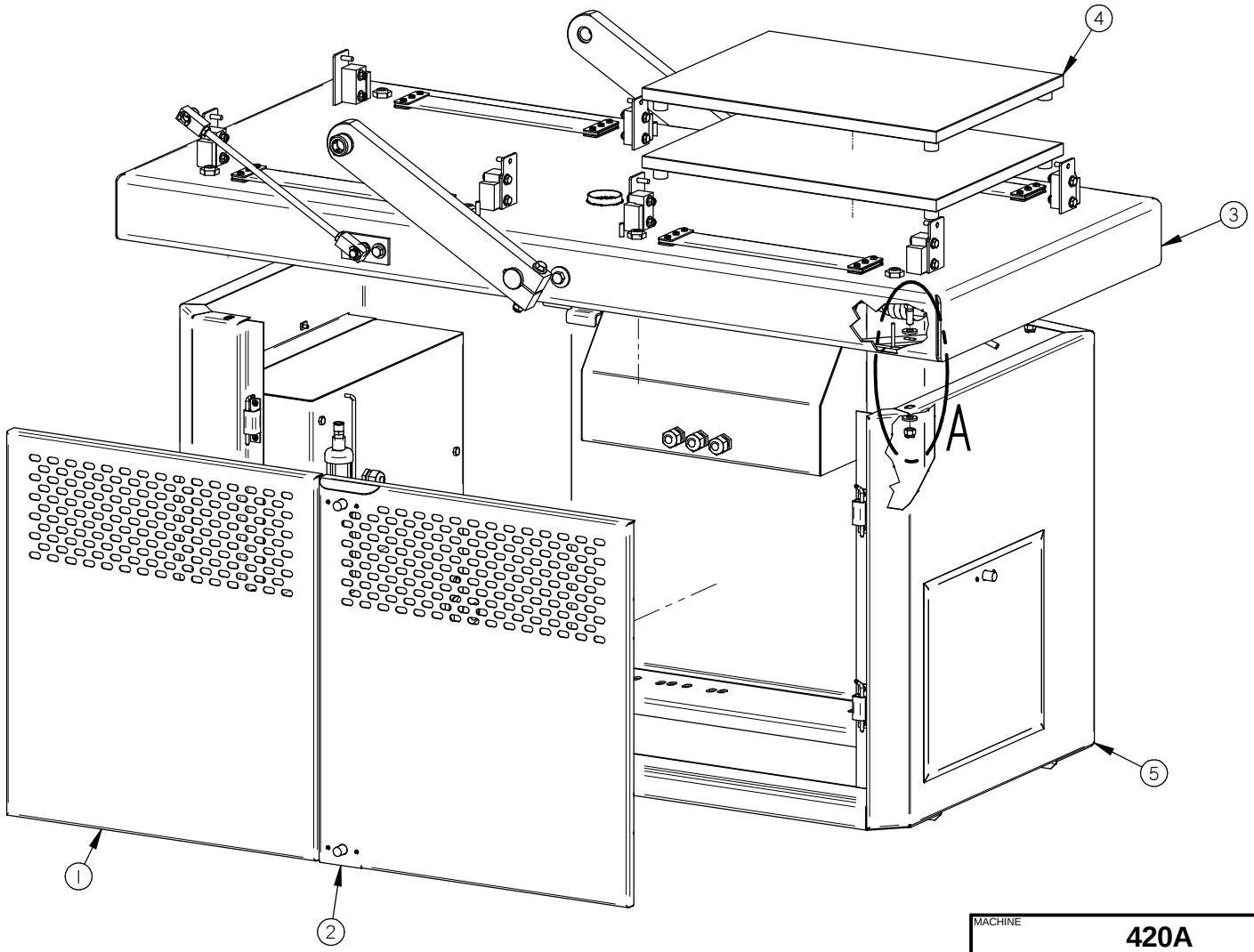


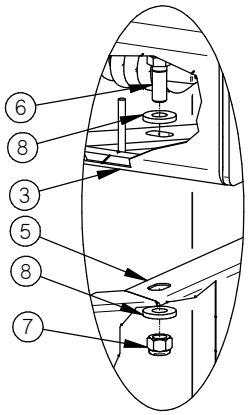
LET.	MODIFICATION	DATE	INT.
A	COLLE ETAIT 169-0010	17-06-01	AG

MACHINE: 420A	DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA			
PART: COVER 8" ASSY (TOP & BOTTOM)	N.T.S.				
ITEM	CNC	DEPT. M	QTY. 1		
MAT.	DWG BY AG	DATE 17-02-02	NO. 005A1874		
	APP. BY	DATE			

004A4150

ITEM	PART #	DESCRIPTION	QT.
1	004A4116	LEFT REAR ACCESS DOOR PRE-ASSY	1
2	004A4118	RIGHT REAR ACCESS DOOR ASSY	1
3	004A4151	TABLE ASSY W/ARM	1
4	005A0333	FILLER PLATE	4
5	005D0599	STRUCTURE ASSY	1
6	051-0360	BOLT 3/8"-16nc. X 1" S/S	6
7	051-0622	NUT 3/8"-16nc. NYLON LOCK S/S	6
8	051-0783	WASHER 3/8" FLAT THICK S/S	12





DETAIL A

LET.	MODIFICATION	DATE	INT.

MACHINE: **420A**

PART: **BASE MACHINE ASSEMBLY**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

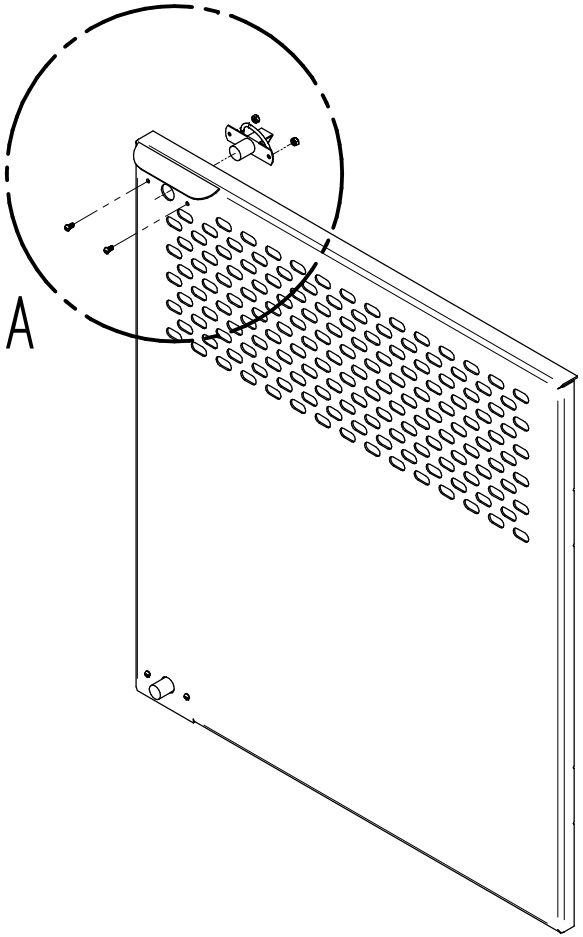
ITEM | CNC | DEPT. **M** | QTY. **1**

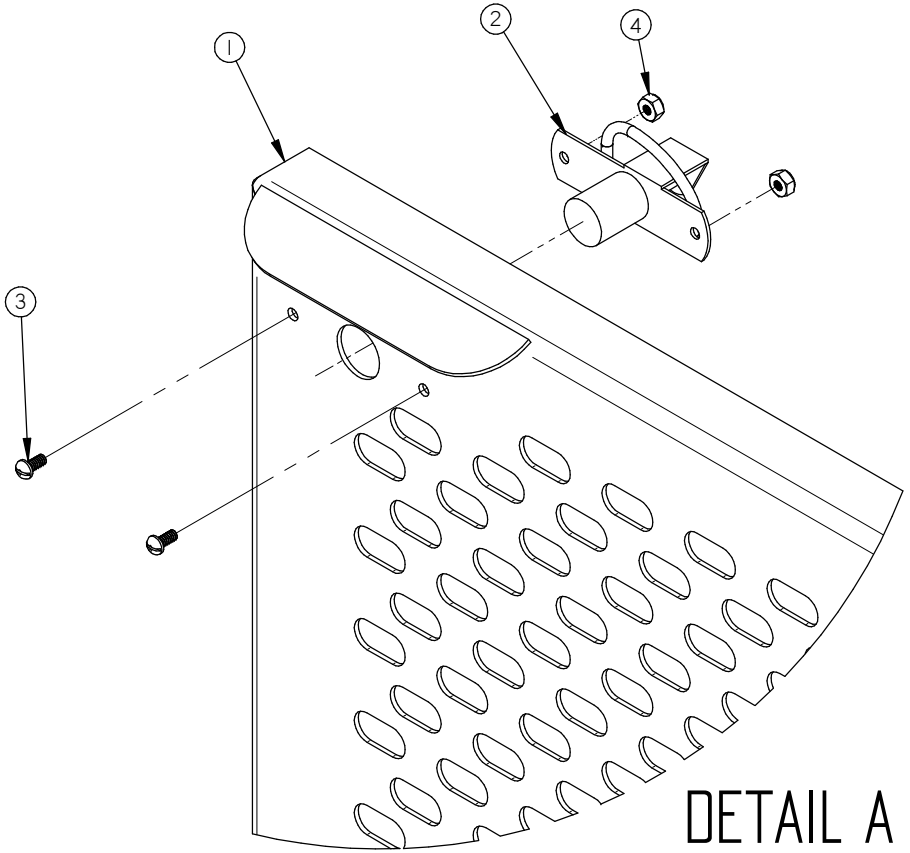
MAT. | DWG BY **SBU** | DATE **14-02-07** | NO. **004A4150**

APP. BY | DATE

004A4118

ITEM	PART #	DESCRIPTION	QT.
1	004A4117	RIGHT REAR ACCESS DOOR PRE-ASSY	1
2	056-2600	SPRING PAWL LATCHE SS KNOB	2
3	051-0071	SCREW 4-40 x 1/4" RND SLOT S/S	4
4	051-0541	NUT # 4-40 NYLON LOCK SS	4





DETAIL A

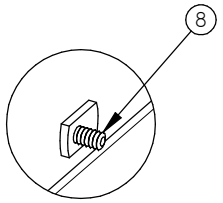
LET.	MODIFICATION	DATE	INT.

MACHINE: 420A		DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"		SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
PART: RIGHT REAR ACCESS DOOR ASSY		N.T.S.			
ITEM	CNC		DEPT. M	QTY. 1	
MAT.	DWG BY SBU	DATE 14-02-06	NO. 004A4118		
	APP. BY	DATE			

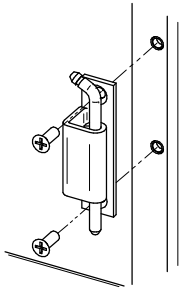
005D0599

ITEM	PART #	DESCRIPTION	QT.
11	056-3010-1	HINGE CONCEALED SS304 - BASE	4
12	056-3010-3	HINGE CONCEALED SS304 - PIN	4
13	102-0551	BULKHEAD 1/4"NPT X 3/8 TUBE QUICK	2
14	127-0040	STICKER "AIR" BLUE/WHITE 1" X 2"	1
15	127-0041	STICKER "GAS" YELLOW/BLACK 1" X 2"	1

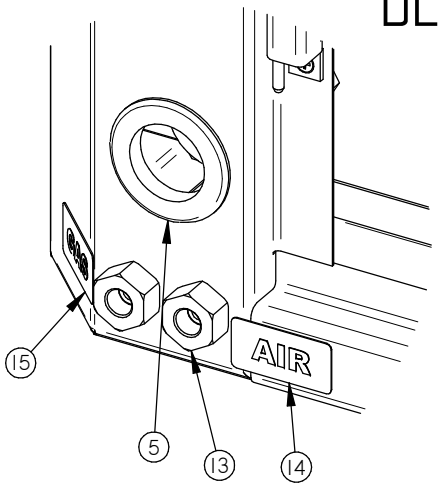
ITEM	PART #	DESCRIPTION	QT.
1	004A4090	ACCESS DOOR ASSEMBLY	1
2	004A4098	ELECTRIC BOX ASS'Y	1
3	004A4138	VACUUM SENSOR FILTER	1
4	004D0437	STRUCTURE WELD ASSY	1
5	036-0265	GROMMET 1-1/2" ID X 2-3/8" OD RUBBER	1
6	036-0409	PRESSE-ETOUPE CD13	3
7	051-01385	SCREW 10-24 x 1/2"FLAT-UND. PHIL S/S	8
8	051-0144	SCREW #10-24 N.C 1/2"PAN PHIL. S/S	8
9	051-0180	BOLT. HEX. 1/4"-20 NC. x 1/2" S/S	2
10	051-0740	WASHER 1/4" FLAT S/S	2



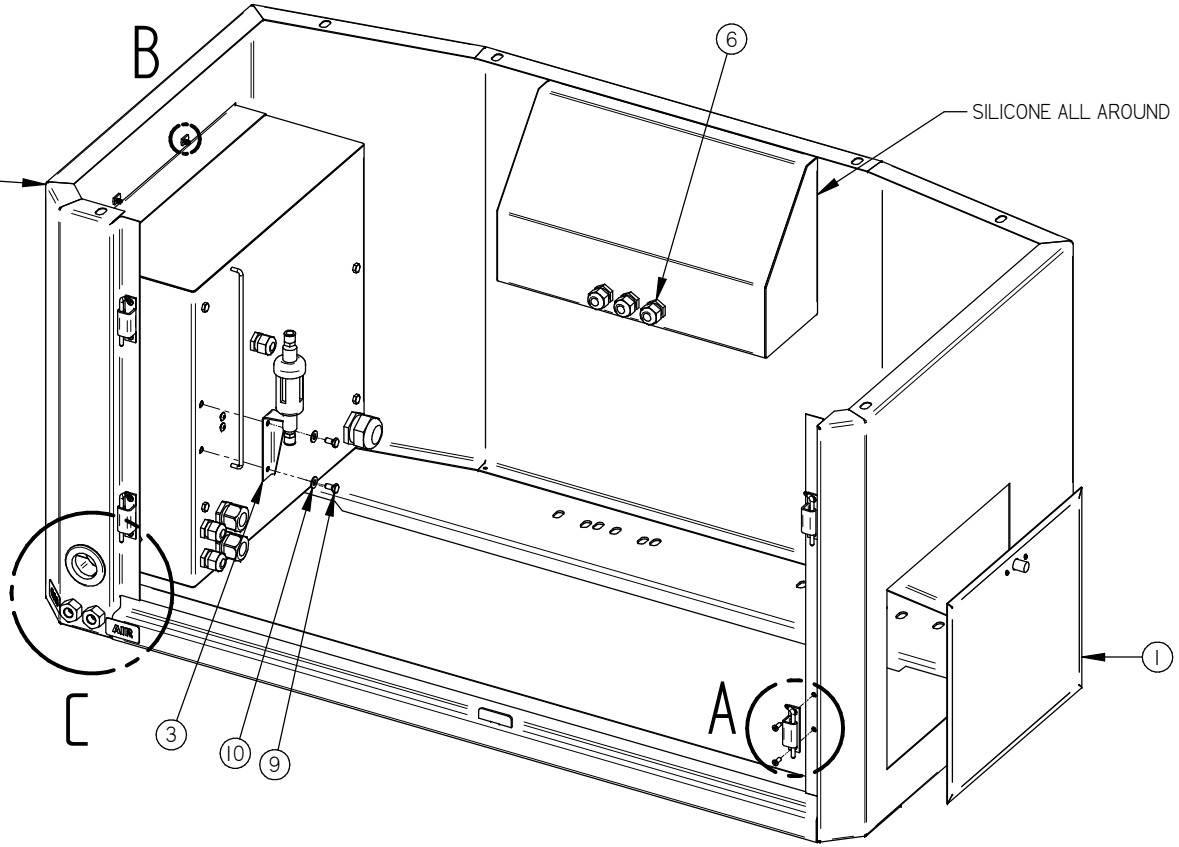
DETAIL B



DETAIL A



DETAIL C



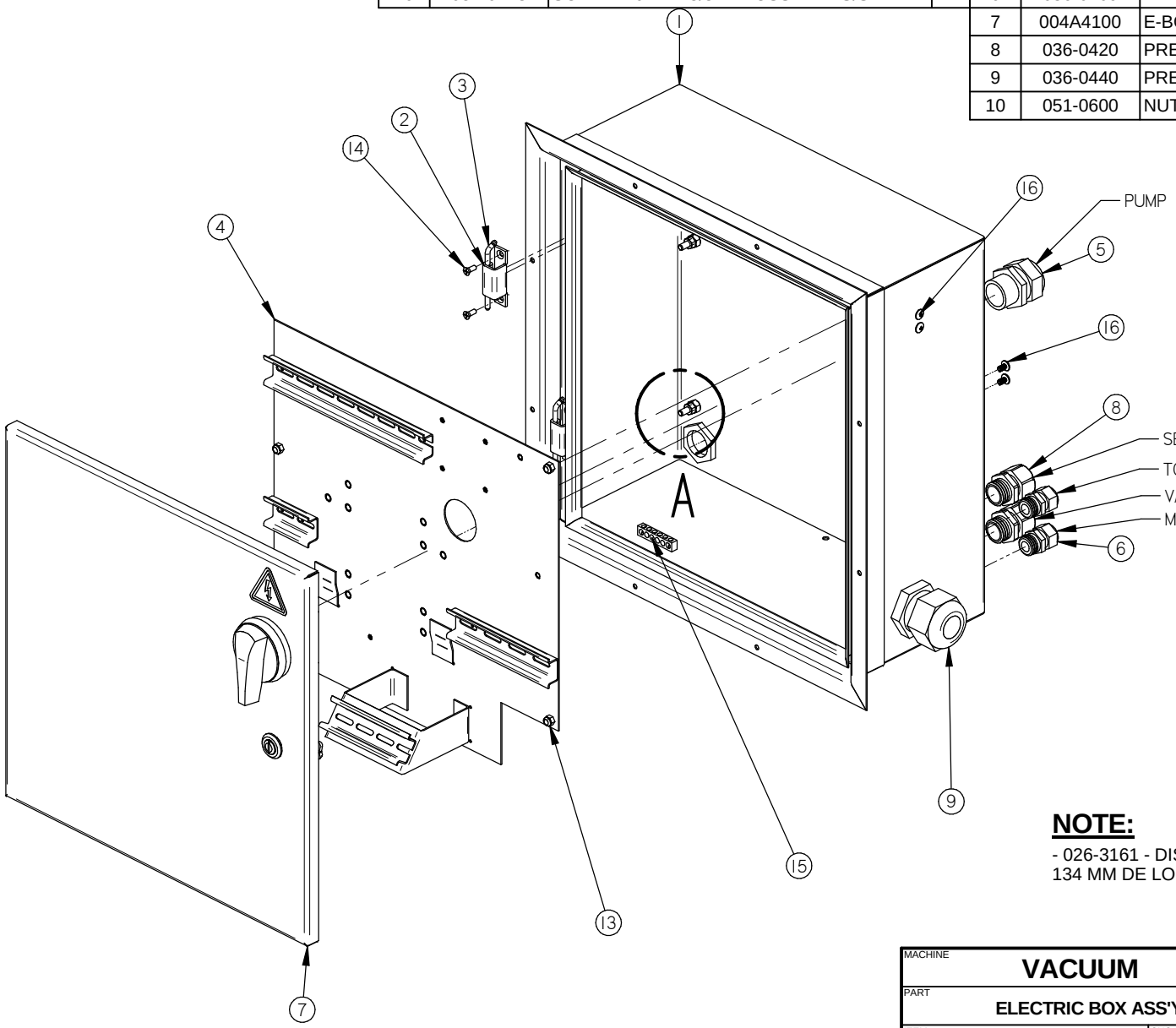
A	NEW DESIGN	14-02-06	SBU
LET.	MODIFICATION	DATE	INT.

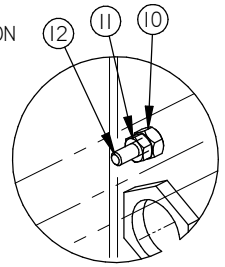
MACHINE	420A	DEPT. TOL	METRIC	INCH	SIPROMAC
		USINAGE	± 0.1	± 0.004"	ST-GERMAIN DE GRANTHAM QUEBEC CANADA
		TOLERIE	± 0.5	± 0.020"	
		SOUDAGE	± 0.5	± 0.020"	
PART	STRUCTURE ASSY		N.T.S.		
ITEM		CNC		DEPT. M	QTY. 1
MAT.		DWG BY SBU	DATE 14-02-06	NO. 005D0599	
		APP. BY	DATE		

004A4098

ITEM	PART #	DESCRIPTION	QT.
11	051-0580	NUT 1/4"-20 S/S	4
12	051-0210	BOLT ¼"-20nc. X 1" S/S	4
13	051-0581	NUT 1/4"-20 NYLON LOCK S/S	4
14	051-0139	SCREW 10-24 x 1/2" FLAT PHIL S/S	4
15	028-0105	GROUND BARRIER (6 HOLES)	1
16	051-0128	SCREW 10-24 x 3/8" TRUSS PHIL S/S	4

ITEM	PART #	DESCRIPTION	QT.
1	004A4099	E-BOX PRE-ASSY	1
2	056-3010-1	HINGE CONCEALED SS304 - BASE	2
3	056-3010-3	HINGE CONCEALED SS304 - PIN	2
4	004A4102	E-BOX FALSE BOTTOM	1
5	036-0430	PRESSE-ÉTOUPE CD29	1
6	036-0409	PRESSE-ETOUPE CD13	3
7	004A4100	E-BOX DOOR ASSEMBLY	1
8	036-0420	PRESSE-ÉTOUPE CD21	2
9	036-0440	PRESSE-ÉTOUPE CD36	1
10	051-0600	NUT 5/16" -18 S/S	4





DETAIL A

NOTE:

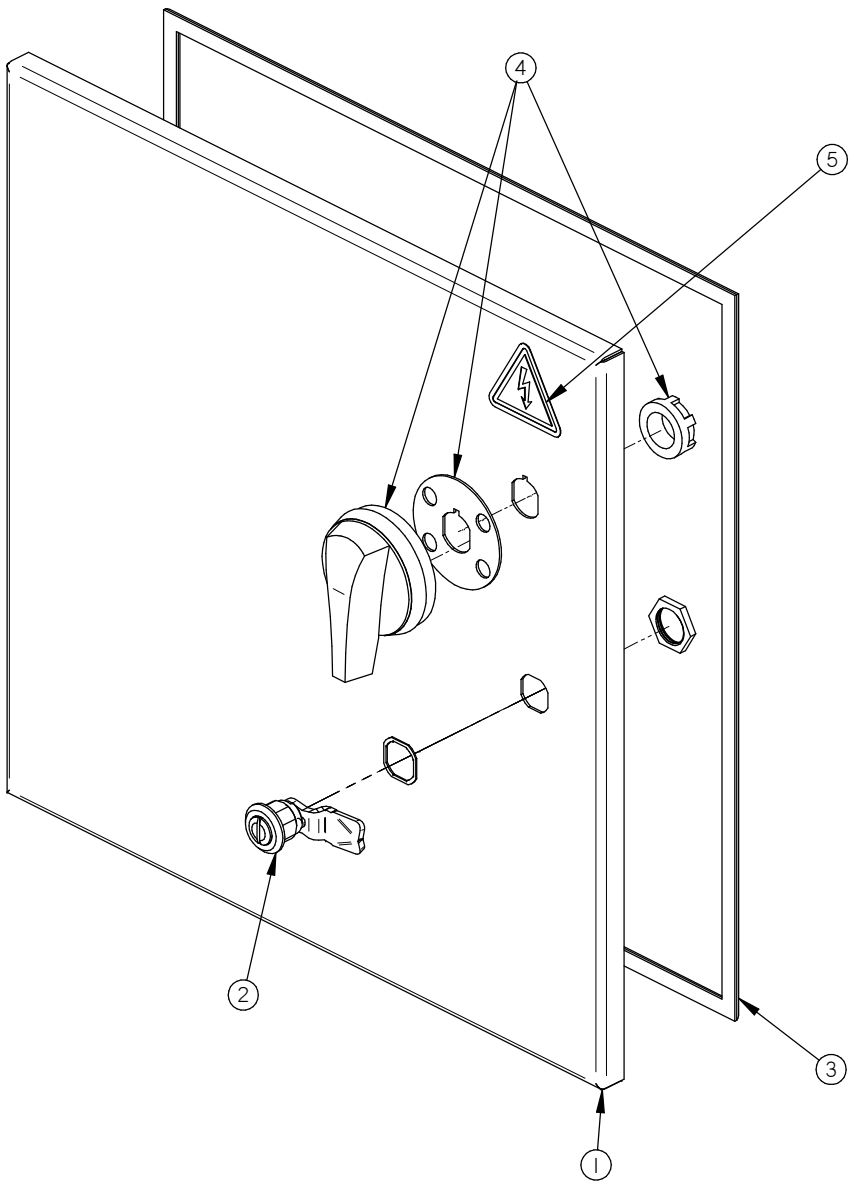
- 026-3161 - DISCONNECT SWITCH SHAFT: COUPER À 134 MM DE LONG.

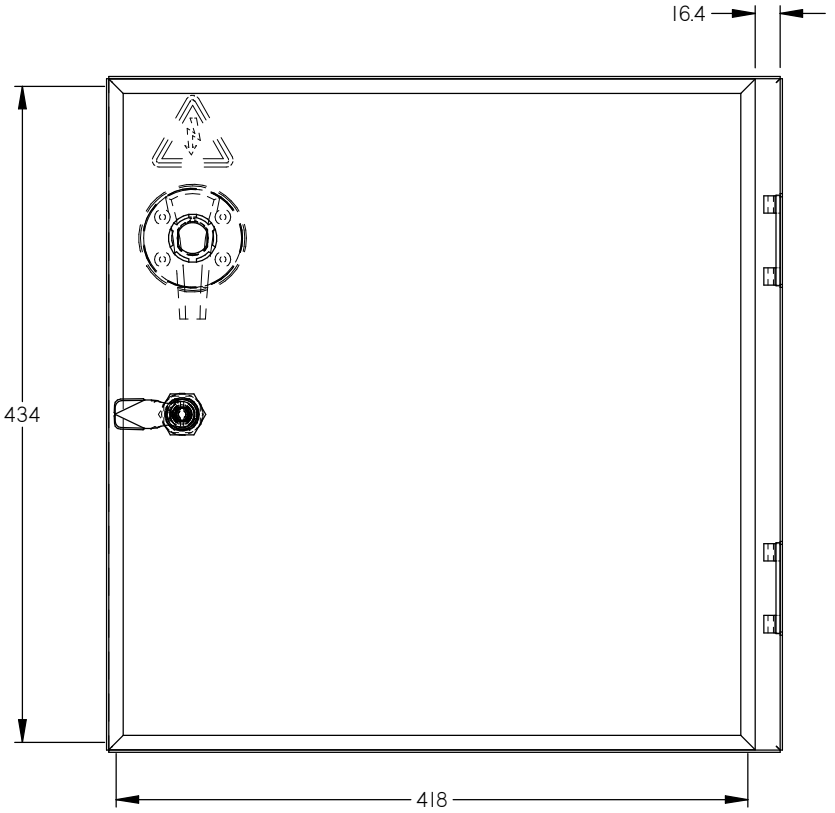
LET.	MODIFICATION	DATE	INT.

