

Enter Serial No. here.

MANUAL No.Y-AL-01E

In the event of an enquiry please quote this serial number.

Store this document safely and ensure it is available at all times.

Non-availability may affect the service / repair of your machine.



OPERATING AND MAINTENANCE MANUAL
for the
ALPHA DEPOSITOR

**The use of templates and/or accessories not produced or supplied by MONO
Equipment will invalidate the machine's warranty**

FOR PROGRAMMING INSTRUCTIONS – SEE SEPARATE MANUAL



DECLARATION OF CONFORMITY

We hereby declare that this machine complies with the essential health and safety requirements of :-

- The Machinery Directive 2006 / 42 / EC
- The Low voltage Directive 2006 / 95 / EC
- The requirements of the Electromagnetic Compatibility Directive 2004 / 108EC, 91 / 263 / EEC, 92 / 31 / EEC
- The General Safety of Machinery and food processing Standards applicable
- Materials and Articles intended to come into contact with food Regulation (EC) No. 1935 / 2004

Signed	
G.A.Williams – Quality Manager	

Date	
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Machine FG Code.		Machine Serial No.	
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A technical construction file for this machine is retained at the following address:

MONO EQUIPMENT
Queensway,
Swansea West Industrial Park,
Swansea
SA5 4EB
UK

MONO EQUIPMENT is a business name of **AFE GROUP Ltd**
Registered in England No.3872673 VAT registration No.923428136

Registered office: Unit 35,
Bryggen Road,
North Lynn Industrial Estate,
Kings Lynn Norfolk,
PE30 2HZ

QD 080

Revision AA

Dated 06/02/2014



CONTENTS

1.0	-	INTRODUCTION	page5
2.0	-	DIMENSIONS	page5
3.0	-	SPECIFICATIONS (SOFT DOUGH)	page6
4.0	-	SAFETY	page7
5.0	-	INSTALLATION	page8
6.0	-	ISOLATION	page8
7.0	-	CLEANING INSTRUCTIONS	page8
8.0	-	OPERATING CONDITIONS	page11
9.0	-	OPERATING INSTRUCTIONS	page11
10.0	-	CONTROL PANEL LAYOUT	page13
11.0	-	CONTROL KEY FUNCTIONS	page13
12.0	-	OPERATIONAL CONTROLS	page16
13.0	-	PREPARING FOR OPERATION	page17
14.0	-	MACHINE / PRODUCT PROGRAMMING	page17
15.0	-	MAINTENANCE	page18
16.0	-	SPARES AND SERVICE	page19
17.0	-	RECOMMENDED SPARES LIST	page20
18.0	-	ELECTRICAL INFORMATION	page24

SECTION "A" BASIC MACHINE

SECTION "B" WIRECUT VERSION

SECTION "C" ROTORY VERSION

SECTION "D" ROTORY & WIRECUT VERSION

19.0	-	FAULT ANALYSIS CHARTS	
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Failure to adhere to the cleaning and maintenance instructions detailed in this booklet could affect the warranty of this machine.

DISPOSAL

CARE SHOULD BE TAKEN WHEN THE MACHINE COMES TO THE END OF ITS WORKING LIFE. ALL PARTS SHOULD BE DISPOSED OF IN THE APPROPRIATE PLACE, EITHER BY RECYCLING OR OTHER MEANS OF DISPOSAL THAT COMPLIES WITH LOCAL REGULATIONS.

(IN UK, ENVIRONMENTAL PROTECTION ACT 1990 APPLIES)

The use of templates and/or accessories not produced or supplied by MONO Equipment will invalidate the machine's warranty

As it is our policy to improve our machines continuously,
we reserve the right to change specifications without prior notice.