MACHINE: VACUUM	DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
PART: ELECTRIC BOX ASS'Y	N.T.S.		
ITEM	CNC	DEPT. M	QTY. 1
MAT.	DWG BY SBU / APP. BY	DATE 13-09-23 / DATE	NO. 004A4098

004A4100

ITEM	PART #	DESCRIPTION	QT.
1	004A4101	E-BOX DOOR PRE-ASSY	1
2	056-2612	CAM LOCK QUARTER TURN SS304	1
3	179-0026	D-SHAPED RUBBER SEAL 1683mm LONG	1
4	026-3160	HANDLE RED/YELLOW NEMA 4X, COMPACT, PADLOCKABLE	1
5	127-0100	STICKER ELEC.HAZARD ISO 2-1/2" TRIANGLE	1



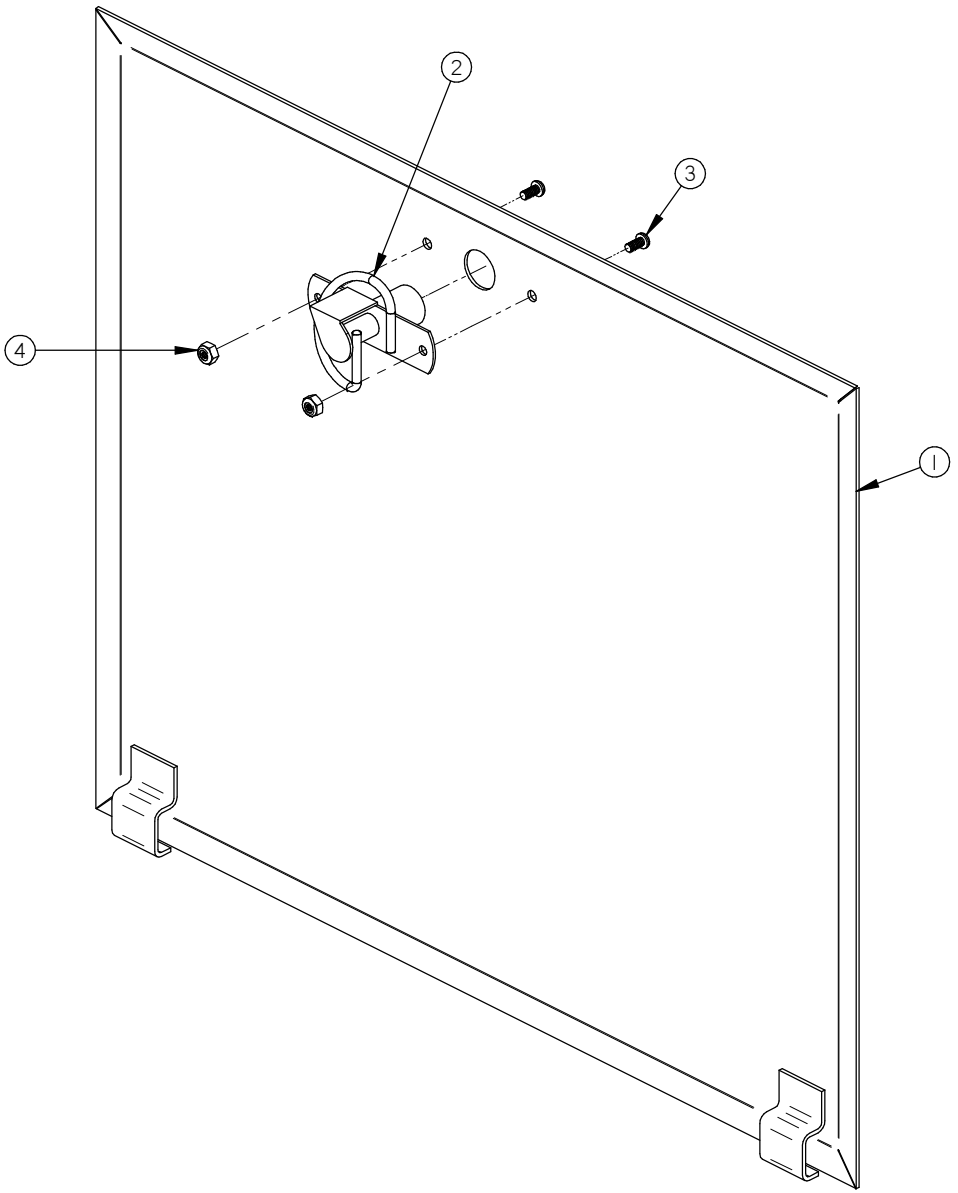


LET.	MODIFICATION	DATE	INT.

MACHINE: VACUUM	DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
PART: E-BOX DOOR ASSEMBLY	N.T.S.		
ITEM	CNC	DEPT. M	QTY. 1
MAT.	DWG BY SBU / APP. BY	DATE 13-09-17 / DATE	NO. 004A4100

004A4090

ITEM	PART #	DESCRIPTION	QT.
1	004A4089	ACCESS PANEL PRE-ASSY	1
2	056-2600	SPRING PAWL LATCHE SS KNOB	1
3	051-0071	SCREW 4-40 x 1/4" RND SLOT S/S	2
4	051-0541	NUT # 4-40 NYLON LOCK SS	2



LET.	MODIFICATION	DATE	INT.

MACHINE: **VACUUM**

PART: **ACCESS DOOR ASSEMBLY**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

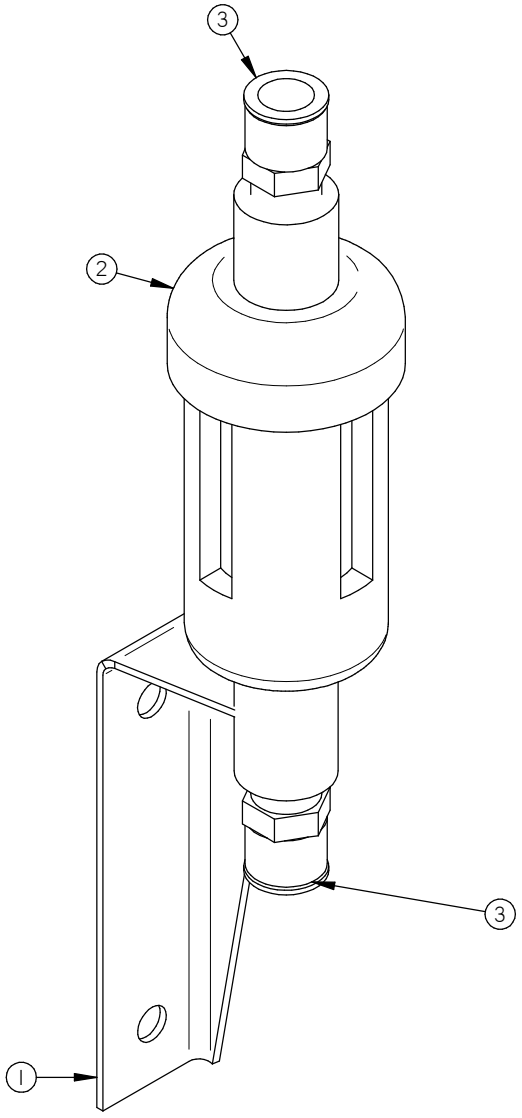
ITEM | CNC | DEPT. **M** | QTY. **1**

MAT. | DWG BY **SBU** | DATE **13-09-11** | NO. **004A4090**

APP. BY | DATE

004A4138

ITEM	PART #	DESCRIPTION	QT.
1	004A4139	VACUUM SENSOR FILTER SUPPORT	1
2	114-2020	FILTER / DRYER ¼"mnpt. X 1/4"t.p. COMP.	1
3	102-0410	MALE CONN.1/4"MNPTx3/8"T.QUICK	2



LET.	MODIFICATION	DATE	INT.

MACHINE: **VACUUM**

PART: **VACUUM SENSOR FILTER**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

ITEM: _____ CNC: _____ DEPT. **M** QTY. **1**

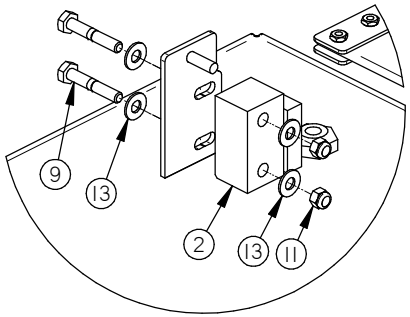
MAT.: _____ DWG BY **SBU** DATE **13-11-19** NO. **004A4138**

APP. BY: _____ DATE: _____

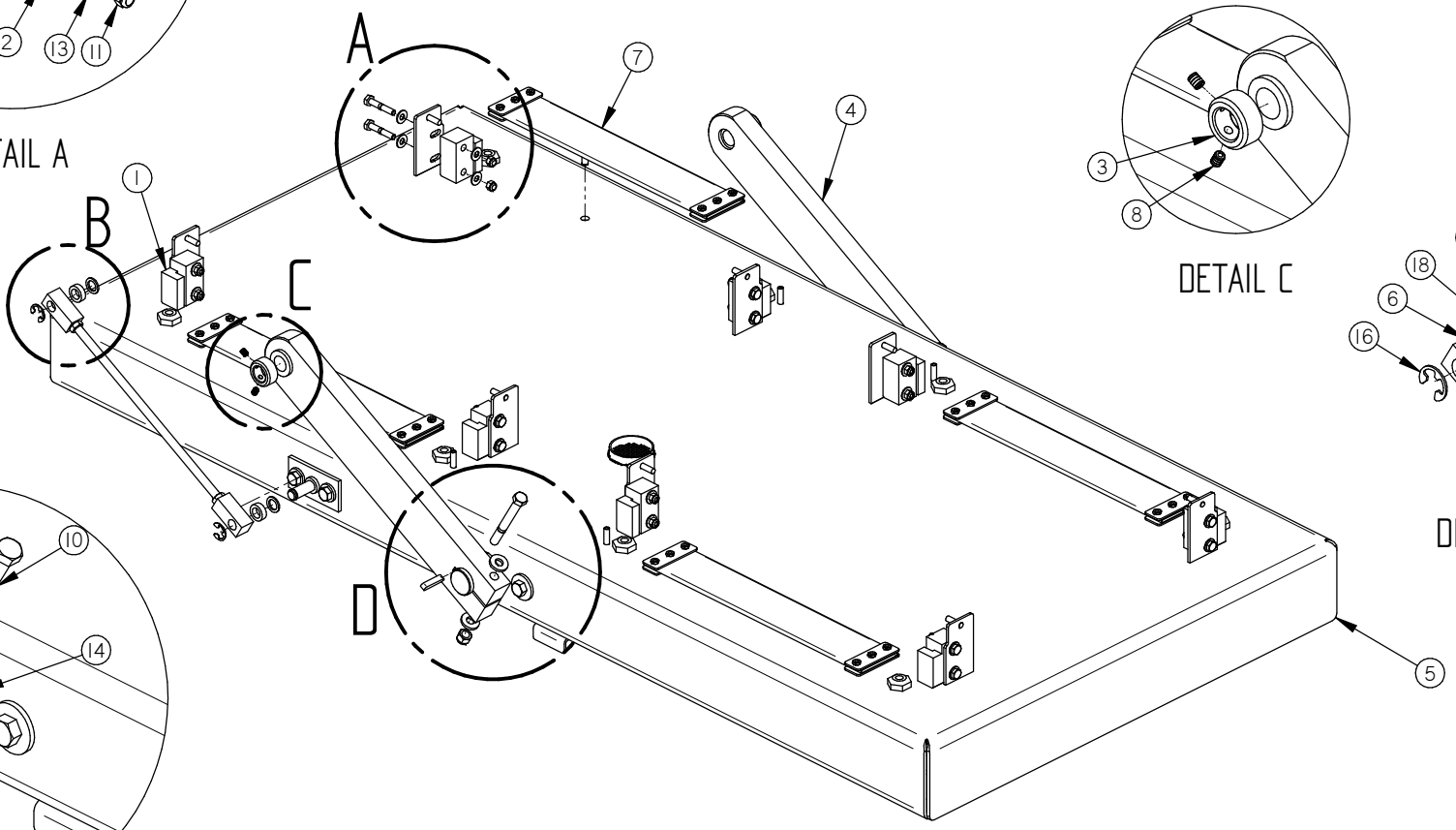
004A4151

ITEM	PART #	DESCRIPTION	QT.
11	051-0581	NUT 1/4"-20 NYLON LOCK S/S	16
12	051-0622	NUT 3/8"-16nc. NYLON LOCK S/S	2
13	051-0740	WASHER 1/4" FLAT S/S	32
14	051-0783	WASHER 3/8" FLAT THICK S/S	4
15	056-01675	KEY 1/4" SQ. x 1 1/4" ROUNDED END S/S	2
16	056-0331	EXT. RETAINING RING 1/2" S/S	2
17	058-0050	NYLON SPACER 1/2IDx3/4ODx1/16"	2
18	058-0060	NYLON SPACER 1/2IDx3/4ODx1/4"	2

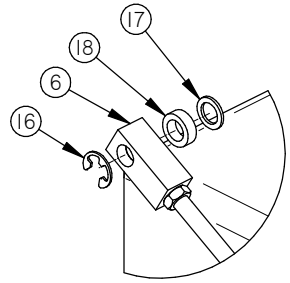
ITEM	PART #	DESCRIPTION	QT.
1	002-0326	LEFT SEAL BAR GUIDE BLOCK	4
2	002-0327	RIGHT SEAL BAR GUIDE BLOCK	4
3	002-0390	COVER ARM COLLAR	2
4	004A0348	COVER ARM ASS'Y	2
5	004B0124	TABLE ASSEMBLY	1
6	004B1393	GUIDE ARM PRE-ASS'Y	1
7	005-0532	BELLOWS ASSEMBLY	4
8	051-0178	SCREW 1/4"-20 x 5/16" SKT SET S/S	4
9	051-0250	BOLT ¼"-20nc. X 1½" S/S	16
10	051-0422	BOLT 3/8"-16nc. X 3¼" S/S	2



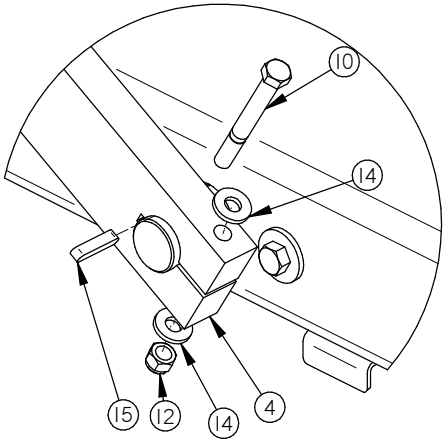
DETAIL A



DETAIL C



DETAIL B



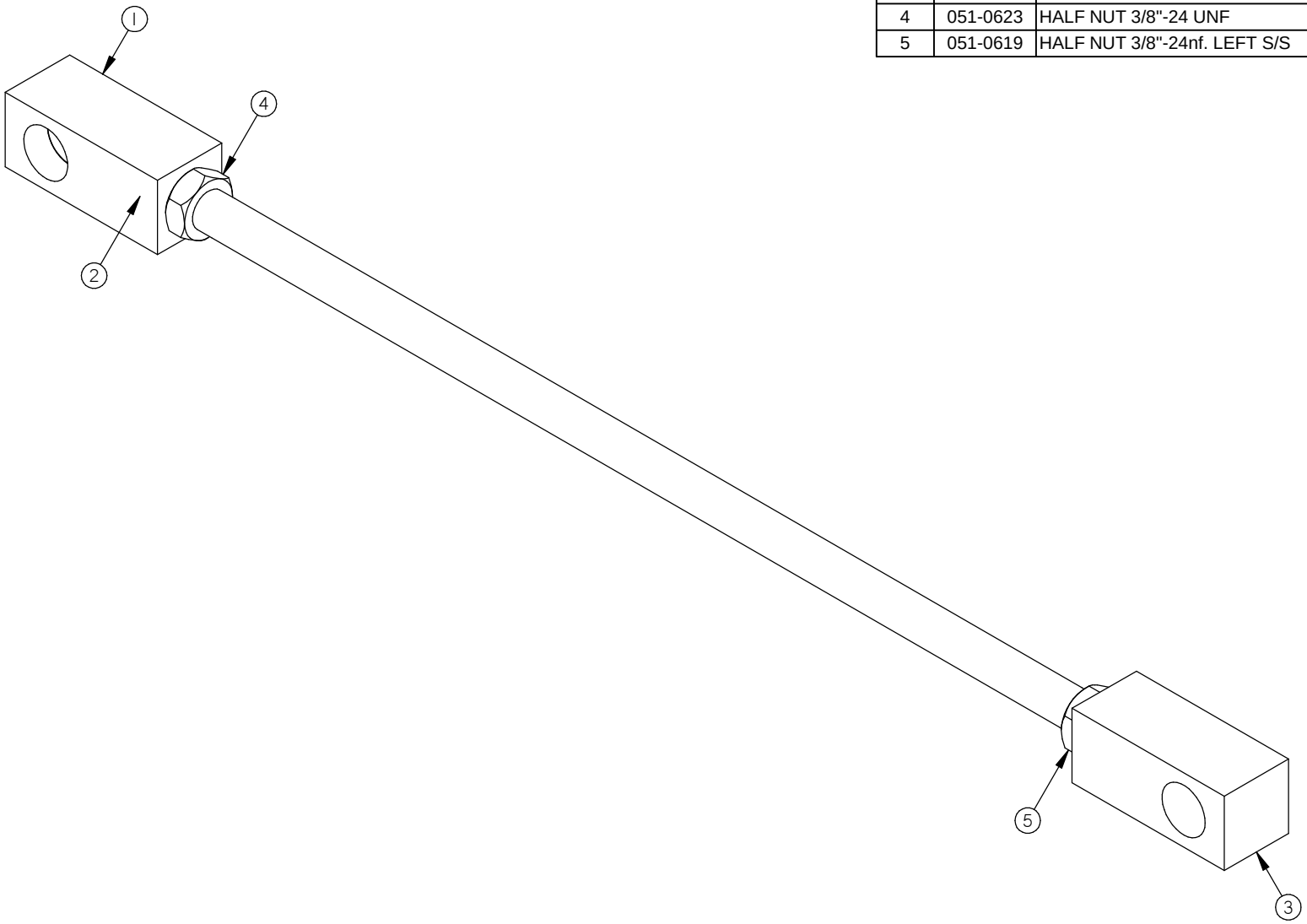
DETAIL D

LET.	MODIFICATION	DATE	INT.

MACHINE: 420A	DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
PART: TABLE ASSY W/ARM	N.T.S.		
ITEM	CNC	DEPT. M	QTY. 1
MAT.	DWG BY SBU; APP. BY	DATE 14-01-31; DATE	NO. 004A4151

004B1393

ITEM	PART #	DESCRIPTION	QT.
1	002-0679	RIGHT GUIDED ARM END	1
2	002A0680	GUIDE ARM ROD	1
3	002-0731	LEFT GUIDED ARM END	1
4	051-0623	HALF NUT 3/8"-24 UNF	1
5	051-0619	HALF NUT 3/8"-24nf. LEFT S/S	1



NOTE:

-PASSER AU JET DE SABLE APRÈS AVOIR ASSEMBÉ LES 5 ITEMS.

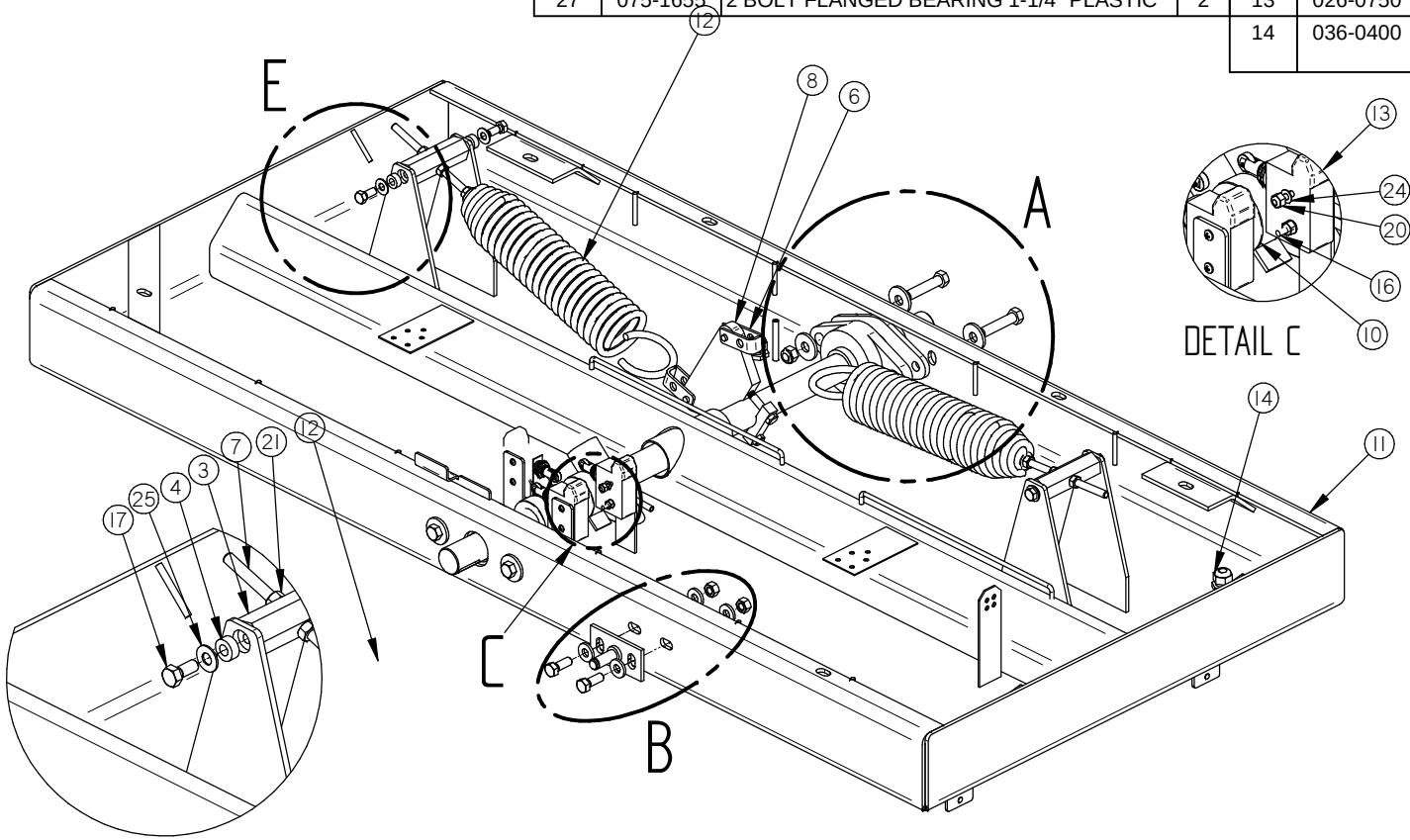
B	008A0680 WAS 008-0680	14-01-31	SBU
LET.	MODIFICATION	DATE	INT.

MACHINE: 420A	DEPT. TOL	METRIC	INCH	SIPROMAC	
	USINAGE	± 0.1	± 0.004"	ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
	TOLERIE	± 0.5	± 0.020"		
	SOUDAGE	± 0.5	± 0.020"		
PART: GUIDE ARM PRE-ASS'Y	N.T.S.				
ITEM	CNC			DEPT. U-J-(M)	QTY. 1
MAT.	DWG BY SBU		DATE 14-01-31	NO. 004B1393	
	APP. BY		DATE		

004B0124

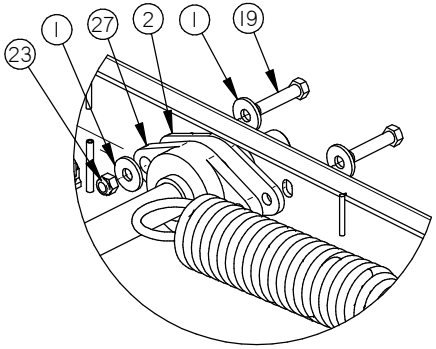
ITEM	PART #	DESCRIPTION	QT.
15	036-0400	WIRE CONNECTOR 3/8" NPT NUT	8
16	051-0142	SCREW 8-32 x1-1/2"RND PHIL S/S	6
17	051-0300	BOLT 5/16"-18 x 3/4" S/S	4
18	051-0360	BOLT 3/8"-16nc. X 1" S/S	2
19	051-04285	BOLT 7/16-14 x 2" HEX S/S	4
20	051-0560	NUT #8-32 NYLON LOCK S/S	6
21	051-0600	NUT 5/16" -18 S/S	4
22	051-0620	NUT 3/8"-16 NC S/S	2
23	051-0624	NUT 7/16"-14 NYLON LOCK S/S	4
24	051-0720	WASHER #8 FLAT S/S	6
25	051-0760	WASHER 5/16" FLAT S/S	4
26	051-0783	WASHER 3/8" FLAT THICK S/S	4
27	075-1655	2 BOLT FLANGED BEARING 1-1/4" PLASTIC	2

ITEM	PART #	DESCRIPTION	QT.
1	001A2954	WASHER 0.468"Ø ID x 1.250"OD x 3.5	8
2	001A6546	BEARING SPACER	2
3	002A3941	SPRING ADJ. PIVOT	2
4	002A4002	SPRING ADJ. PIVOT SPACER	4
5	002B0324	CENTRAL SHAFT	1
6	004A3937	SHACKLE ASS'Y	2
7	004A3968	SPRING INSERT ASSEMBLY	2
8	004A4087	SPRING BLOCK PRE-ASSY	1
9	005-0317	GUIDE ARM AXIS ASS'Y	1
10	005A1437	MICRO SWITCH COLLAR ASSY	3
11	005B0327	TABLE ASEMBLY	1
12	008A1953	SPRING	2
13	026-0750	ROLLER PLUNGER SWITCH SPDT	3
14	036-0400	WIRE CONNECT. 3/8" NPT CD09/O-RING/NUT	8

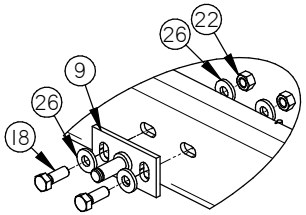


DETAIL E

DETAIL C



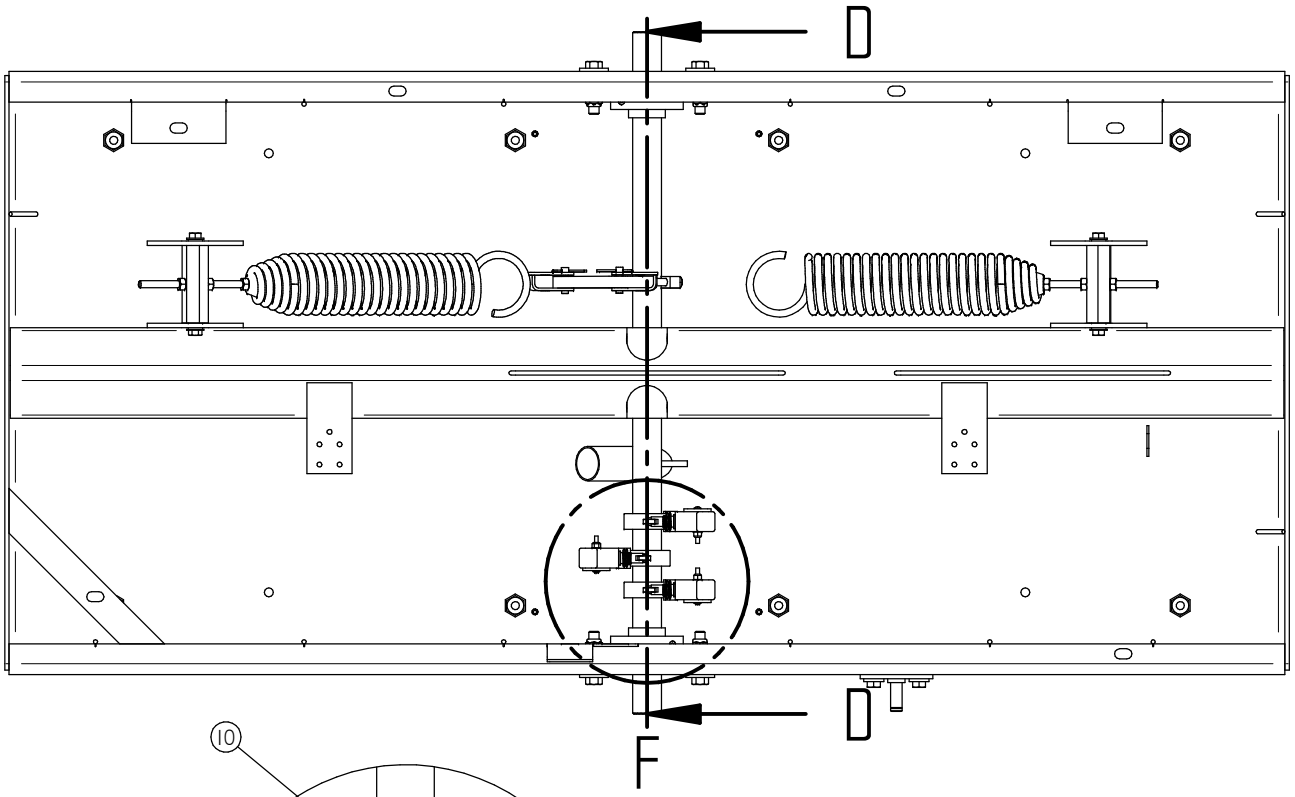
DETAIL A

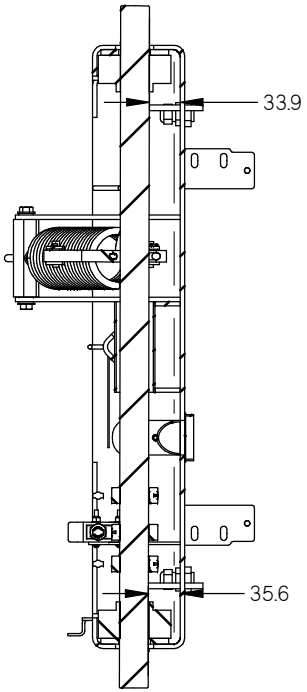


DETAIL B

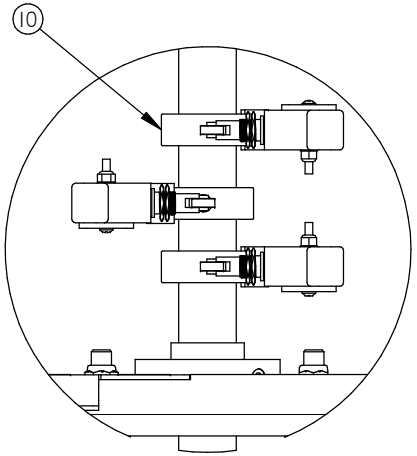
F	EXTENSION SPRING DESIGN	14-01-31	SBU
LET.	MODIFICATION	DATE	INT.

MACHINE	420A	DEPT. TOL	METRIC	INCH	SIPROMAC
		USINAGE	± 0.1	± 0.004"	ST-GERMAIN DE GRANTHAM QUEBEC CANADA
		TOLERIE	± 0.5	± 0.020"	
		SOUDAGE	± 0.5	± 0.020"	
PART	TABLE ASSEMBLY		N.T.S.		
ITEM		CNC		DEPT. M	QTY. 1
MAT.		DWG BY SBU	DATE 13-12-18	NO. 004B0124	
		APP. BY	DATE		





SECTION D-D

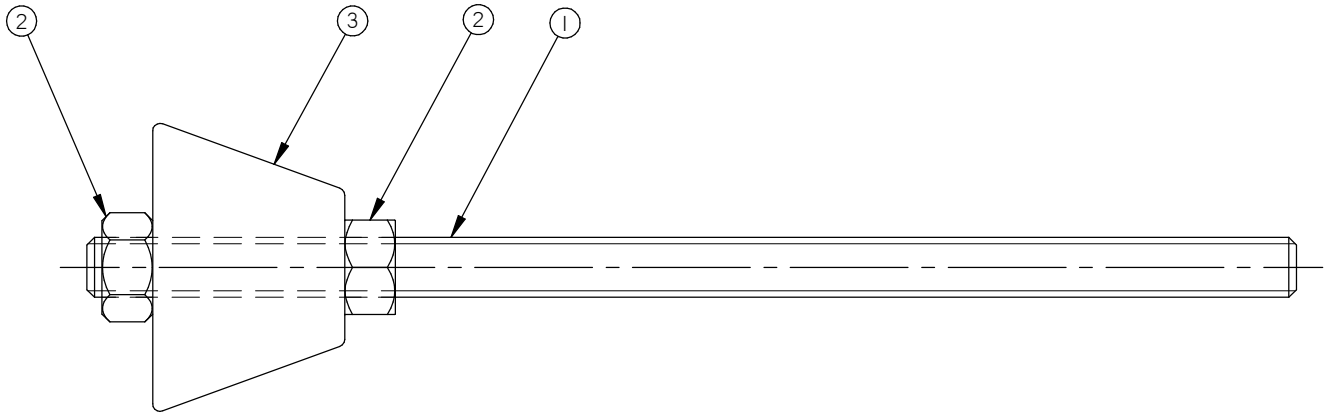


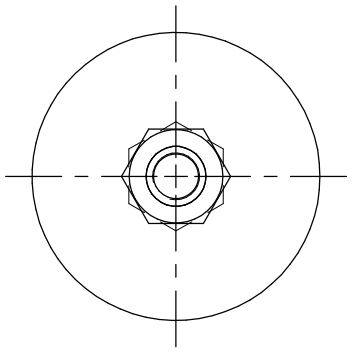
DETAIL F

MACHINE: 420A	DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"		SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA		
PART: TABLE ASSEMBLY		N.T.S.			
ITEM	CNC		DEPT. M	QTY. 1	
MAT.	DWG BY SBU	DATE 13-12-18	NO. 004B0124		
	APP. BY	DATE			

004A3968

ITEM	PART #	DESCRIPTION	QT.
1	002A3989	SPRING ADJUSTMENT ROD	1
2	051-0600	NUT 5/16" -18 S/S	2
3	002B3940	SPRING INSERT	1





620A	4
600A	4
MACHINE	QTY

MACHINE: **600A & 620A**

PART: **SPRING INSERT ASSEMBLY**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

ITEM

CNC

DEPT. **M-(M)**

QTY. **LISTE**

MAT.

DWG BY **J.G.**

DATE **13-01-15**

APP. BY

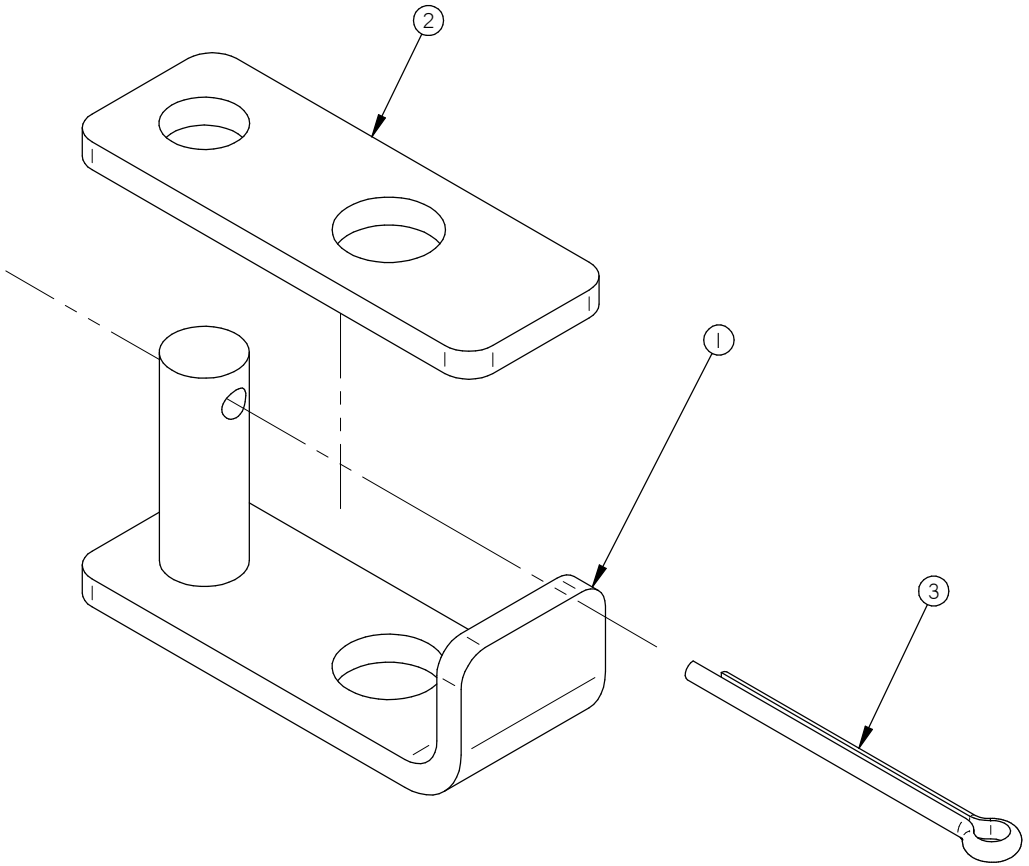
DATE

NO. **004A3968**

LET.	MODIFICATION	DATE	INT.
A	AJOUTER 620A	13-01-23	J.G.

004A3937

ITEM	PART #	DESCRIPTION	QT.
1	004A3935	SHACKLE PRE-ASS'Y	1
2	001A6269	SHACKLE PLATE	1
3	056-0118	COTTER PIN 3/32" x 1" S/S	1



600A	4
MACHINE	QTY

MACHINE: **VACUUM**

PART: **SHACKLE ASS'Y**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

ITEM _____ CNC _____ DEPT. **M-(M)** QTY. **LISTE**

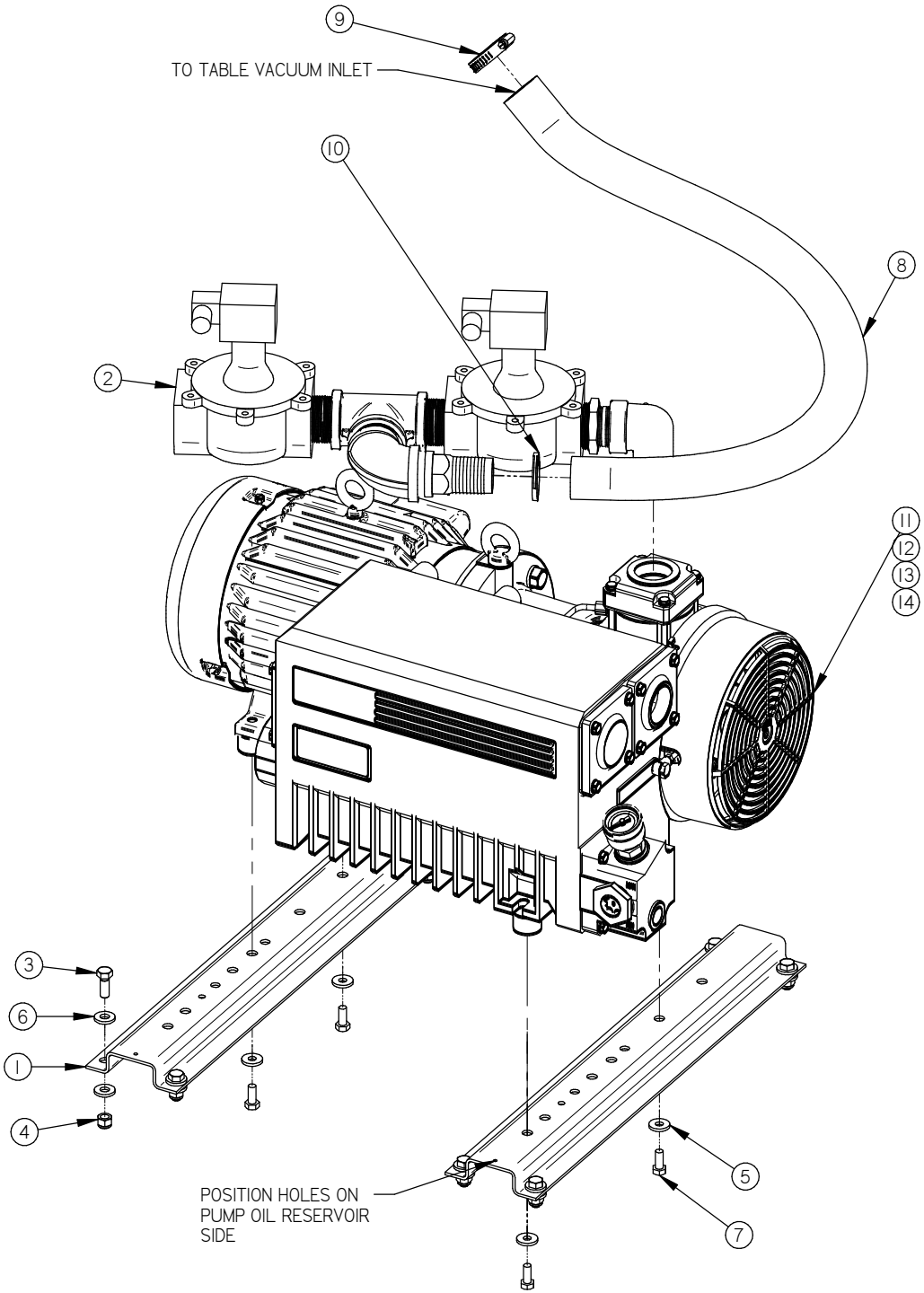
MAT. _____ DWG BY **J.G.** DATE **12-11-06** NO. **004A3937**

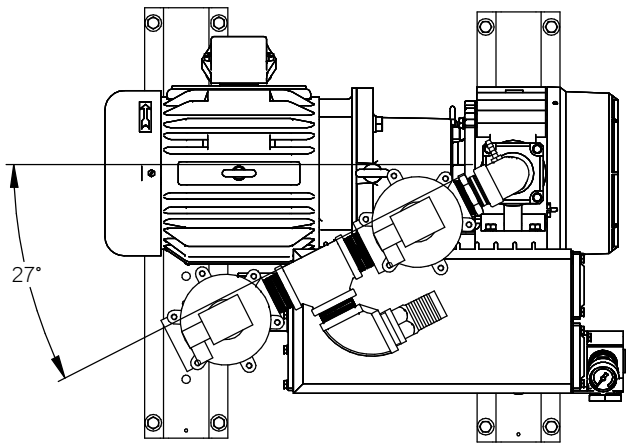
APP. BY _____ DATE _____

LET.	MODIFICATION	DATE	INT.

004A4120

ITEM	PART #	DESCRIPTION	QT.
1	001A6589	PUMP SUPPORT	2
2	004B1404	VACUUM / ATMOSPHERE VALVE ASSY.	1
3	051-0360	BOLT 3/8"-16nc. X 1" S/S	8
4	051-0622	NUT 3/8"-16nc. NYLON LOCK S/S	8
5	051-0762	WASHER 5/16" THICK FLAT S/S	4
6	051-0783	WASHER 3/8" FLAT THICK S/S	16
7	051-0980	BOLT M8 x 20 S/S	4
8	104-0125	HOSE 1-1/2" ID VACUUM POLYWIRE (3')	1
9	105-0110	SCREW CLAMPS 1-1/16" TO 2" ALL S/S	1
10	105-0250	EAR CLAMP 1-1/2" S/S	1
11	125-0040	BUSCH RA-0063 230-460V/3PH/60HZ	1
12	125-0041	BUSCH RA0063 380V/3PH/50HZ	1
13	125-0042	BUSCH RA0063 575V/3PH/60HZ	1
14	125-0045	BUSCH RA0063 230-460V/3PH/60HZ OXYGENE	1





LET.	MODIFICATION	DATE	INT.

MACHINE: **420A**

PART: **PUMP "BUSCH" 63M³ ASSY**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

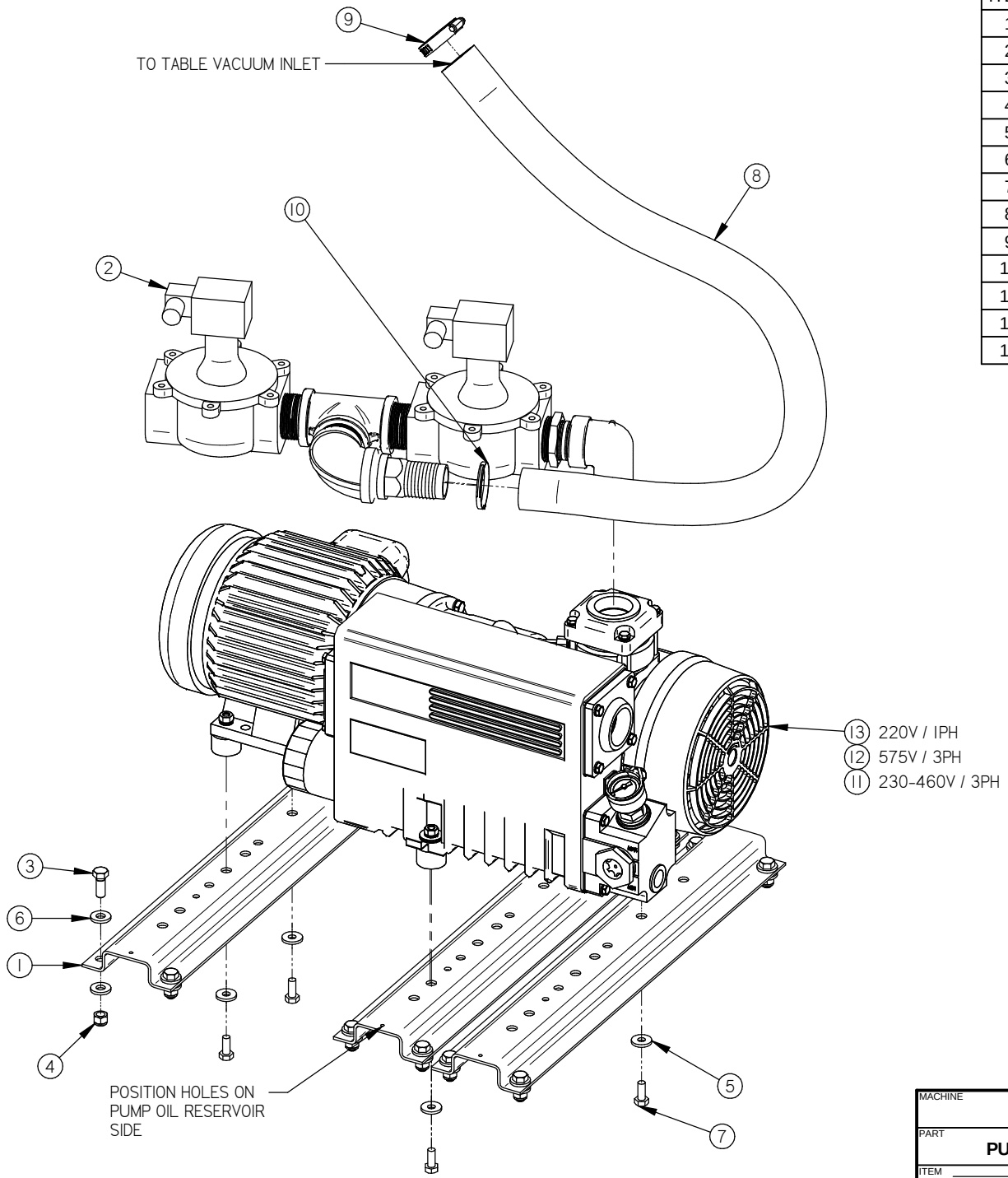
ITEM | CNC | DEPT. **M** | QTY. **1**

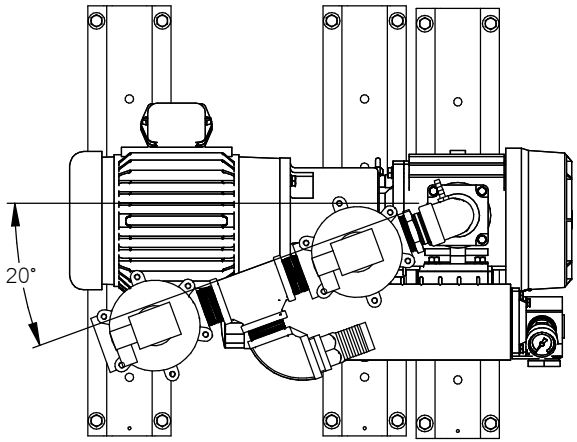
MAT. | DWG BY **SBU** | DATE **14-01-28** | NO. **004A4120**

APP. BY | DATE

004A4119

ITEM	PART #	DESCRIPTION	QT.
1	001A6589	PUMP SUPPORT	3
2	004B1404	VACUUM / ATMOSPHERE VALVE ASSY.	1
3	051-0360	BOLT 3/8"-16nc. X 1" S/S	12
4	051-0622	NUT 3/8"-16nc. NYLON LOCK S/S	12
5	051-0762	WASHER 5/16" THICK FLAT S/S	4
6	051-0783	WASHER 3/8" FLAT THICK S/S	24
7	051-0980	BOLT M8 x 20 S/S	4
8	104-0125	HOSE 1-1/2" ID VACUUM POLYWIRE	1
9	105-0110	SCREW CLAMPS 1-1/16" TO 2" ALL S/S	1
10	105-0250	EAR CLAMP 1-1/2" S/S	1
11	125-0030	BUSCH RA-0040 230-460V/3PH/60HZ	1
12	125-0032	BUSCH RA-0040 575V/3PH/60Hz	1
13	125-0034	BUSCH RA0040 220V/1PH/60Hz	1



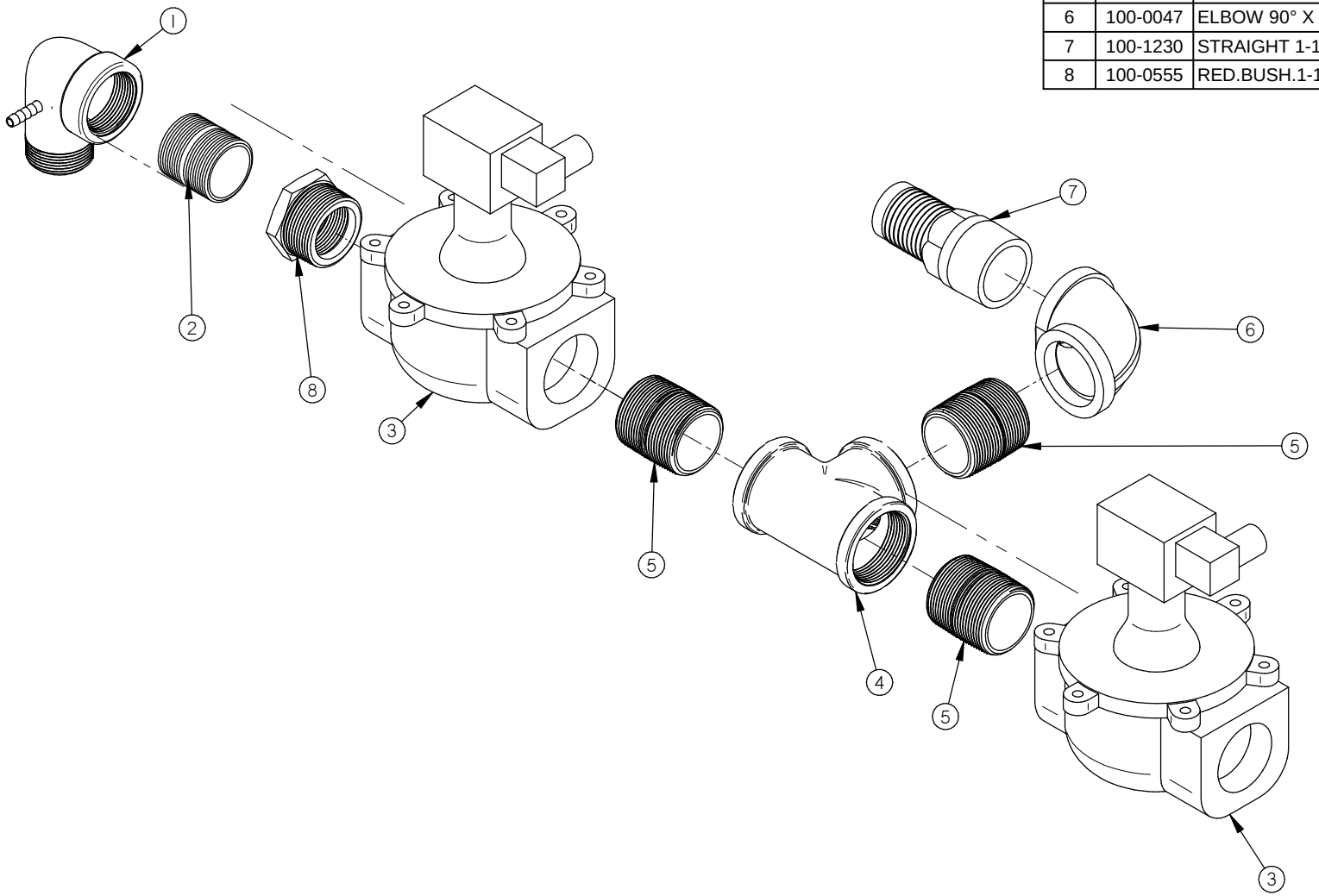


LET.	MODIFICATION	DATE	INT.