1.0 INTRODUCTION

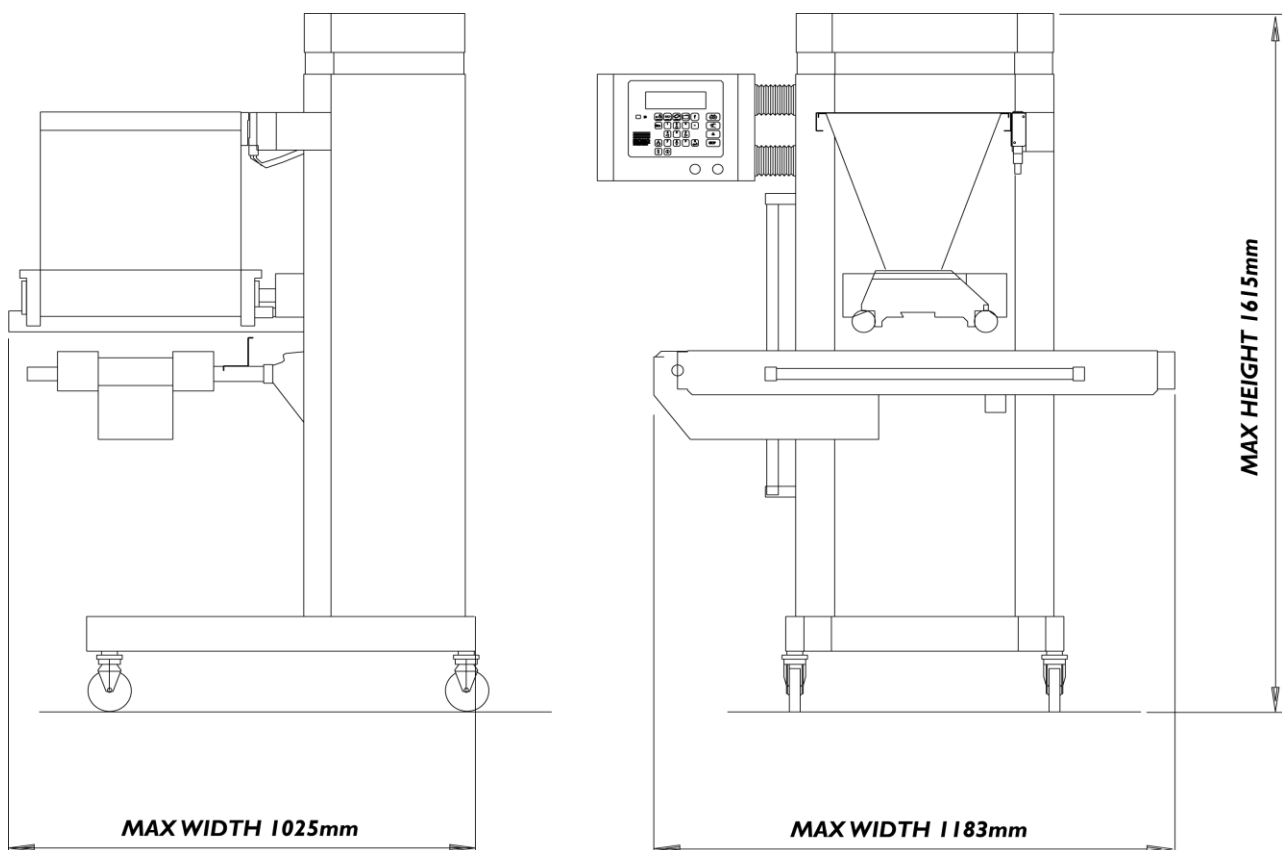
MONO's ALPHA depositor is designed for ease of use to produce a wide range of confectionery products. Its exceptional accuracy, repeatability, versatility and user friendly approach lends itself to quick high volume production.

The **ALPHA** depositor is a compact, high specification machine, operated off a single-phase electric supply and capable of being moved through a single door.

Product creation requires programming of the **ALPHA's** controller via its menu driven interface screen situated on a swivel pod to the side of the machine. Product programs can be stored into the controller's memory for future retrieval, with the ability to store up to 99 programs - each program requiring unique identification using alpha and/or numeric characters.

Subsequent deletion of created programs is only possible via a password-protected screen. Mechanically, the **ALPHA** is configured with the tray conveyor capable of vertical movement and the deposit head in a fixed height position. Vertical movement is controlled by a manual control, with a fixed jog height. In order to achieve smooth production and optimum performance, it is recommended that the information given in this manual be studied before any operation is carried out.

2.0 DIMENSIONS



3.0 SPECIFICATIONS (SOFT DOUGH)

MODEL (nom. hopper width (cm))	40	45
Weight: (Kg)	270	272
Max. deposit rate: (litre/min)	26	30
Standard hopper capacity: (litre)	36	41
Power:	2.5Kw single phase fused at 20A anti-surge or 20A type d MCB.	
Min distance between trays	= 50mm	
Noise level	= Less than 85dB	
Electronics	= All microprocessor Controlled	

NOTE:

The minimum deposit that can be made depends on several factors - recipe, mixing method, template size and deposit speed.

As a guide the following is the minimum that should be attempted:

Macaroons	6g,
Meringues	3g,
Choux Paste	5g,
Viennese	4g,
Sponge Drops	4g.

However, consult **Mono Equipment** if intended product falls outside the above general machine specification to determine the **ALPHA's** exact capabilities with any specific product.