MACHINE: 420A	DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
PART: PUMP "BUSCH" 40M³ ASSY	N.T.S.		
ITEM	CNC	DEPT. M	QTY. 1
MAT.	DWG BY SBU / APP. BY	DATE 14-01-27 / DATE	NO. 004A4119

004B1404

ITEM	PART #	DESCRIPTION	QT.
1	004A4081	BELLOWS ELBOW CONNECTOR ASSY	1
2	100-0245	CLOSE NIPPLE 1¼"npt. S/S	1
3	106-0051	VALVE 2WAY 24V 1-1/2"NPT60Hz	2
4	100-0485	TEE 1-1/2" NPT S/S	1
5	100-0440	NIPPLE 1-1/2" NPT X 2" SS	3
6	100-0047	ELBOW 90° X 1-1/2" NPT S/S	1
7	100-1230	STRAIGHT 1-1/2"MNPT x1-1/2" HOSE BARB	1
8	100-0555	RED.BUSH.1-1/2" x 1-1/4" NPT S/S	1



-OPTION - 40M³, 63M³ & 100M³ PUMP

LET.	MODIFICATION	DATE	INT.

MACHINE: **VACUUM**

PART: **VACUUM / ATMOSPHERE VALVE ASSY.**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

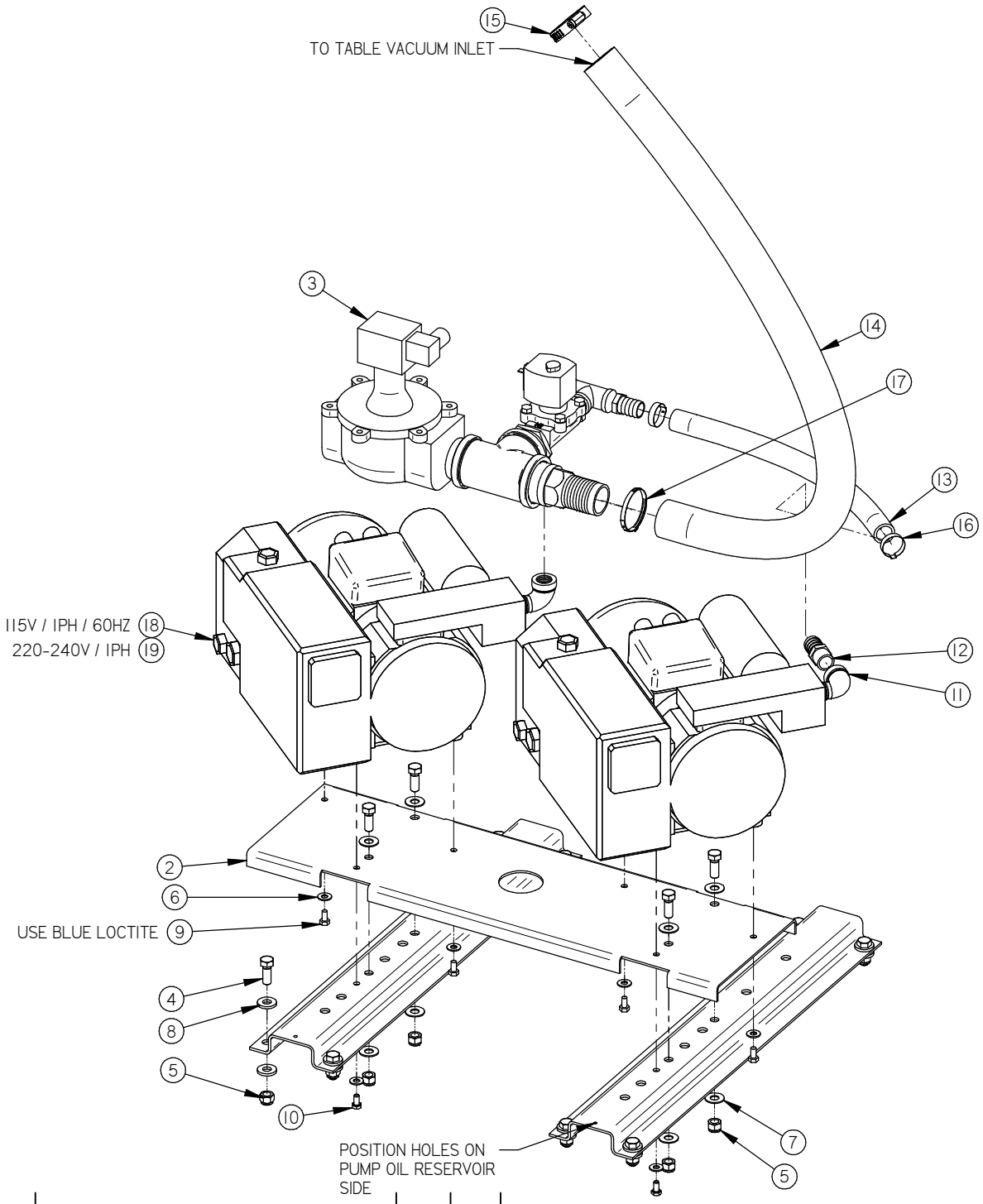
SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

ITEM: _____ CNC: _____ DEPT. **M-I** QTY. **1**

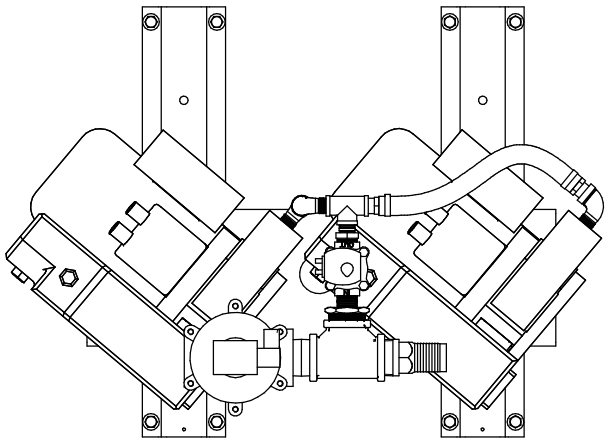
MAT.: _____ DWG BY **SBU** DATE **13-09-19** NO. **004B1404**

APP. BY: _____ DATE: _____

004A4121



ITEM	PART #	DESCRIPTION	QT.
1	001A6589	PUMP SUPPORT	2
2	001A6590	KB-0020 TRANSVERSE PUMP SUPPORT	1
3	004A4153	VACUUM/ATMOSPHERE VALVE ASSY (2X KB0020)	1
4	051-0360	BOLT 3/8"-16nc. X 1" S/S	12
5	051-0622	NUT 3/8"-16nc. NYLON LOCK S/S	12
6	051-0740	WASHER 1/4" FLAT S/S	6
7	051-0780	WASHER 3/8" FLAT S/S	8
8	051-0783	WASHER 3/8" FLAT THICK S/S	16
9	051-0930	BOLT M6 x 10 S/S	4
10	051-0948	BOLT M6 x 12 SS	2
11	100-0075	STREET ELBOW 1/2" NPT SS	2
12	100-1205	STRAIGHT ½"MNPTx3/4" HOSE BARB S/S	1
13	104-0110	HOSE 3/4" ID VACUUM TIGERFLEX (1.02')	1
14	104-0125	HOSE 1-1/2" ID VACUUM POLYWIRE (3')	1
15	105-0110	SCREW CLAMPS 1-1/16" TO 2" ALL S/S	1
16	105-0238	EAR CLAMP 23.9-27.1 SS	2
17	105-0250	EAR CLAMP 1-1/2" S/S	1
18	125-1020	BUSCH KB-0020 115V/1PH/60HZ	2
19	125-1021	BUSCH KB-0020 220-240V/1PH/50-60HZ	2



LET.	MODIFICATION	DATE	INT.

MACHINE: **420A**

PART: **PUMP "BUSCH" 2X 20M³**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

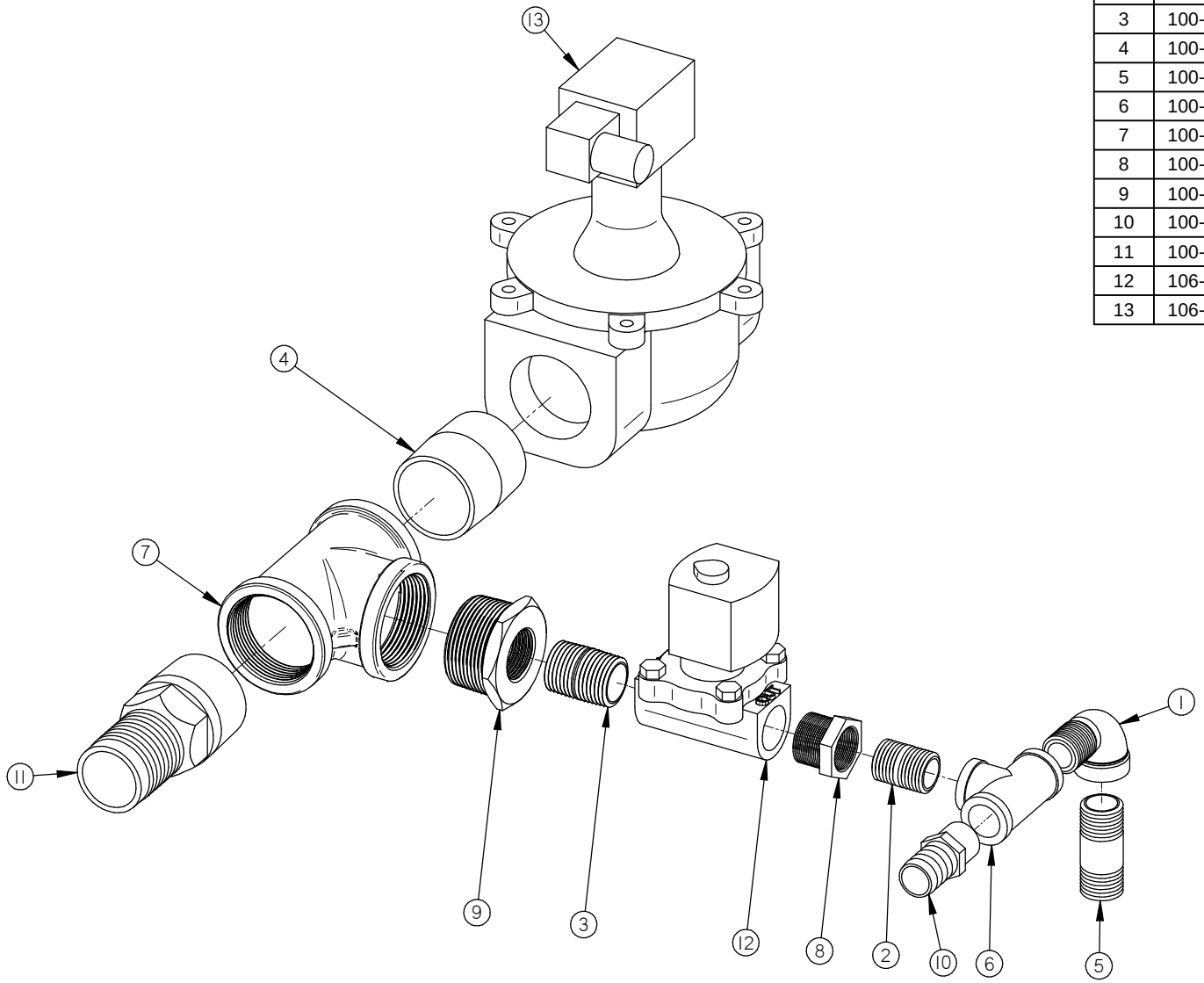
ITEM: _____ CNC: _____ DEPT. **M** QTY. **1**

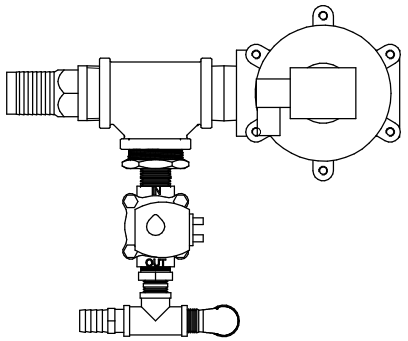
MAT.: _____ DWG BY **SBU** DATE **14-01-28** NO. **004A4121**

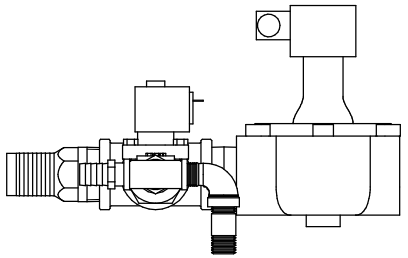
APP. BY: _____ DATE: _____

004A4153

ITEM	PART #	DESCRIPTION	QT.
1	100-0075	STREET ELBOW 1/2" NPT SS	1
2	100-0230	CLOSE NIPPLE ½" npt, S/S	1
3	100-0235	CLOSE NIPPLE 3/4"npt, S/S	1
4	100-0250	CLOSE NIPPLE 1-1/2"NPT S/S	1
5	100-0325	NIPPLE ½"npt. X 2" S/S	1
6	100-0465	TEE ½"npt. S/S	1
7	100-0485	TEE 1-1/2" NPT S/S	1
8	100-0520	RED.BUSH.3/4"NPT x 1/2"NPT S/S	1
9	100-0553	REDUCING BUSH. 1-1/2" NPT X 3/4" NPT SS	1
10	100-1205	STRAIGHT ½"MNPTx3/4" HOSE BARB S/S	1
11	100-1230	STRAIGHT 1-1/2"MNPT x1-1/2" HOSE BARB	1
12	106-0030	VALVE 2WAY 24V 3/4"NPT(G95) 60Hz	1
13	106-0051	VALVE 2WAY 24V 1-1/2"NPT60Hz	1







LET.	MODIFICATION	DATE	INT.

MACHINE: **VACUUM**

PART: **VACUUM/ATMOSPHERE VALVE ASSY (2X KB0020)**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

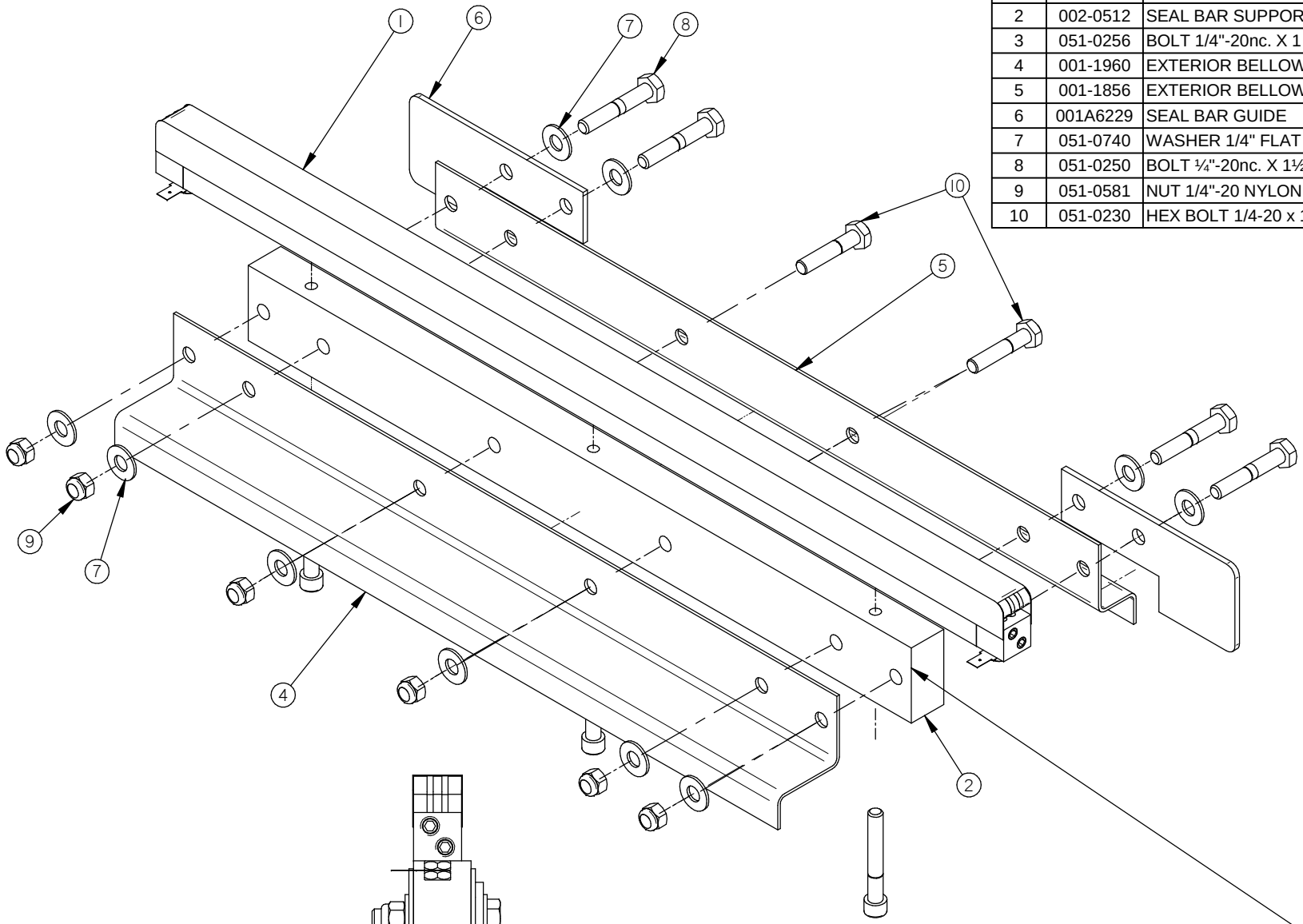
ITEM _____ CNC _____ DEPT. **M** QTY. **1**

MAT. _____ DWG BY **SBU** DATE **14-01-28** NO. **004A4153**

APP. BY _____ DATE _____

005A1355

ITEM	PART #	DESCRIPTION	QT.
1	004-0352	SEAL BAR PRE-ASSEMBLY	1
2	002-0512	SEAL BAR SUPPORT	1
3	051-0256	BOLT 1/4"-20nc. X 1 3/4" CAP SKT S/S	3
4	001-1960	EXTERIOR BELLOWS COVER	1
5	001-1856	EXTERIOR BELLOWS COVER	1
6	001A6229	SEAL BAR GUIDE	2
7	051-0740	WASHER 1/4" FLAT S/S	10
8	051-0250	BOLT ¼"-20nc. X 1½" S/S	4
9	051-0581	NUT 1/4"-20 NYLON LOCK S/S	6
10	051-0230	HEX BOLT 1/4-20 x 1 1/4" SS	2



-ITEM #2 ÉGAL AVEC L'ITEM #4 & #5.
-ITEM #2 FLUSH WITH ITEM #4 & #5.

-END VIEW-

-CE COTÉ DU SUPPORT ÉGAL AVEC DE LA BARRE DE SCELLAGE.
-THIS SIDE OF SUPPORT TO FIT FLUSH W/ SEAL BAR.

-TWIN SEAL OPTION-

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

LET.	MODIFICATION	DATE	INT.
B	AJOUT 420A ÉTAIT ÉTAIT 005B0046	14-08-21	SBU
A	REDESSINÉ ÉTAIT 005B0046	12-09-24	J.G.

MACHINE: 300, 300D, 350, 350D & 420A

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

PART: SEAL BAR ASSEMBLY W/SUPP. TWIN SEAL

N.T.S.

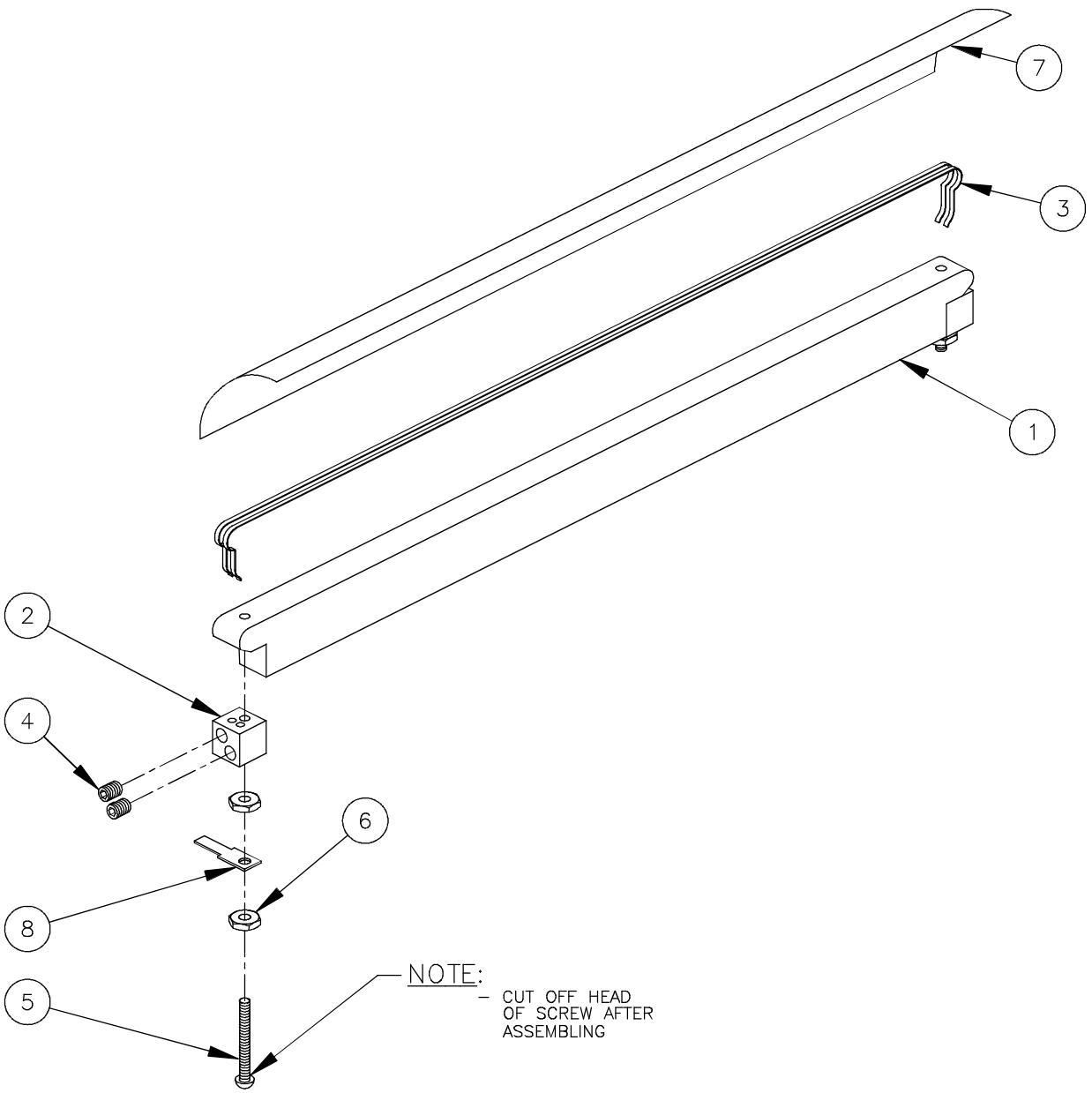
SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

ITEM | PROGRAM | DEPT. M-I-(M) | QTY. LIST

MAT. | 3D BY J.G. | DATE 12-09-24 | 2D BY | DATE | NO. 005A1355

004-0352

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.)	4.31
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



MACHINE	QTÉ.
420A	4
450T	2
450A	2
400	2
350D	2
350	1
300D	2
300	1

LET.	MODIFICATION	DATE	INT.
G	ADDED 420A WAS 005-0267	14-08-21	SBU
F	ADDED 300, 300D, 350 & 350D WAS 005-0267	12-09-24	J.G.
E	ADDED 450T WAS 005-0377	08-05-26	D.A.
D	MODIFICATION #A-0398 (CONNECTEUR)	04-04-19	J.G.
C	ADDED 400	99-05-06	S.L.
B	REDRAWN	98-02-10	A.P.

MACHINE: VOIR LISTE

PART: SEAL BAR PRE-ASSEMBLY

TOLERANCE

	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM, QUEBEC CANADA

ITEM: CNC: DEPT. M-I QT. 2

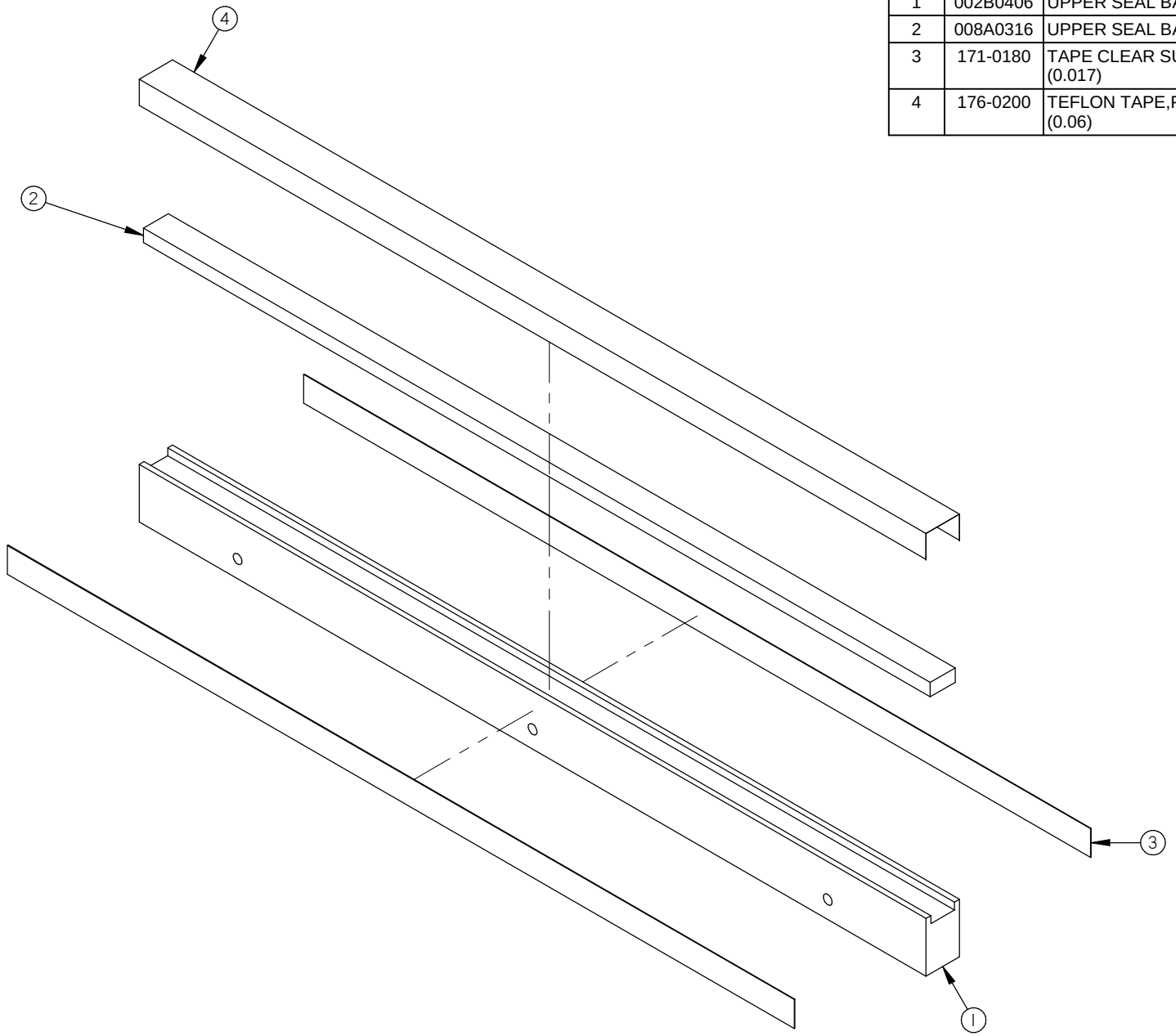
MAT: DWG BY A. P. DATE 98-02-10

APP. DATE

NO. 004-0352

004B0126

ITEM	PART #	DESCRIPTION	QT.
1	002B0406	UPPER SEAL BAR	1
2	008A0316	UPPER SEAL BAR RUBBER	1
3	171-0180	TAPE CLEAR SUPER BOND 3/4" 600mm (0.017)	2
4	176-0200	TEFLON TAPE,PRESS.SENSITIVE 2" 600mm (0.06)	1



LET.	MODIFICATION	DATE	INT.