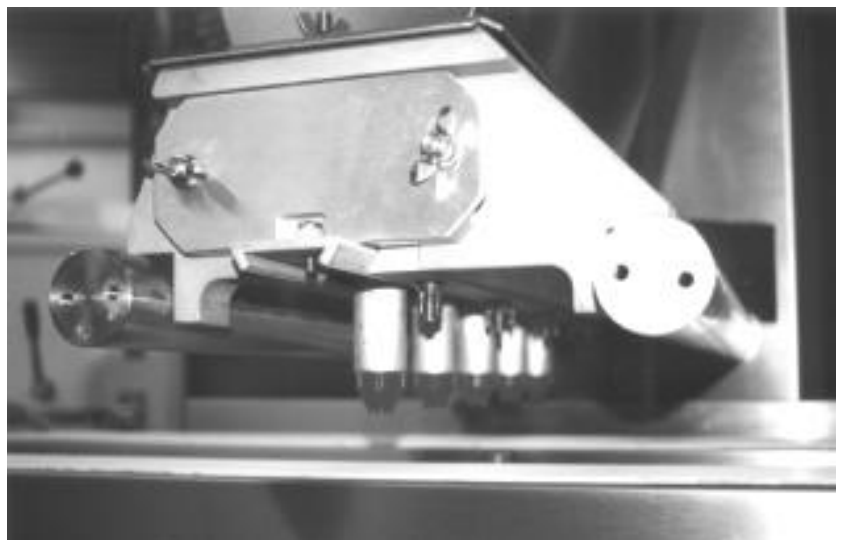
4.0 SAFETY

- 1 Never use a machine in a faulty condition and always report any damage.
- 2 Only trained engineers may remove any part from this machine that requires a tool to do so.
- 3 Always ensure hands are dry before touching any electrical appliance (including cable, switch and plug).
- 4 All operatives must be fully trained.
- 5 People undergoing training on the machine must be under direct supervision.
- 6 Do not operate the machine with any panels or guards removed.
- 7 No loose clothing or jewellery should be worn while operating the machine.
- 8 Switch off power at the mains isolator when machine is not in use and before carrying out any cleaning or maintenance.

ALL CLEANING AND MAINTENANCE OPERATIONS MUST BE MADE WITH MACHINE DISCONNECTED FROM THE POWER SUPPLY.

- 9 The bakery manager or the bakery supervisor must carry out daily safety checks on the machine.
- 10 Do not operate machine without hopper template fitted correctly.

10 HOPPER TEMPLATE FITTED



5.0 INSTALLATION

- 1 Ensure that the depositor is connected to correct electric supply as specified on the serial number plate on the rear of the machine.
- 2 Ensure that the correct fuse rating is fitted in the electrical supply to the **ALPHA** - a 13A single-phase supply fused at 20A anti surge or 20A type D MCB is required.

6.0 ISOLATION

- 1 In an emergency, switch off at the mains wall isolator, or the machines emergency stop button. To release the emergency stop button, turn clockwise.

7.0 CLEANING INSTRUCTIONS

NOTE:

- Cleaning must be carried out by fully trained personnel only.
- Isolate machine from mains supply before carrying out any cleaning.
- Do not steam clean or use a jet of water.

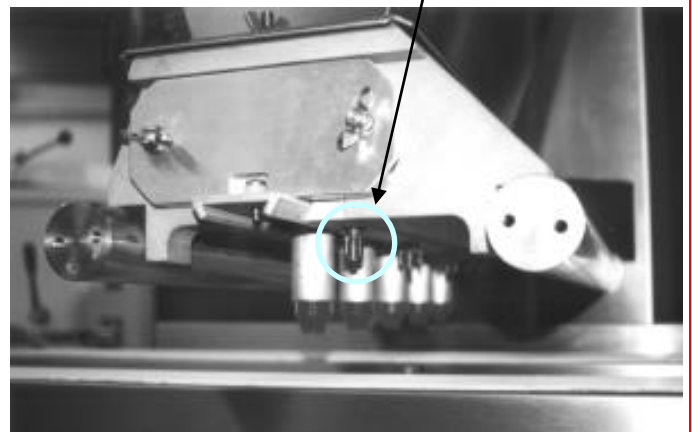
All the outer surfaces of the machine should be daily wiped over with warm soapy water. Do not use any form of caustic detergent or abrasive.

a. BETWEEN PRODUCT MIX CHANGES

- 1 The hopper, hopper pump, template, nozzles etc. should be removed from the machine and dismantled for thorough cleaning.
- 2 Slacken template clamp strip nuts and remove fitted template from hopper pump assembly by sliding out to avoid subsequent damage.