MACHINE: **420A**

PART: **UPPER SEAL BAR ASSY**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

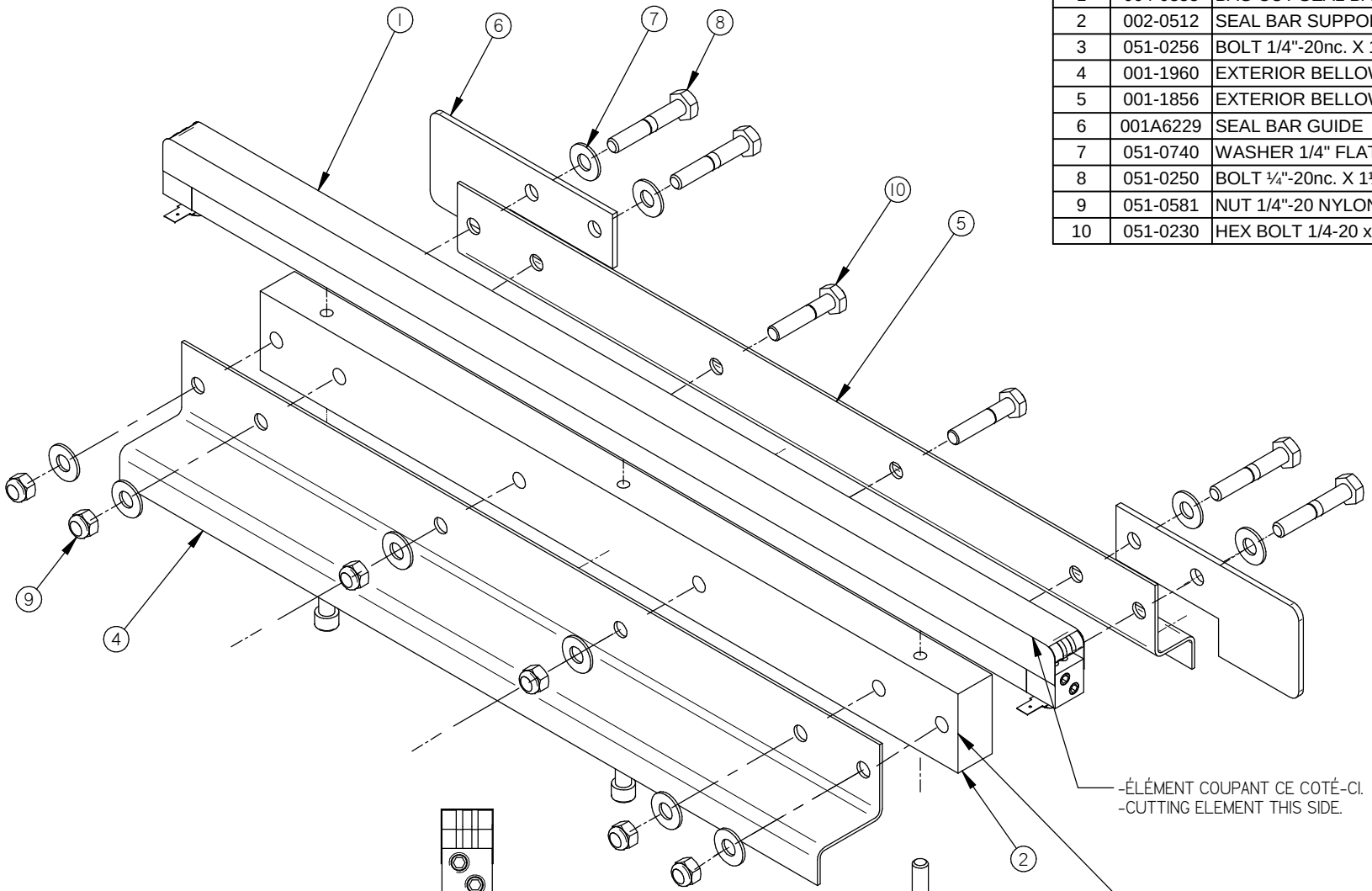
ITEM | CNC | DEPT. **M** | QTY. **2**

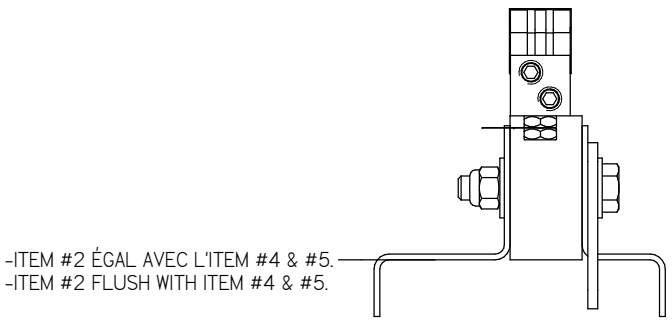
MAT. | DWG BY **SBU** | DATE **14-01-29** | NO. **004B0126**

APP. BY | DATE

005A1356

ITEM	PART #	DESCRIPTION	QT.
1	004-0355	BAG CUT SEAL BAR PRE-ASSEMBLY	1
2	002-0512	SEAL BAR SUPPORT	1
3	051-0256	BOLT 1/4"-20nc. X 1 3/4" CAP SKT S/S	3
4	001-1960	EXTERIOR BELLOWS COVER	1
5	001-1856	EXTERIOR BELLOWS COVER	1
6	001A6229	SEAL BAR GUIDE	2
7	051-0740	WASHER 1/4" FLAT S/S	10
8	051-0250	BOLT ¼"-20nc. X 1½" S/S	4
9	051-0581	NUT 1/4"-20 NYLON LOCK S/S	6
10	051-0230	HEX BOLT 1/4-20 x 1 1/4" SS	2





-END VIEW-

-CE COTÉ DU SUPPORT ÉGAL AVEC DE LA BARRE DE SCELLAGE.
-THIS SIDE OF SUPPORT TO FIT FLUSH W/ SEAL BAR.

-BAG CUT OPTION-

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

LET.	MODIFICATION	DATE	INT.
B	AJOUT 420A ÉTAIT 005B0558	14-08-21	SBU
A	REDESSINÉ ÉTAIT 005B0558	12-09-24	J.G.

MACHINE: 300, 300D, 350, 350D & 420A

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

PART: SEAL BAR ASSEMBLY W/SUPP. BAG CUT

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

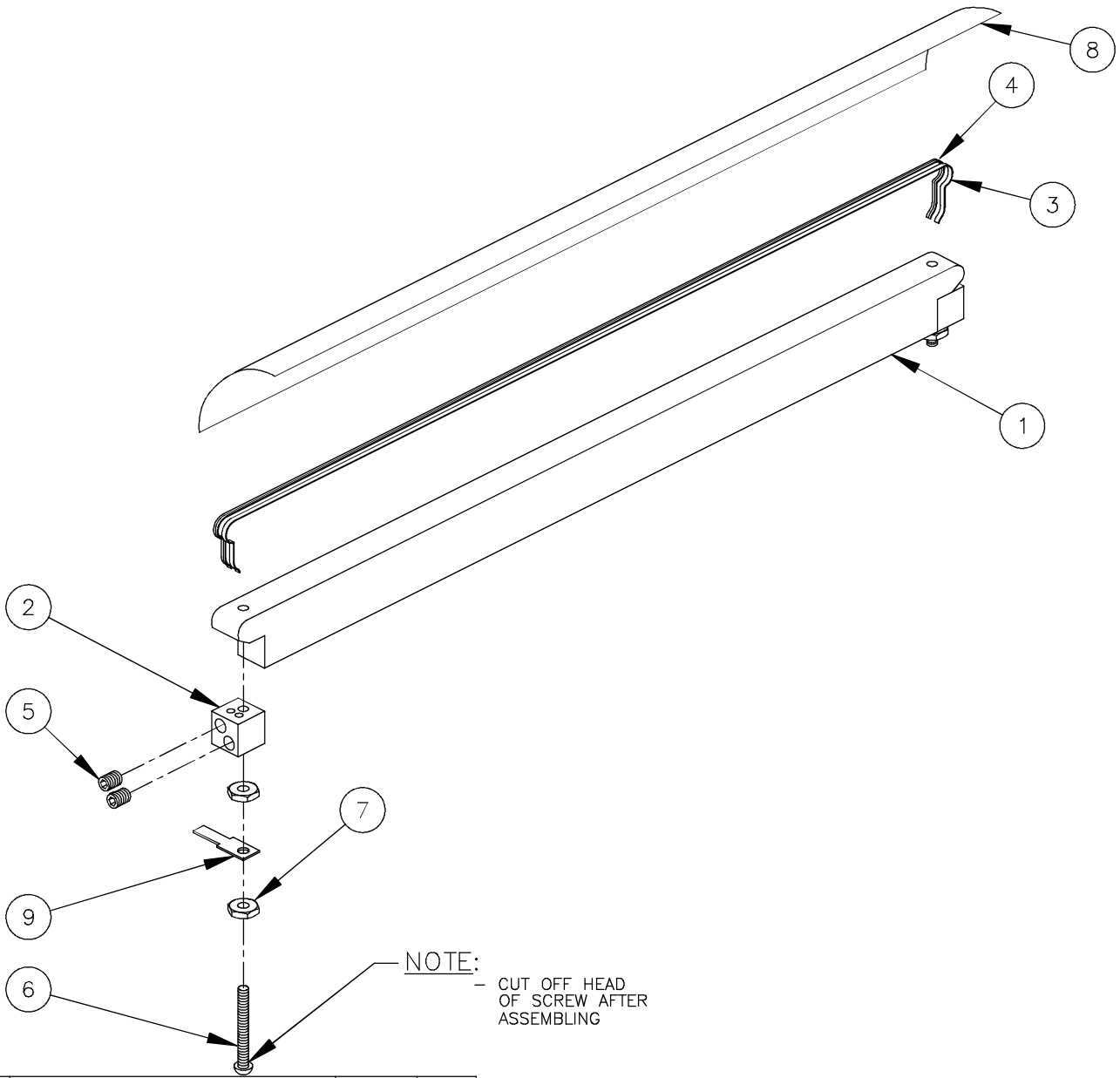
ITEM | PROGRAM | DEPT. M-I-(M) | QTY. LIST

MAT. | 3D BY J.G. | DATE 12-09-24 | NO. 005A1356

2D BY | DATE

004-0355

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 5S 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

MACHINE	QTÉ.
420A	4
450T	2
450A	2
400	2
350D	2
350	1
300D	2
300	1

-BAG CUT OPTION-

LET.	MODIFICATION	DATE	INT.
G	ADDED 420A WAS 005-0267	14-08-21	SBU
F	ADDED 300, 300D, 350 & 350D WAS 005-0267	12-09-24	J.G.
E	ADDED 450T WAS 005-0383	08-05-26	D.A.
D	MODIFICATION #A-0398 (CONNECTEUR)	04-04-19	J.G.
C	ADDED 400	99-05-06	S.L.
B	REDRAWN	98-02-10	A.P.

MACHINE: VOIR LISTE

PART: SEAL BAR PRE-ASSEMBLY

TOLERANCE

	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM,
QUEBEC CANADA

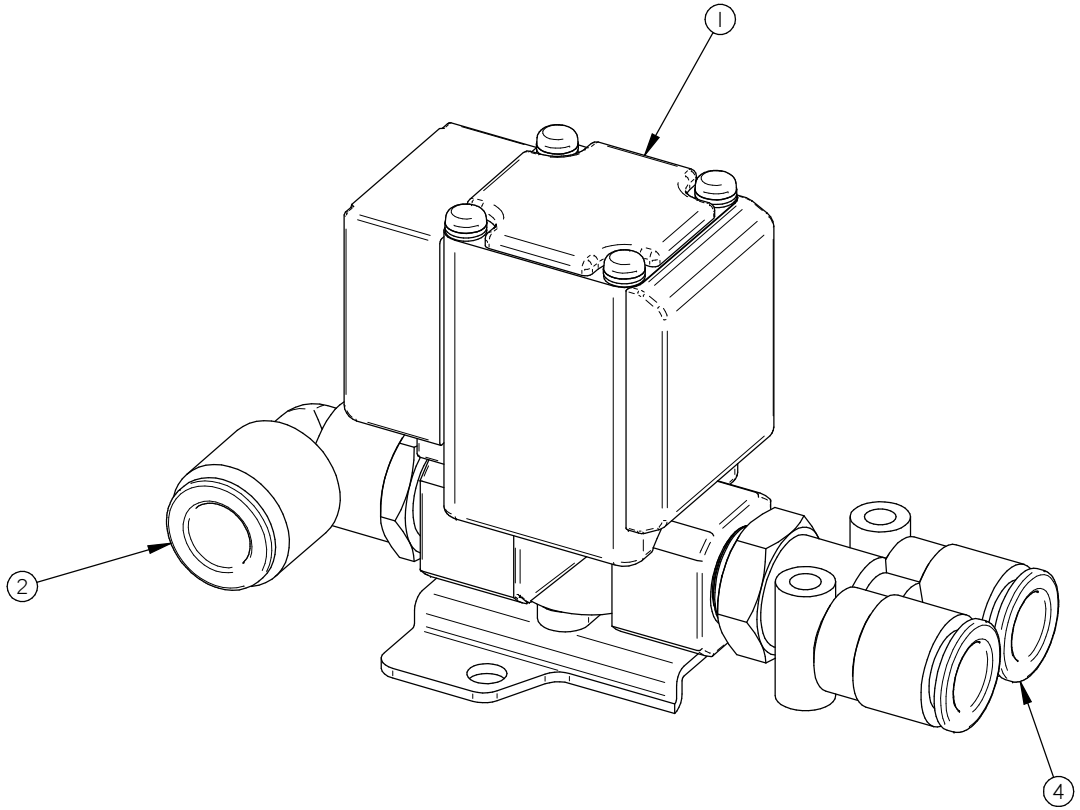
ITEM: | CNC: | M-I | QT. LISTE

MAT: | DWG BY A.P. | DATE 98-02-10 | APP. | DATE

NO. 004-0355

004B4113

ITEM	PART #	DESCRIPTION	QT.
1	106-0010	VALVE 2WAY N.C. 24VAC 1/4" NPT(SMC)	1
2	102-0330	ELBOW 1/4" NPT X 3/8" HOSE QUICK	1
4	102-0361	Y BRANCH 1/4" MNPT X 3/8" T. QUICK	1



-OPTION - GAS

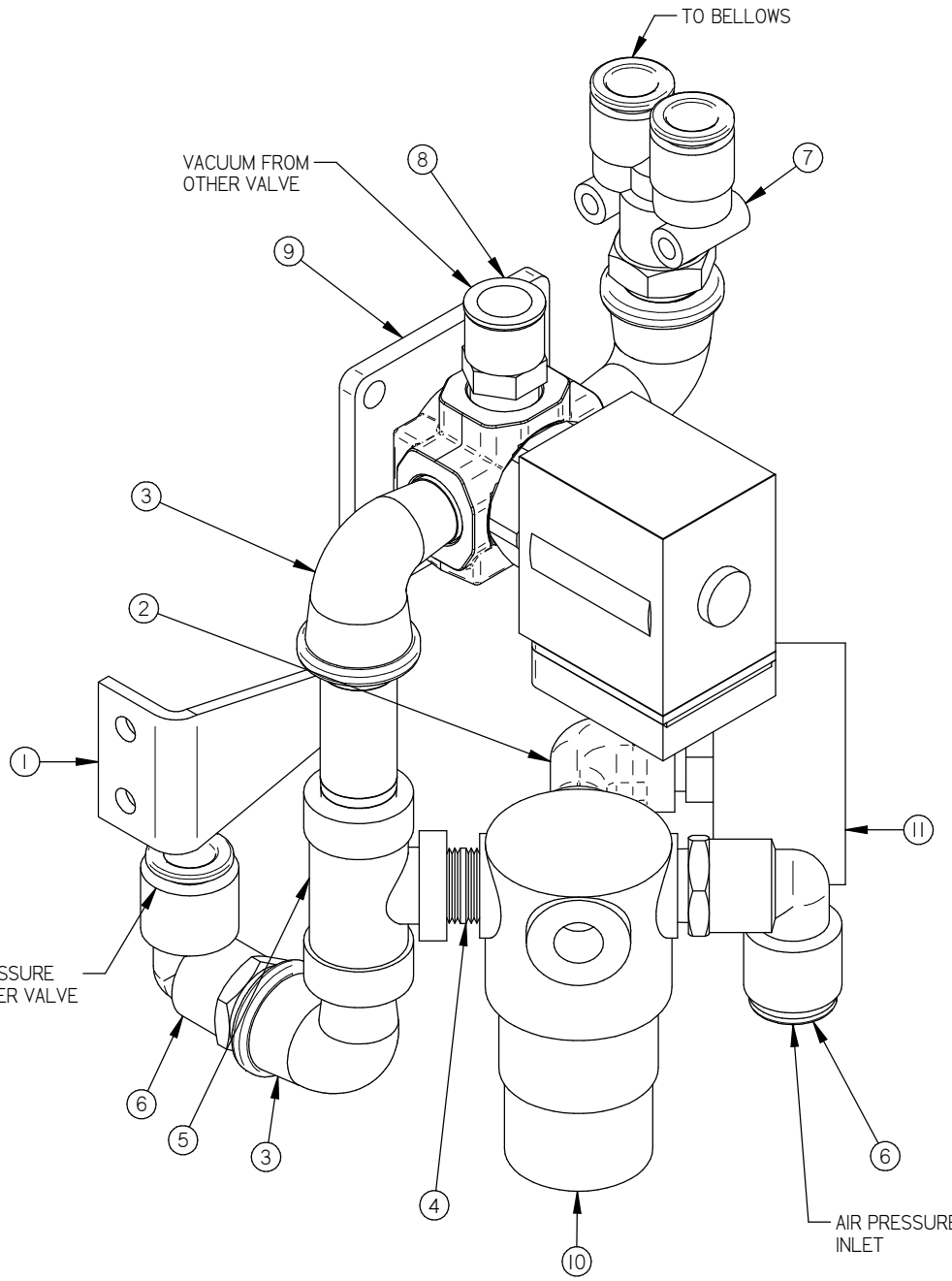
B	ENLEVER 100-0065	17-02-20	AG
A	VALVE UPDATE	14-05-27	SBU
LET.	MODIFICATION	DATE	INT.

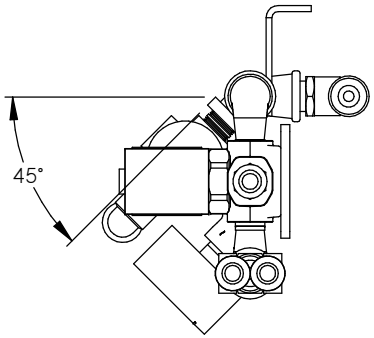
DOUBLE CHAMBER	2
SINGLE CHAMBER	1
MACHINE	QTY

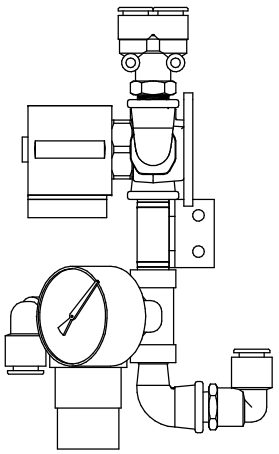
MACHINE: VACUUM	DEPT. TOL	METRIC	INCH	SIPROMAC
	USINAGE	± 0.1	± 0.004"	ST-GERMAIN DE GRANTHAM
	TOLERIE	± 0.5	± 0.020"	QUEBEC CANADA
	SOUDAGE	± 0.5	± 0.020"	
PART: GAS VALVE ASSEMBLY (OPTION)	N.T.S.			
ITEM	CNC		DEPT. M	QTY. LISTE
MAT.	DWG BY SBU	DATE 14-05-27	NO. 004B4113	
	APP. BY	DATE		

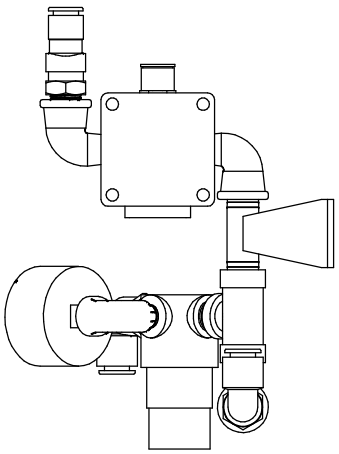
004A4152

ITEM	PART #	DESCRIPTION	QT.
1	004A4140	AIR REGULATOR SUPPORT	1
2	100-0060	STREET ELBOW 1/8" NPT SS	1
3	100-0065	STREET ELBOW 1/4" NPT SS	3
4	100-0225	CLOSE NIPPLE 1/4" NPT SS	1
5	100-0463	TEE 1/4" NPT S/S	1
6	102-0330	ELBOW 1/4" NPT X 3/8" HOSE QUICK	2
7	102-0361	Y BRANCH 1/4" MNPT X 3/8" T. QUICK	1
8	102-0410	MALE CONN.1/4"MNPTx3/8"T.QUICK	1
9	106-00701	VALVE 3WAY 24V 1/4"NPT	1
10	114-0147	PRESSURE REGUL. 0-60 PSI 1/4" NPT	1
11	114-0245	PRESSURE GAUGE 60 PSI 1/8" NPT	1







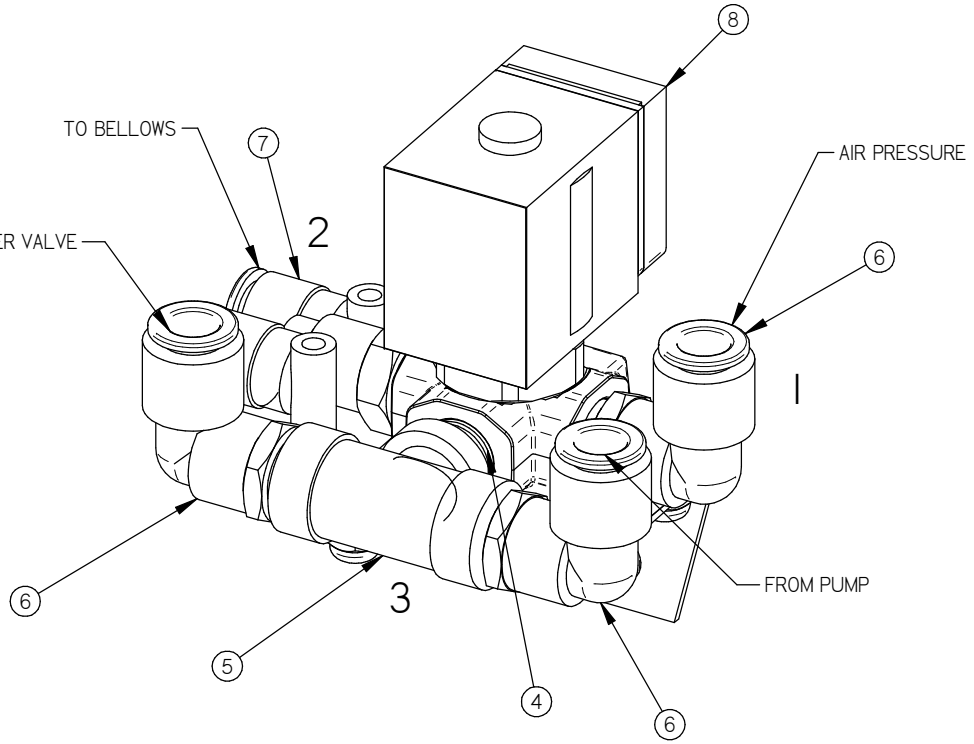


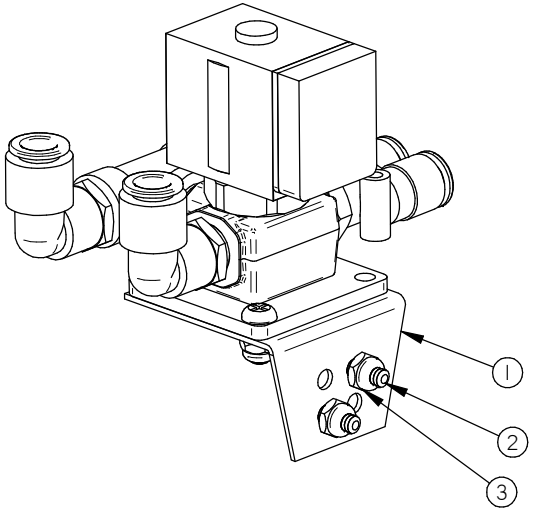
MACHINE: 420A		DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"		SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
PART: AIR REGULATOR VALVE ASSY		N.T.S.			
ITEM	CNC	DEPT. M	QTY. 1		
MAT.	DWG BY SBU	DATE 14-01-27	NO. 004A4152		
	APP. BY	DATE			

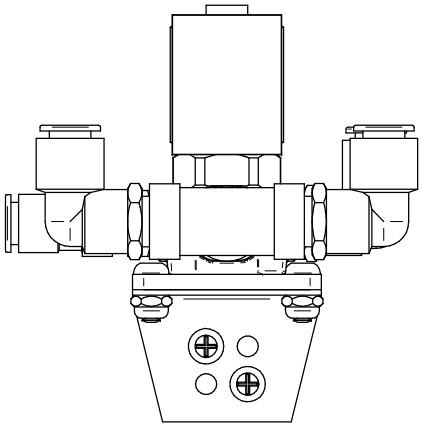
LET.	MODIFICATION	DATE	INT.

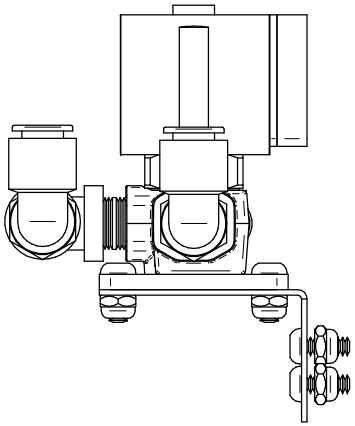
004B4105

ITEM	PART #	DESCRIPTION	QT.
1	001B6779	VALVE SUPPORT BRACKET	1
2	051-0144	SCREW #10-24 N.C 1/2"PAN PHIL. S/S	4
3	051-0572	NUT #10-24 NYLON LOCK S/S	4
4	100-0225	CLOSE NIPPLE 1/4" NPT SS	1
5	100-0463	TEE 1/4" NPT S/S	1
6	102-0330	ELBOW 1/4" NPT X 3/8" HOSE QUICK	3
7	102-0361	Y BRANCH 1/4" MNPT X 3/8" T. QUICK	1
8	106-00701	VALVE 3WAY 24V 1/4"NPT	1









-OPTION - AIR REGULATOR

B	CHANGER LA POSITION DES FITTINGS	17-06-01	AG
A	UPDATE VALVE	14-05-27	SBU
LET.	MODIFICATION	DATE	INT.

MACHINE: **VACUUM**

PART: **BELLOWS VALVE ASSY (OPT AIR REG)**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

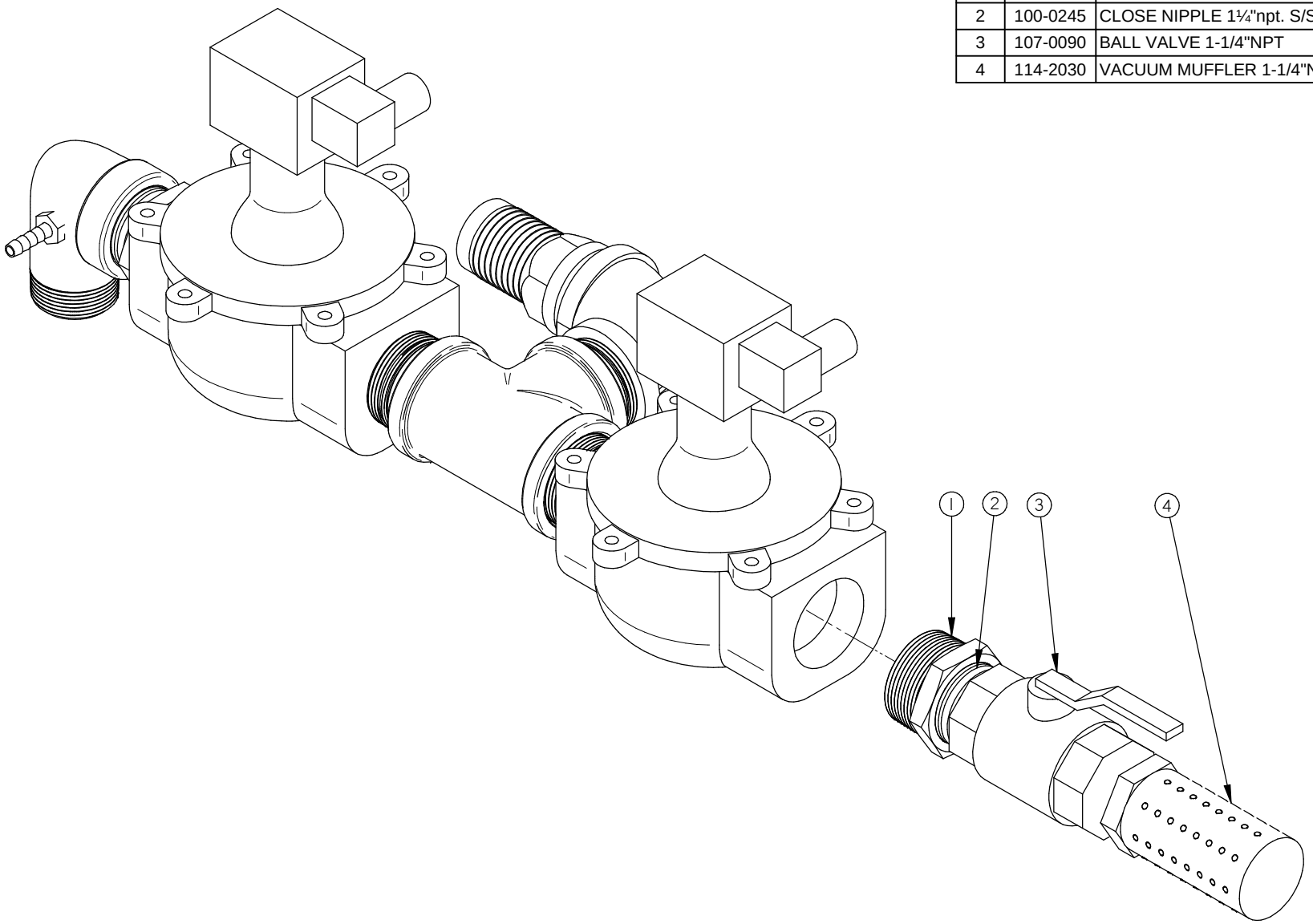
ITEM | CNC | DEPT. **M** | QTY. **1**

MAT. | DWG BY **SBU** | DATE **14-05-27** | NO. **004B4105**

APP. BY | DATE

004A4111

ITEM	PART #	DESCRIPTION	QT.
1	100-0555	RED.BUSH.1-1/2" x 1-1/4" NPT S/S	1
2	100-0245	CLOSE NIPPLE 1¼"npt. S/S	1
3	107-0090	BALL VALVE 1-1/4"NPT	1
4	114-2030	VACUUM MUFFLER 1-1/4"NPT	1



-OPTION - SOFT AIR + MUFFLER 40M³ @ 100M³

LET.	MODIFICATION	DATE	INT.

MACHINE: **VACUUM**

PART: **VACUUM/ATMOSPHERE VALVE (OPT SOFT AIR+MUFFLER)**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

N.T.S.

SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

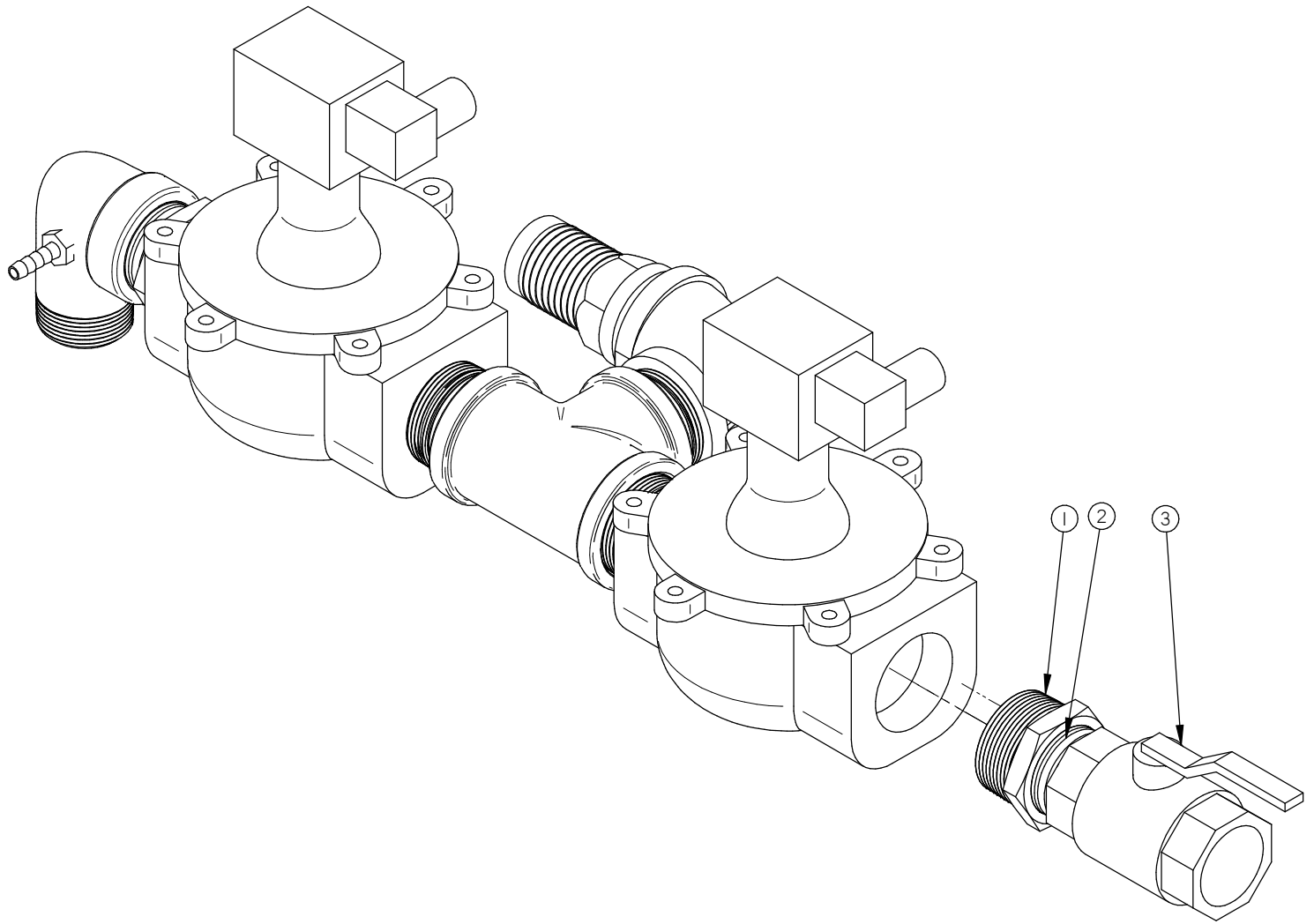
ITEM: _____ CNC: _____ DEPT.: **M** QTY.: **1**

MAT.: _____ DWG BY: **SBU** DATE: **13-09-19** NO.: **004A4111**

APP. BY: _____ DATE: _____

004A4110

ITEM	PART #	DESCRIPTION	QT.
1	100-0555	RED.BUSH.1-1/2" x 1-1/4" NPT S/S	1
2	100-0245	CLOSE NIPPLE 1¼"npt. S/S	1
3	107-0090	BALL VALVE 1-1/4"NPT	1



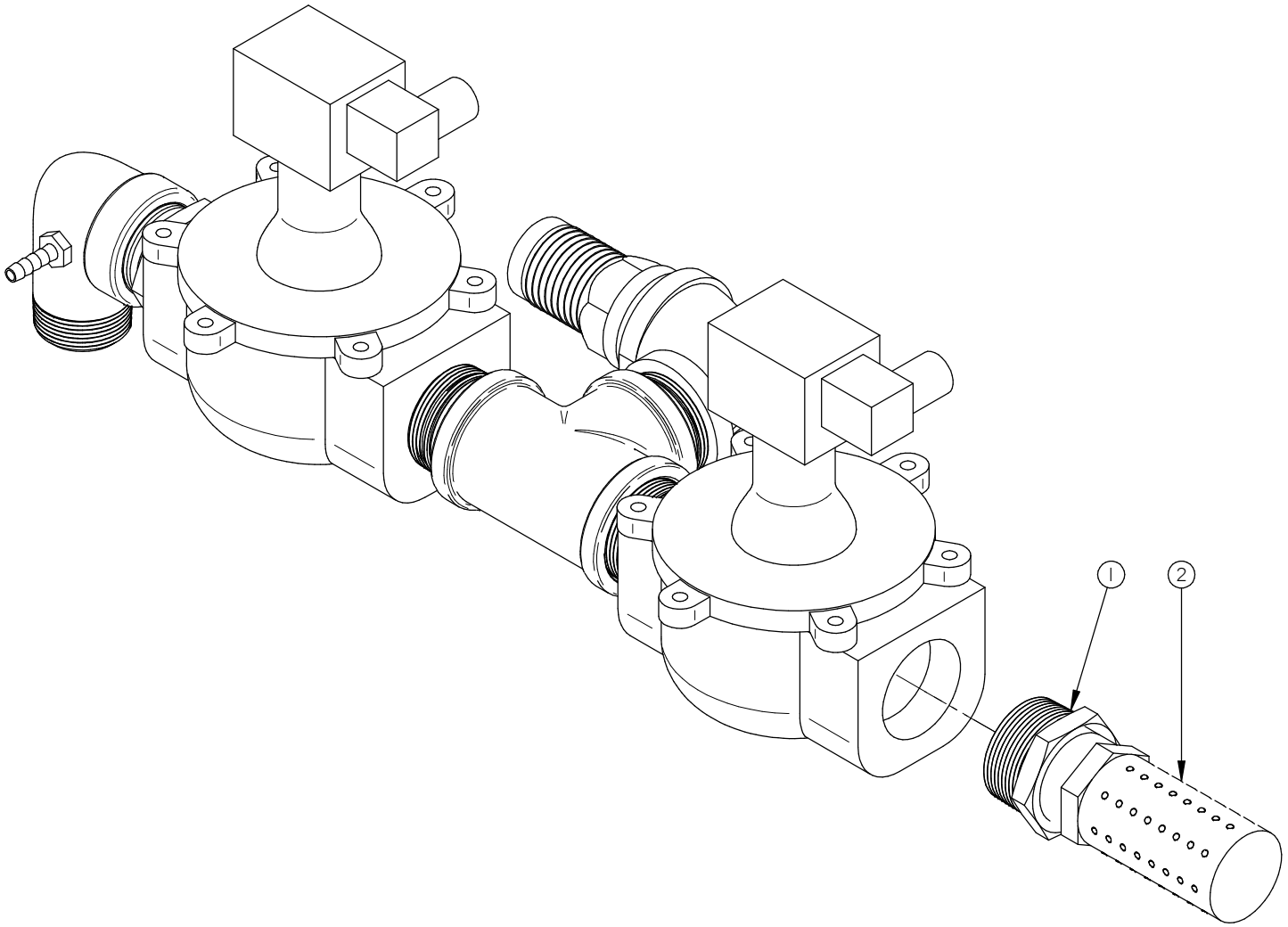
-OPTION - SOFT AIR 40M³ @ 100M³

MACHINE: VACUUM	DEPT. TOL / METRIC / INCH: USINAGE ± 0.1 ± 0.004"; TOLERIE ± 0.5 ± 0.020"; SOUDAGE ± 0.5 ± 0.020"	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA			
PART: VACUUM/ATMOSPHERE VALVE (OPT SOFT AIR)	N.T.S.				
ITEM	CNC	DEPT. M	QTY. 1		
MAT.	DWG BY SBU	DATE 13-09-19	NO. 004A4110		
	APP. BY	DATE			

LET.	MODIFICATION	DATE	INT.

004A4109

ITEM	PART #	DESCRIPTION	QT.
1	100-0555	RED.BUSH.1-1/2" x 1-1/4" NPT S/S	1
2	114-2030	VACUUM MUFFLER 1-1/4"NPT	1



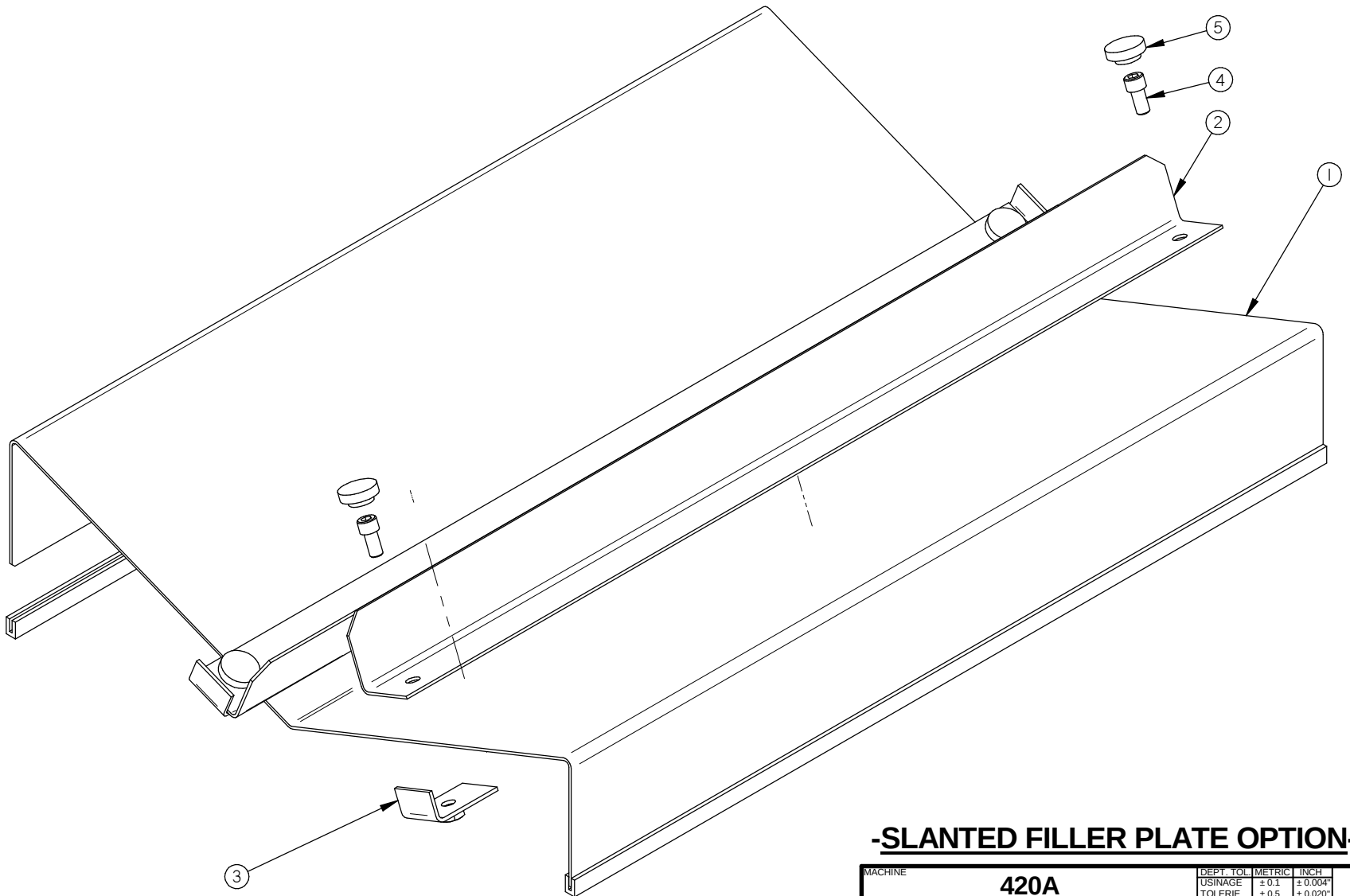
-OPTION - MUFFLER 40M³ @ 100M³

MACHINE: VACUUM	DEPT. TOL	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
PART: VACUUM/ATMOSPHERE VALVE (OPT MUFFLER)	USINAGE	± 0.1	± 0.004"		
	TOLERIE	± 0.5	± 0.020"		
	SOUDAGE	± 0.5	± 0.020"		
	N.T.S.				
ITEM	CNC			DEPT. M	QTY. 1
MAT.	DWG BY SBU	DATE 13-09-19		NO. 004A4109	
	APP. BY	DATE			

LET.	MODIFICATION	DATE	INT.

005B1370

ITEM	PART #	DESCRIPTION	QT.
1	001B6292	SLANTED FILLER PLATE	1
2	001B6293	SLANTED FILLER PLATE ADJ. STOPPER	2
3	005-0187	ASS. BARRURE	4
4	051-01845	BOLT 1/4"-20 x 1/2"CAP HEX SKT.S/S	4
5	057-0004	THMB SCREW KNOB 1/4"	4
6	179-0014	RUBBER 1/4"x3/8"x1/16"U SHAPED	2



-SLANTED FILLER PLATE OPTION-

LET.	MODIFICATION	DATE	INT.
A	LENGTHEN BY 60MM	14-01-27	SBU

MACHINE: **420A**

PART: **SLANTED FILLER PLATE ASS'Y**

DEPT. TOL	METRIC	INCH
USINAGE	± 0.1	± 0.004"
TOLERIE	± 0.5	± 0.020"
SOUDAGE	± 0.5	± 0.020"

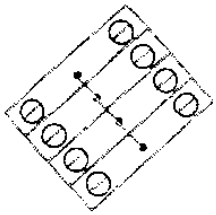
N.T.S.

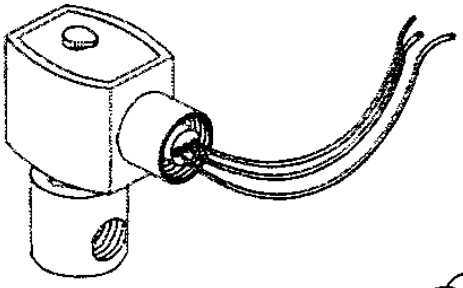
SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

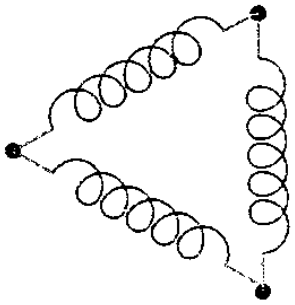
ITEM: _____ CNC: _____ DEPT. **M-I** QTY. **2**

MAT.: _____ DWG BY **SBU** DATE **14-01-27** NO. **005B1370**

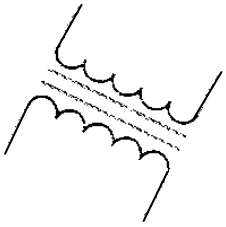
APP. BY: _____ DATE: _____

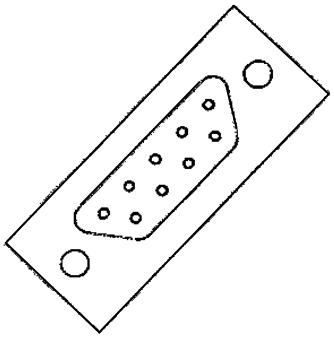


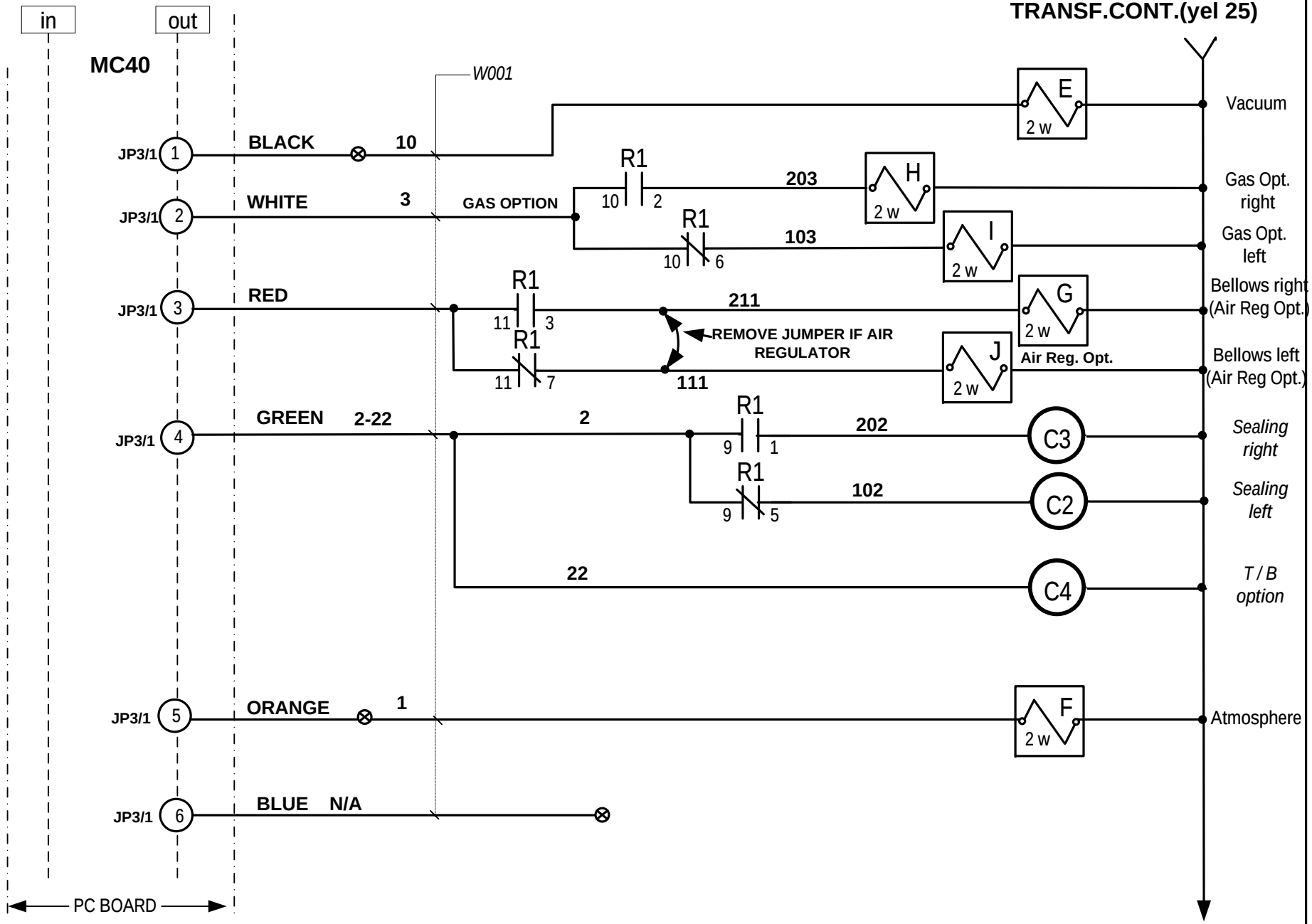




ELECTRICAL DRAWING

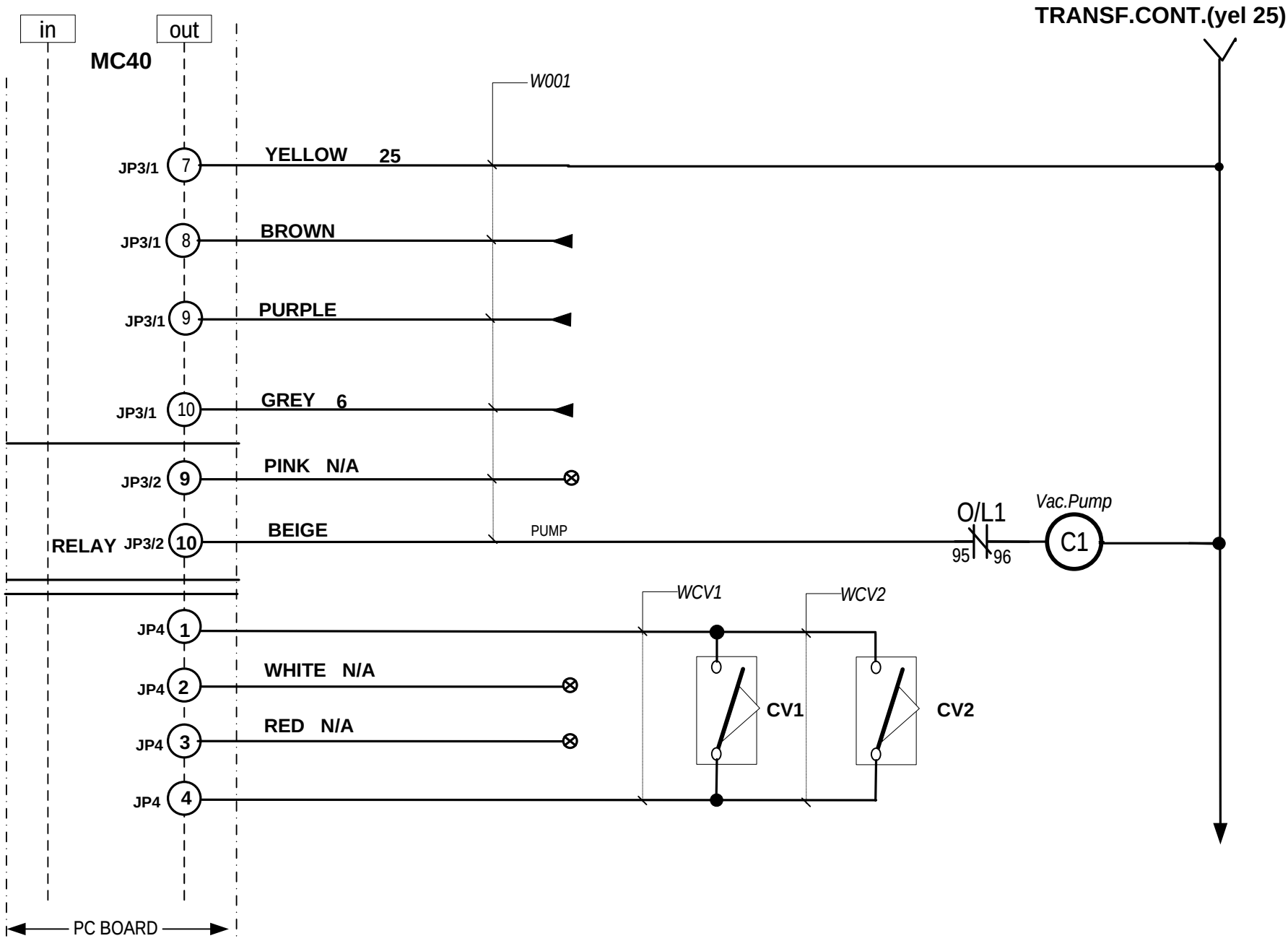






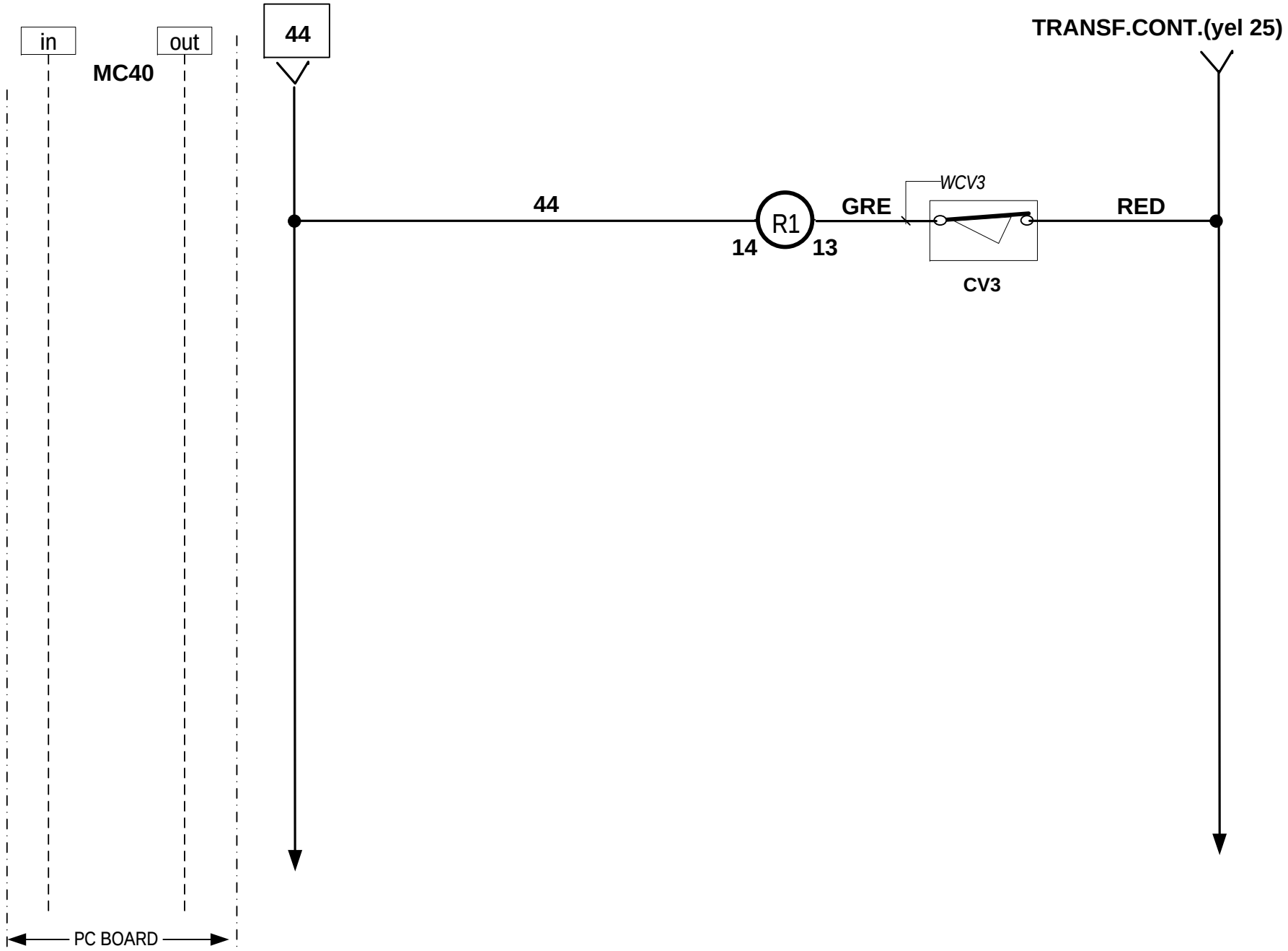
RC filters must be connected on each AC coil (not shown on diagram)

category: VACUUM PACK	model: 420A	volt.: ALL					SIPROMAC St-Germain de Grantham QUEBEC ,CANADA
system: Control		circuit: control	year: 05	month: 03	day: 03	block:	
usual fonctions: **MC-40**			concept: PP	draw: PP	app: DL	006-0637 PAGE 1 de 3	
options:							



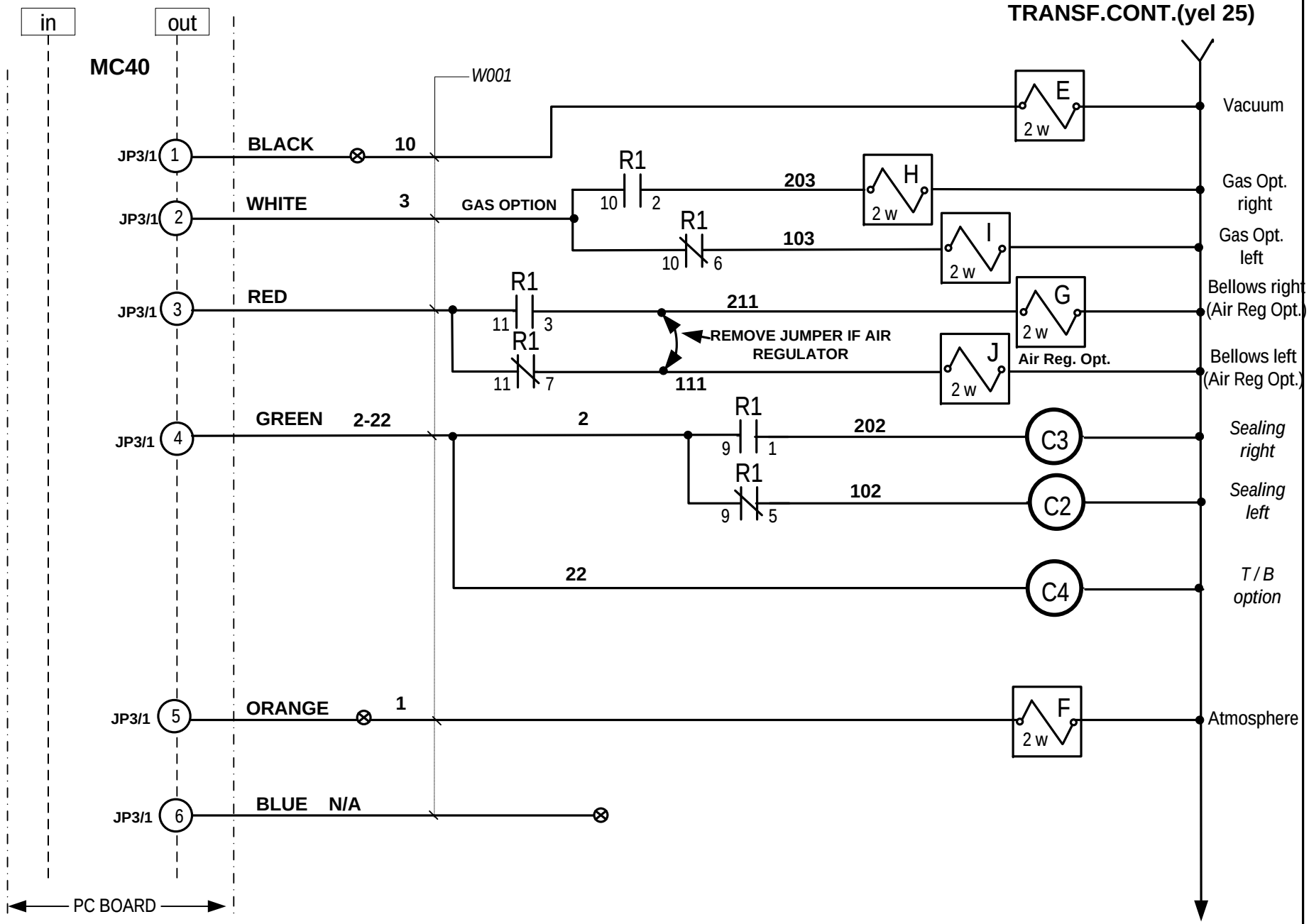
RC filters must be connected on each AC coil (not shown on diagram)

category VACUUM PACK	model 420A	volt. ALL					SIPROMAC St-Germain de Grantham QUEBEC ,CANADA	
system Control		circuit control	year 05	month 03	day 03	block		
usual fonctions **MC-40**			concept PP	draw PP	app DL	006-0637 PAGE 2 de 3		
options								



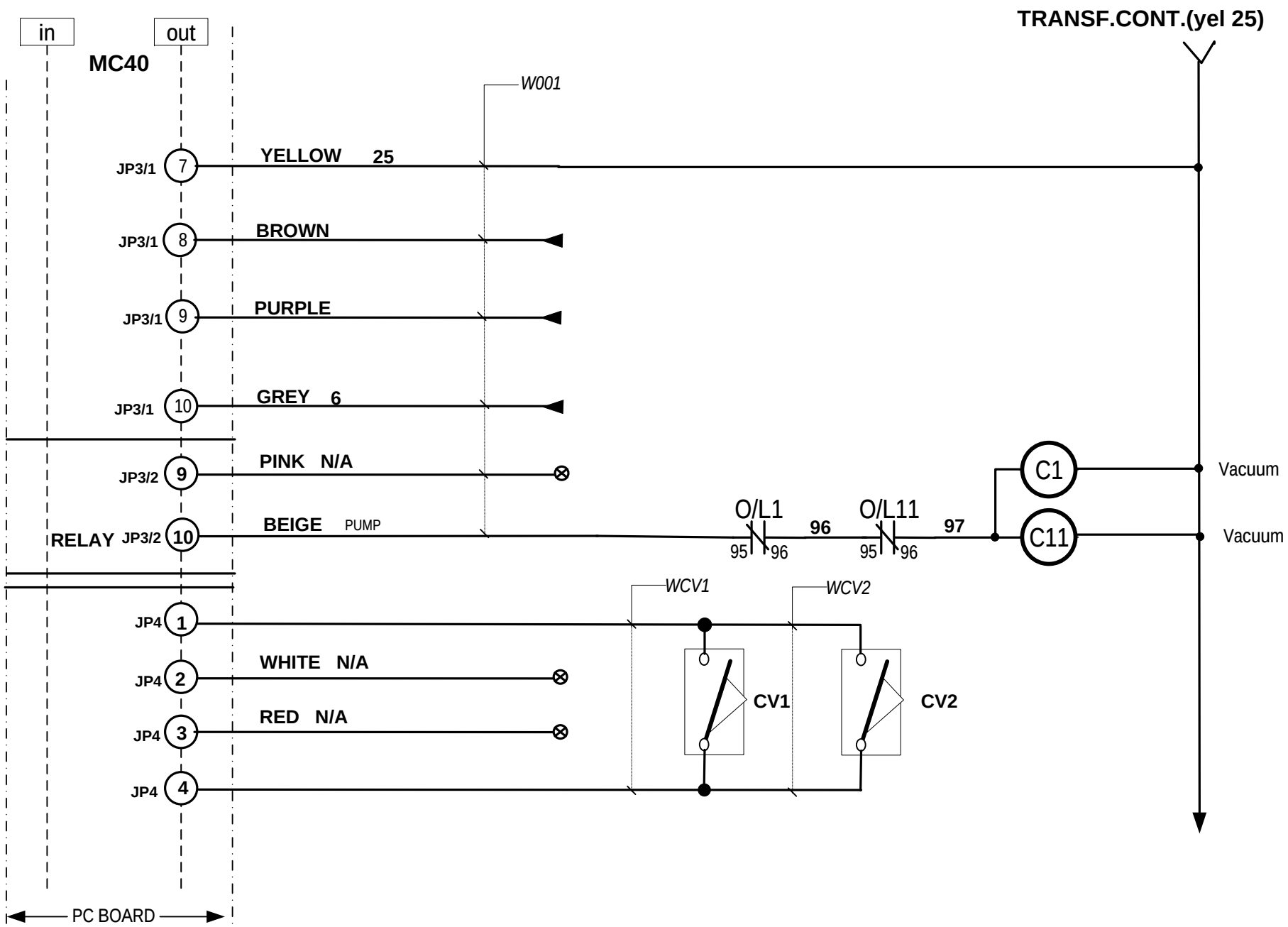
RC filters must be connected on each AC coil (not shown on diagram)

category VACUUM PACK	model 420A	volt. ALL					SIPROMAC St-Germain de Grantham QUEBEC ,CANADA	
system Control		circuit control	year 05	month 03	day 03	block		
usual fonctions MC-40			concept PP	draw PP	app DL	006-0637	PAGE	3 de 3
options								



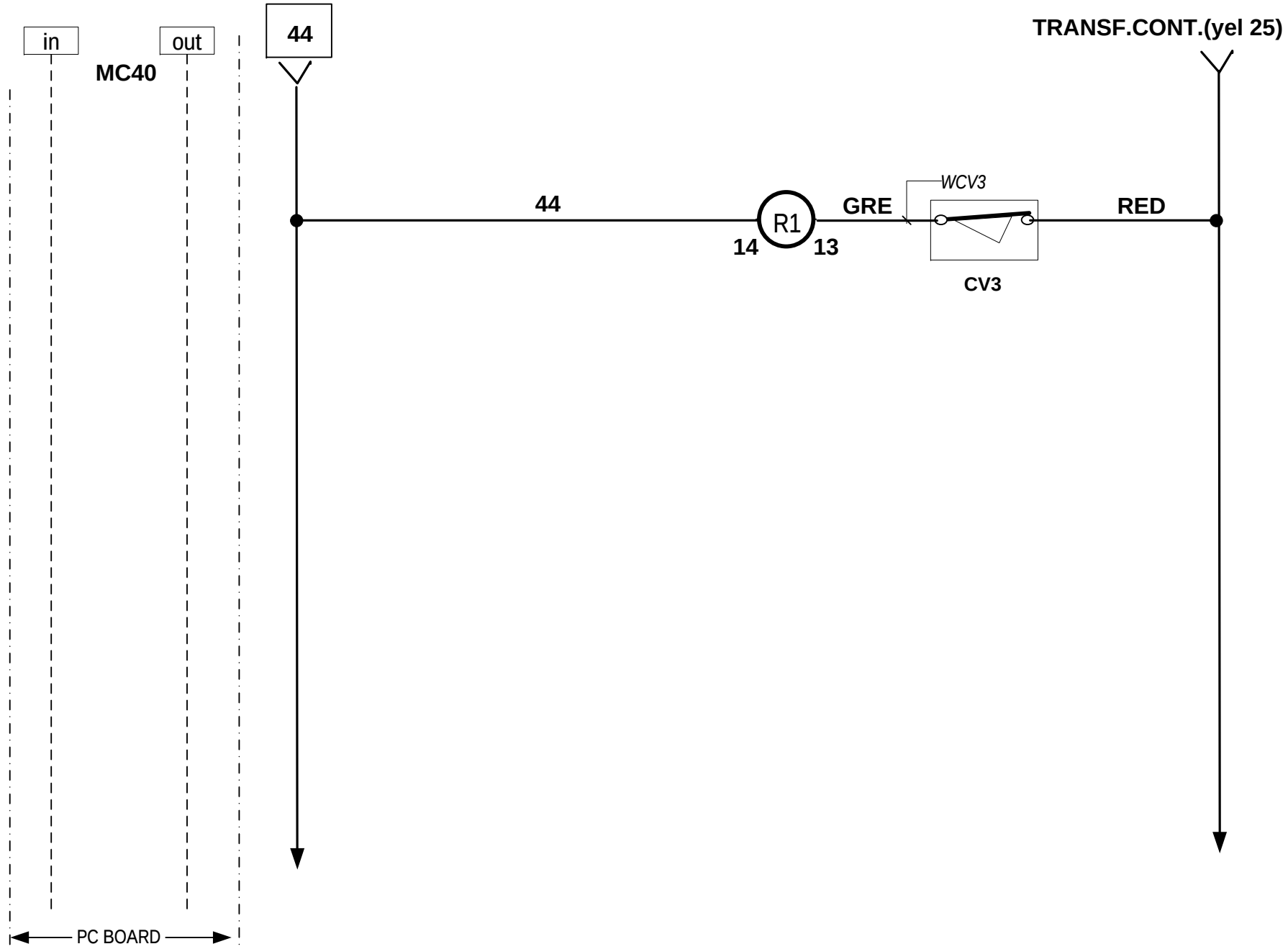
RC filters must be connected on each AC coil (not shown on diagram)

category: VACUUM PACK	model: 420A	volt.: ALL					SIPROMAC St-Germain de Grantham QUEBEC ,CANADA
system: Control		circuit: control	year: 05	month: 03	day: 03	block:	
usual fonctions: **MC-40**			concept: PP	draw: PP	app: DL	006-0637	PAGE 1 de 3
options:							



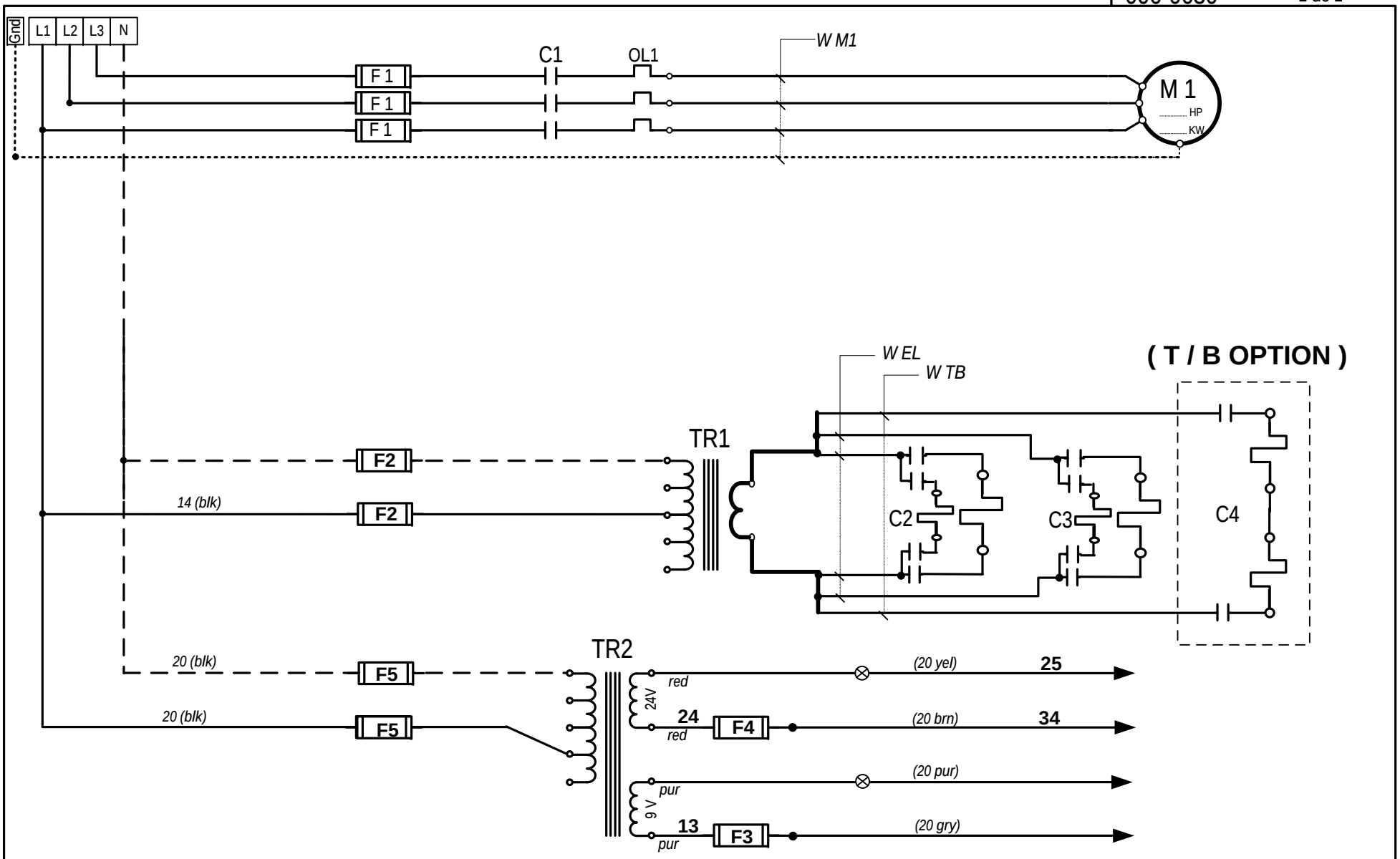
RC filters must be connected on each AC coil (not shown on diagram)

category	VACUUM PACK	model	420A	volt.	ALL			SIPROMAC
system	Control			circuit	control	year 05	month 03	day 03	block	St-Germain de Grantham QUEBEC ,CANADA
usual fonctions	**MC-40**					concept PP	draw PP	app DL	006-0637 PAGE 2 de 3	
options										

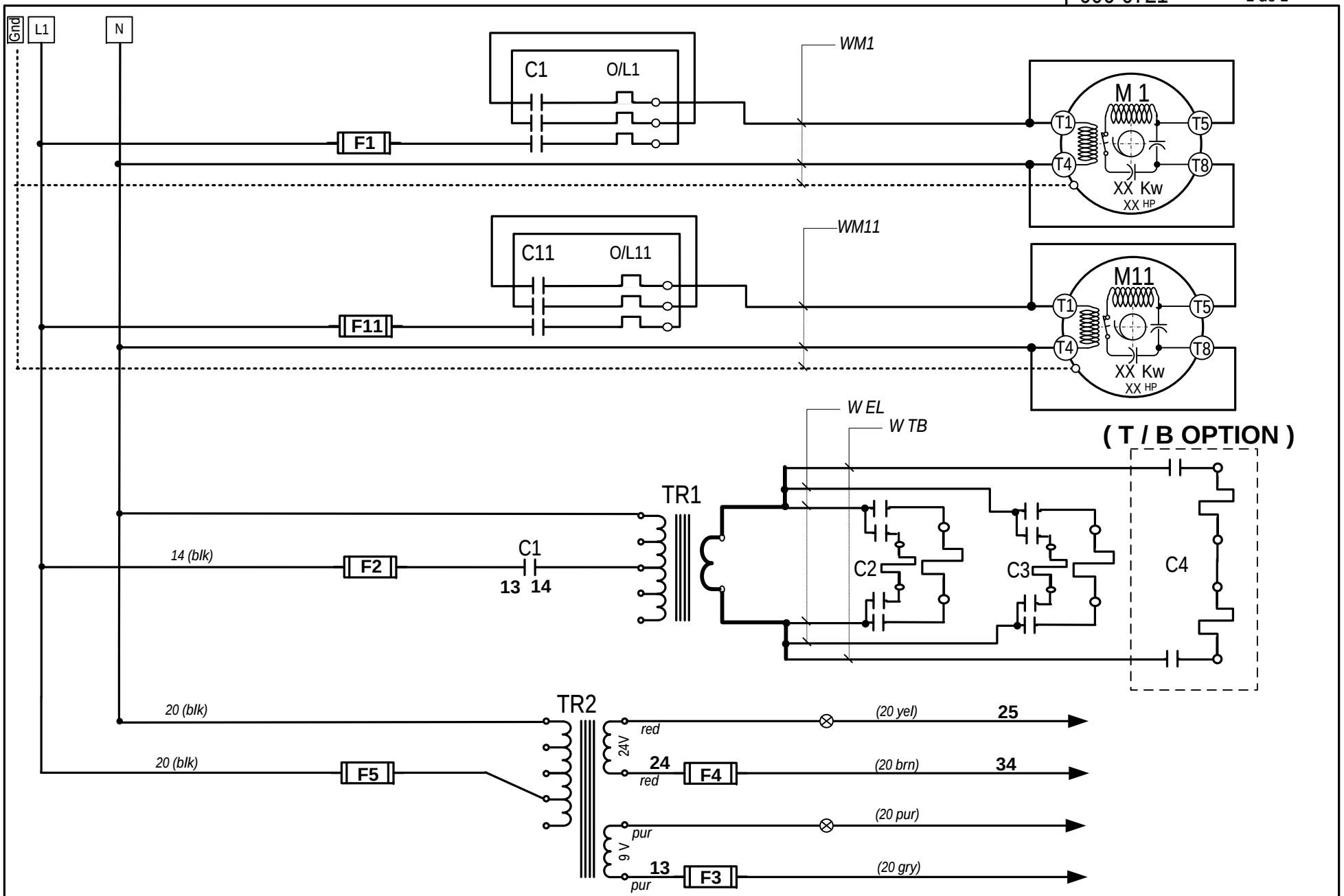


RC filters must be connected on each AC coil (not shown on diagram)

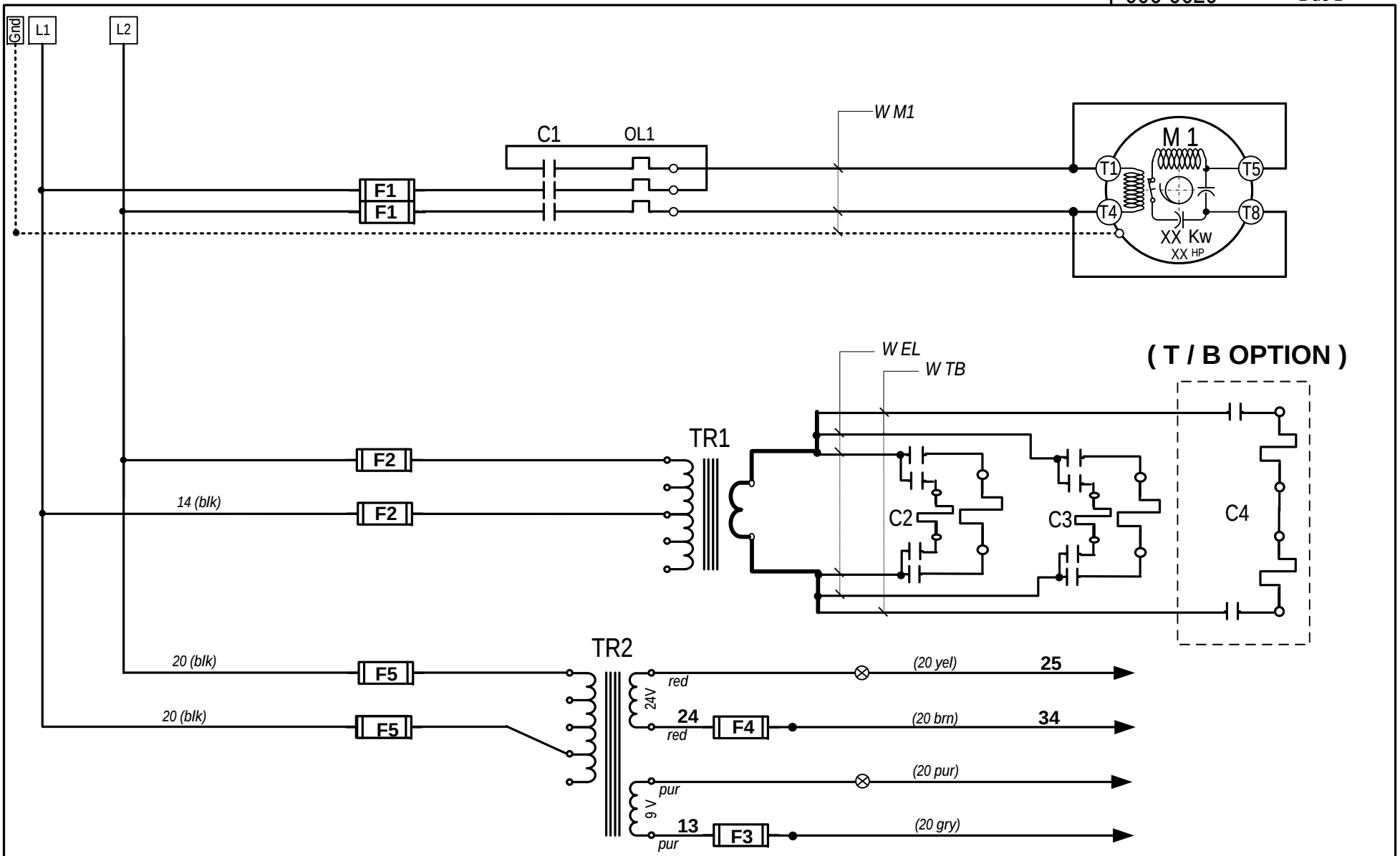
category VACUUM PACK	model 420A	volt. ALL					SIPROMAC St-Germain de Grantham QUEBEC ,CANADA	
system Control		circuit control	year 05	month 03	day 03	block		
usual fonctions MC-40			concept PP	draw PP	app DL	006-0637	PAGE	3 de 3
options								



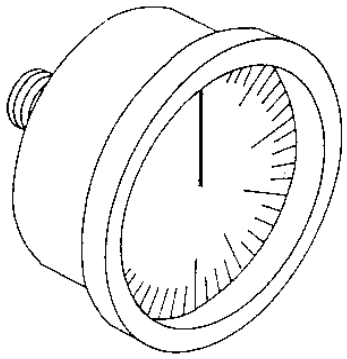
category VACUUM PACK	model 420A	volt. 3Ph 60Hz					SIPROMAC St-Germain de Grantham QUEBEC ,CANADA
system **POWER**		circuit power	year **05**	month **01**	day **18**	block	
usual fonctions **MC-40**							
options			concept **PP**	draw **PP**	app **DL**	006-0630	PAGE 1 de 1



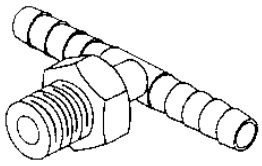
category VACUUM PACK	model 420A	volt. 120v 1Ph 60Hz					SIPROMAC St-Germain de Grantham QUEBEC ,CANADA
system **POWER**		circuit power	year **10**	month **08**	day **10**	block	
usual fonctions **MC-40**			concept **xx**	draw **xx**	app **xx**	006-0721 PAGE 1 de 1	
options **2 KB0020 pumps**							

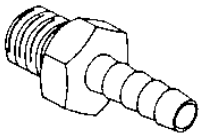


category VACUUM PACK	model 420A	volt. 1Ph 60Hz					SIPROMAC St-Germain de Grantham QUEBEC ,CANADA
system **POWER**		circuit power	year **05**	month **01**	day **18**	block	
usual fonctions **MC-40**							
options			concept **PP**	draw **PP**	app **DL**	006-0620	PAGE 1 de 1



PNEUMATIC DRAWING





MANUEL D'UTILISATEUR

MICROPROCESSEUR MC-40
AVEC OU SANS DÉTECTEUR DE VIDE

EMBALLEUSE SOUS VIDE

TABLE DES MATIÈRES

I INSTRUCTIONS POUR LES OPÉRATIONS

II MÉCANIQUE

- A- Vue de face
- B- Vue de l'arrière
- C- Procédure d'ajustement du couvert
- D- Schéma de l'assemblage de l'axe central
- E- Barres de scellage (Double scellage)
- F- Dessin des barres de scellage (Option du coupe sac électrique)
- G- Dessins des barres d'assemblage (Scellage du haut et du bas en option)
- H- Gas injection kit installation drawing (gaz injection option)

III ELECTRIQUE

- A- Schéma électrique (Bas voltage)
- B- Schéma électrique (Haut voltage à une phase)
- C- Schéma électrique (Haut voltage à 3 phases)
- D- Schéma électrique (Haut voltage 1 phase 50 Hz
- E- Schéma électrique (Haut voltage 3 phase 50 Hz

IV PNEUMATQUE

- A- Schéma Pneumatique

EMBALLEUSES SOUS VIDE
INSTRUCTIONS D'OPÉRATIONS

TABLE DES MATIÈRES

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2. Connexion Électrique
3. Opération
    - 3.1 Principes de travail
    - 3.2 Emballage Spécial
        - 3.2.1 Injection de Gaz
        - 3.2.2 Scellage haut et bas (bi-active sealing)
        - 3.2.3 Coupe sac électrique
    - 3.3 Ajustement des contrôles digital
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    - 4.1 Échec durant le cycle d'emballage
    - 4.2 Vide insuffisant
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        - 4.2.2 Pas de fuite dans le sac
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    - 4.3 Scellage Inadéquat
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        - 4.3.3 Courant ininterrompu sur les barres de scellage
        - 4.3.4 Le scellage ne tient pas
    - 4.4 Problème avec les valves
    - 4.5 Problème du panneau de contrôle
5. Maintenance Régulière

SIPROMAC INC.
EMBALLEUSES SOUS VIDE

1. MISE EN PLACE DE LA MACHINE:

Avant de choisir le site d'installation de votre machine, veuillez considérer que vous aurez besoin d'espace pour les produits emballés et non-emballés à part de l'espace occupé par la machine elle-même.

Bien vouloir vous rappelez que vous aurez besoin d'un sol bien au niveau pour votre installation. Spécialement avec les modèles mobiles, le poids de la pompe peut gauchir la machine et le le couvercle ne fermera plus correctement.

Avant de commencer à travailler, vérifier l'huile de la pompe pour voir si elle est en quantité suffisante. Bien vouloir ne jamais utiliser une huile autre que celle recommandée par le fabricant. Ne pas excéder la quantité indiquée quand vous ajoutez ou faites le changement d'huile et faites votre vérification hebdomadairement.

En raison de la viscosité de l'huile, la machine sera plus difficile à démarrer à basses températures. Ainsi donc la pompe doit être placée dans un endroit où la température est d'au moins 50°F (+10°C). D'autre part, l'air doit circuler librement aux alentours de la pompe pour permettre le refroidissement dans les cas où la température des opérations atteindrait 160°F (70°C) ou la température maximale permise.

2. CONNECTION ÉLECTRIQUE:

Les connections électriques doivent se faire par du personnel qualifié. La personne désignée doit s'assurer que les entrées électriques correspondent au voltage et à l'ampérage approprié de la machine.

Un schéma électrique accompagne chacune de nos machines.

Une étape importante dans le branchement de la machine est de s'assurer que le moteur de la pompe tourne dans une rotation appropriée.

> Attention: Le moteur de la pompe ne devrait pas tourner plus de 3 ou 4 secondes dans une mauvaise rotation car il en résultera des dommages sérieux. La rotation est indiquée par une flèche dur le moteur de la pompe.

3. OPÉRATION:

3.1 Principes de travail:

Un empaquetage sous vide est un cycle composé de 3 étapes. Premièrement le vide est fait et l'air est complètement enlevé de la chambre et du sac contenant le produit. (Voir figure 1). Ensuite c'est possible d'injecter du gaz neutre par les conduits si le produit est très délicat. Finalement, un mécanisme pousse la barre de scellage sur le support de caoutchouc pour sceller le sac

Pour obtenir de beaux empaquetages, les produits et les sacs doivent être de taille proportionnelles. L'ouverture du sac ne devrait jamais excéder 2" (50cm) au delà des barres de scellage. Le produit doit être centré en hauteur par rapport aux barres de scellage en ajustant les écarteurs qui vous sont fournis.

Pour obtenir un bon scellage, assurez-vous qu'il n'y a pas de résidu de graisse qui reste entre les côtés intérieurs des sacs où le scellage doit être fait.

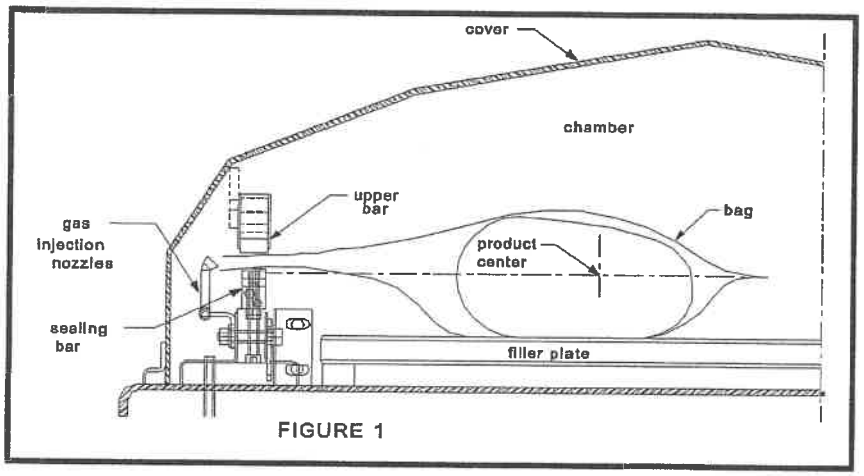


FIGURE 1

3.2 Empaquetage Spécial:

3.2.1 Injection de Gaz (option):

Il y a une pression atmosphérique de 14 lbs / pouce carré (= 1 kg / cm carré) sur les produits quand le vide demandé est atteint. Les produits qui peuvent être endommagés par une haute pression doivent être empaquetés avec un vide partiel et la pression doit être contrebalancée en injectant du gaz dans le sac (nitrogène ou dioxyde de carbone) avant le scellement et après avoir atteint le vide.

Pour l'injection de gaz, les sacs sont placés sur les barres de scellage, l'ouverture placée au dessus des conduits de gaz qui sont montés le long des barres de scellage. Après que le vide soit atteint, la valve du vide se ferme et la valve du gaz s'ouvre. Le pourcentage de gaz peut être ajusté par le menu du programme.

Le réservoir de gaz et la valve de pression qui est rattachée au réservoir ne sont pas fournis par Sipromac. La pression pour le régulateur de gaz devrait être ajustée approximativement à 5 lbs/pouce carré (1/3 Kg/cm carré). Chaque machine a un adapteur pour la connexion de gaz quand l'option de l'injection de gaz est commandée.

3.2.2 Scellage Haut et Bas (optionnel):

Pour le scellage des sacs en aluminium comme pour le café il est impératif d'avoir une barre de scellage en haut et en bas.

3.2.3 Coupe sac électrique: (optionnel):

Cette option est utilisée pour obtenir un paquet dont l'excédent de film au niveau du scellage doit être coupée très près de la ligne de scellage. (cette option ne peut pas être utilisée avec le scellage Haut et Bas)

3.3 Les opérations de l'empaquetage sous vide:

Note: Reportez-vous aux menus structure de la page 8 et aux détails du panneau de contrôle sur la page 9

3.3.1 Bases:

Utilisez la touche "POWER" pour initier le bouton ON/OFF sur votre machine sous vide. Quand votre unité sera en fonction le dernier programme exécuté apparaîtra sur l'écran à cristaux liquides.

Utilisez la touche "ESC" pour passer du menu programme au menu fonctions et du menu des fonctions au menu des programmes.

Dans le menu des fonctions, utilisez la touche "SELECT" pour sélectionner une fonction et la touche "ENTER" pour exécuter la sélection.

Dans le menu des programmes, utilisez la touche "SELECT" pour sélectionner un programme et la touche "Enter" pour accéder ou modifier la sélection.

Dans les programmes du sous menu, utilisez la touche "ENTER" pour voir défiler les paramètres et lorsque ces derniers clignotent pour indiquer ils sont dans le mode d'acquisition. Quand la séquence de tous les paramètres se sont affichés, on revient automatiquement au début de la liste.

Dans les programmes du sous menu, utilisez la touche "ESC" pour revenir au menu des programmes. Pressez n'importe quelle touche pour effacer les messages d'erreur qui peuvent s'afficher sur l'écran à cristaux liquide.

3.3.2 Menu des fonctions:

3.3.2.1 Créer un programme:

Quand vous exécuter la fonction "create a program", le programme sous menu est atteint en commençant par l'identification. L'identification initiale "PxxNO NAME" est donné au programme et tous les paramètres sont établis à zéro; le numéro du programme est alloué automatiquement.

3.3.2.2 Supprimer un programme:

En exécutant la fonction de "delete a program", vous avez accès au menu des programmes et le numéro du premier programme en mémoire clignote pour indiquer le mode de suppression. Utilisez la touche "SELECT" pour sélectionner un programme et la touche "ENTER" pour avoir accès et confirmer la suppression de la sélection. Utilisez la touche "ESC" pour annuler une suppression et quitter la fonction. Quand vous quittez la fonction, le nombre des programmes actuels sur l'écran à cristaux liquides cesse de clignoter.

3.3.2.3 Choisir le mode d'opération:

Quand vous exécutez la fonction "Select Operating Mode", laquelle est disponible seulement pour les unités automatiques, la sélection en cours clignote pour vous indiquez le mode. Utilisez la touche "SELECT" pour parcourir les modes d'opération, lesquels sont automatiques, semi-automatiques et manuels.

Le mode d'opération sera validé et exécuté automatiquement. Utilisez la touche "ESC" ou "ENTER" pour quitter la function et retourner au menu des programmes.

3.3.3 Menu des Programmes:

3.3.3.1 Identification des Programmes:

Pour un programme sélectionné, choisissez l'identification en utilisant le panneau de contrôle numérique avec la chartre des caractères et pressez sur la touche numérique jusqu'à ce que le caractère soit sélectionné (4 x pour la valeur numérique). Utilisez la touche "ENTER" pour valider le caractère ainsi que la chaîne de caractères jusqu'à la fin (la nouvelle chaîne de caractères clignote). Vous pouvez utilisez la touche "ESC" pour revenir en arrière dans le cas où vous vous êtes trompé et que vous voulez effacer le caractère.

Example: EXAMPLE 1 → (9 caractères)

Touche 2, 2, ENTER → E
Touche 8, 8, 8, ENTER → X
Touche 1, ENTER → A
Touche 5, ENTER → M
Touche 6, ENTER → P
Touche 4, 4, 4, ENTER → L
Touche 2, 2, ENTER → E
Touche 9, 9, 9, ENTER → espace
Touche 1, 1, 1, 1, ENTER → 1
Touche ENTER pour valider la chaîne de caractères

3.3.3.2 L'ajustement du niveau de Vide (capteur de vide désactivé):

Pour un programme sélectionné, ajustez le niveau de vide, en secondes; la validation est automatiquement exécutée après la deuxième entrée digitale (Le nouveau temps de vide clignote). En cours de traitement, utilisez la touche "ENTER" pour valider la valeur du niveau de vide et la touche "ESC" pour revenir en arrière et changer la valeur du niveau de vide (La valeur du niveau de vide la plus ancienne clignotera à ce moment).

Exemples: 1 sec. → Touches 0, 1 ou 1, ENTER
15 sec. → Touches 1, 5

3.3.3.3 L'ajustement du niveau de Vide (capteur de vide en activé):

Pour un programme sélectionné, ajustez le niveau de vide avec les valeurs; le point décimal est automatiquement inséré suivant la deuxième entrée digitale et la validation est automatiquement exécutée après la troisième entrée digitale (La nouvelle valeur du niveau du vide clignote). Le niveau de vide est arrondi à la demie la plus près de la valeur. En cours de traitement, utilisez la touche "ENTER" pour valider la valeur du niveau de vide et la touche "ESC" pour revenir en arrière et changer la valeur du niveau de vide (La valeur du niveau de vide la plus ancienne clignotera à ce moment). Ajustez le niveau du vide à zéro pour pouvoir contourner le capteur de vide et procédez en réglant seulement le " Temps de vide Plus" (Vacuum plus time).

Exemples: 90.0% → Touches 9, 0, 0 ou 9, 0, ENTER ou
Touches 9, 0, 1 ou 9, 0, 2 or 9, 0, 3 ou 9, 0, 4
97.5% → Touches 9, 7, 5 ou
Touches 9, 7, 6 ou 9, 0, 7 or 9, 0, 8 ou 9, 0, 9
0.0% → Touches 0, 0, 0 ou 0, ENTER

3.3.3.4 Ajustement du Temps de Vide "Plus" (capteur de vide activé):

Pour un programme sélectionné, réglez le "temps de vide plus" en secondes; la validation est automatiquement exécutée après la deuxième entrée digitale (La nouvelle valeur du "temps de vide plus" clignotera à ce moment). En cours de traitement, utilisez la touche "ENTER" pour valider la nouvelle valeur du "temps de vide plus" et la touche "ESC" pour revenir et recommencer avec de nouvelles valeurs (la valeur la plus ancienne du "temps de vacuum plus" clignotera).

Exemples: 1s → Touche 0, 1 or 1, ENTER
15s → Touche 1, 5

3.3.3.5 Ajustement de l'injection de gaz (capteur de vide désactivé):

Pour sélectionner un programme placer le niveau d'injection de gaz en suivant la même procédure que pour le niveau de vide. Gardez en mémoire que plus le temps d'injection de gaz est haut, moins la pression du sellage sera forte. Un certain niveau de vide doit être maintenu pour un bon fonctionnement.

3.3.3.6 Ajustement de l'injection de gaz (capteur de vide activé):

Pour sélectionner un programme placer le niveau d'injection de gaz en suivant la même procédure que pour le niveau de vide; L'ajustement pour le gaz le plus haut devrait être de 10% au-dessous du niveau de l'ajustement de vide.

3.3.3.7 Ajustement du cachetage:

Pour sélectionner un programme le temps de cachetage, en commençant par les secondes; le point décimale est automatiquement insérée après la première entrée de chiffre et la validation est automatiquement effectuée après la troisième entrée de chiffre (le nouveau temps de cachetage clignote). Le temps de cachetage est arrondi à la moitié la plus proche du cent. À un milieu l'entrée des données, utiliser la clé "ENTER" pour valider l'heure du cachetage et la clé " ESC " pour revenir en arrière et reprogrammer le temps cachetage avec de nouvelles données (le vieux temps de cachetage clignote).

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

3.3.4 Exécution de cycle de vide :

Pour les unités manuels ainsi que les unités automatiques faire la mise en marche manuelle, fermer le couvercle afin de lancer un cycle de vide. Pour l'unité automatique faire mise en marche semi-automatique ou automatique, utilisez le bouton "ARRÊT / DÉBUT" pour lancer ou interrompre un cycle de vide. Le programme sélectionné peut être lancé seulement dans le programme du menu, au moment où aucune modification n'est nécessité, et l'accès des autres programmes et des fonctions ne sont pas requis. Pendant l'exécution du cycle le statut d'opération est séquentiellement affiché sur l'écran à cristaux liquides, excepté pour les paramètres établis à zéro, qui ne sont pas montrés:

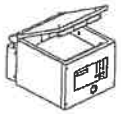
- niveau de vide de la chambre pendant la séquence,
- vide additionné du temps pendant le vide plus la séquence,
- niveau de vide de la chambre pendant la séquence d'injection de gaz,
- statut de temps de cachetage pendant la séquence de cachetage,
- niveau de vide de la chambre pendant La séquence d'atmosphère .7

Pendant l'exécution du cycle, utilisé la clef "1" pour interrompre la séquence de vide et pour exécuter la séquence suivante, sois l'injection du gaz ou le cachetage, suivi de la clé "ENTER" afin d'accéder et modifier le programme; les paramètres deviennent valides seulement pour les cycles suivants de vide.

3.3.5 System monitor:

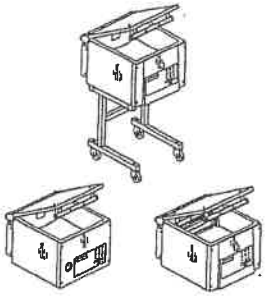
Pour accéder le menu des diagnostics, monter la puissance de la machine d'emballage sous vide tout en maintenant le bouton "'ESC" enfoncé. Utilisez la clé "SELECT" pour choisir la fonction du système du moniteur et "ENTER" pour accéder et visualiser les paramètres surveillés. Employez la clé "SELECT" pour changer la révision de logiciel, la quantité d'heures de travail faites et de la quantité de cycles complets exécutés depuis la première initialisation.

NOTES

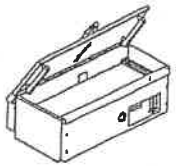


250

300



350/350D



380A

450T

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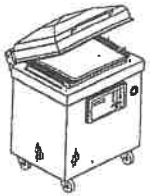

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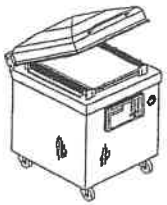

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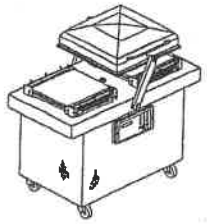
580A

VACUUM PACKAGING MACHINES



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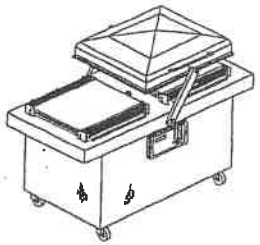

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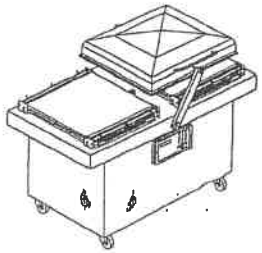

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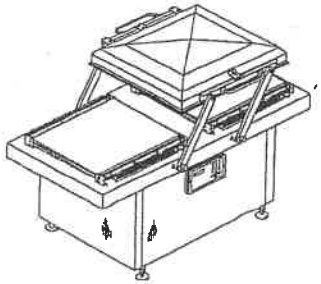

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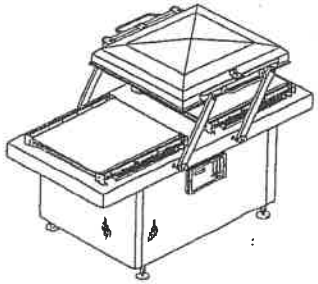

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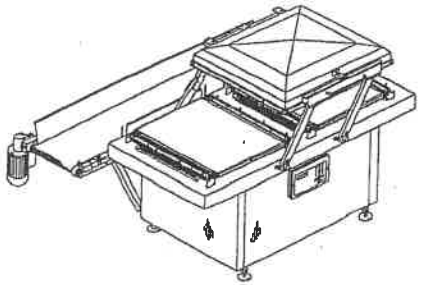

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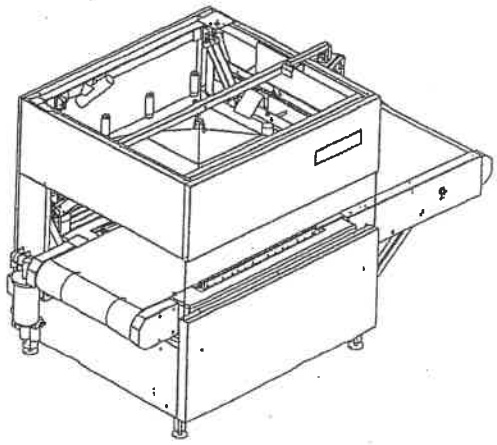

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