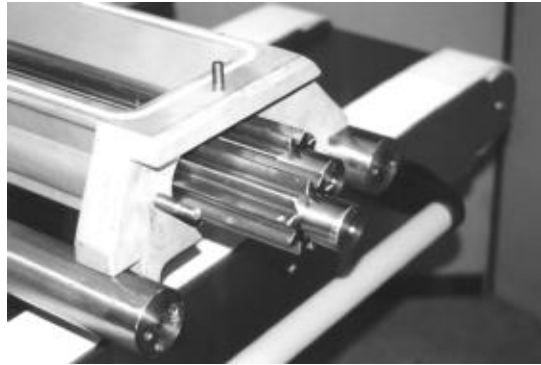
2

**Clamp Strip
Nut**



- 3 To reduce weight and bulk, separate and remove hopper body from hopper pump assembly whilst still on machine. Unscrew the nuts holding the hopper body to the hopper pump to reveal the 'O' sealing ring. Ensure seal is not damaged during cleaning.

3



- 4 Unscrew the nuts holding the pump end cap to the hopper. Ensure that the nuts are placed where they will not be lost.
- 5 Withdraw the end cap with the pump gears, if still attached. Ensure that the 'O' sealing ring on the inside of the endplate is not damaged during cleaning.

5



- 6 Remove the hopper-locking clamp from the end of the hopper bar and slide off hopper pump casting.

NOTE: Use only warm soapy water to clean these parts that should be rinsed and thoroughly dried before re-assembly. The greatest care must be taken not to drop the hopper, or leave any components in the hopper.

b. CLEANING OF HARD DOUGH HOPPER

- 1 Remove hopper from hopper body assembly by removing the wing nut at either end.
- 2 Lift off both upper bronze end caps
Remove both gears from the assembly; ensure that the hopper has been disengaged from the drive, to enable removal.

NOTE:
The main hopper construction should be lifted off by at least two people.

c. TABLE REMOVAL AND CLEANING

- 1** Removal of the table from the machine for cleaning is not necessary, however, if required, unscrew the two securing screws from the side of the table. Disconnect the three sockets from the main bulkhead and slide the table off the support bars.



1



To replace, follow reverse procedure.

- 2** In normal use clean the table's external surfaces and belts with warm soapy water and rinse and thoroughly dry before use.
- 3** The table's conveyor belts can be disengaged from their drive rollers by slackening the adjusting screws on the underside of the table. However, for belt replacement first remove the table from machine as in 7.c.1 above.



3

d. WIRECUT REMOVAL AND CLEANING

- 1** To remove wirecut frame, lift out drop arm pins and slide frame out backwards.
- 2** Clean with warm soapy water, rinse and thoroughly dry and replace.

8.0 OPERATING CONDITIONS

Make sure the depositor is used on a level floor to achieve best results.
Ensure flat trays of consistent length, width, material and edge dimensions are used to obtain the best product results and consistent operating from the **ALPHA**.

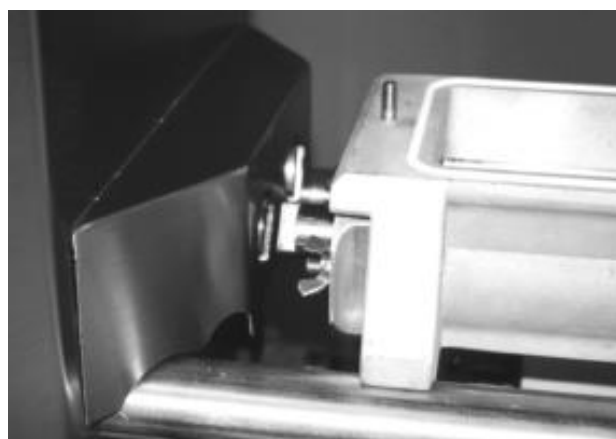
9.0 OPERATING INSTRUCTIONS

FITTING THE HOPPER

CAUTION SHOULD BE TAKEN WHEN FITTING HOPPER PUMP AS WEIGHT EXCEEDS 20KGS.

- 1 To reduce weight and bulk, fit the complete hopper assembly in two stages - first the hopper pump assembly, then the hopper body with its detachable top guard.
- 2 Align hopper pump drive gear with drive shaft and slide hopper on support bars until fully up against locating boss.
- 3 Ensure hopper-locking clamp is replaced on hopper bars.

2



DO NOT OPERATE MACHINE WITHOUT TEMPLATE FITTED

FITTING A TEMPLATE

- 1 Select template and nozzles required.
 - 2 Screw nozzles into threaded nozzle tube on templates.
 - 3 Slide template into matching recess at base of hopper pump until the stop engages.
 - 4 Tighten nuts on clamp strip, on underside of hopper pump, to secure template.
Leakage of mix will occur if the nuts are not securely tightened.
-

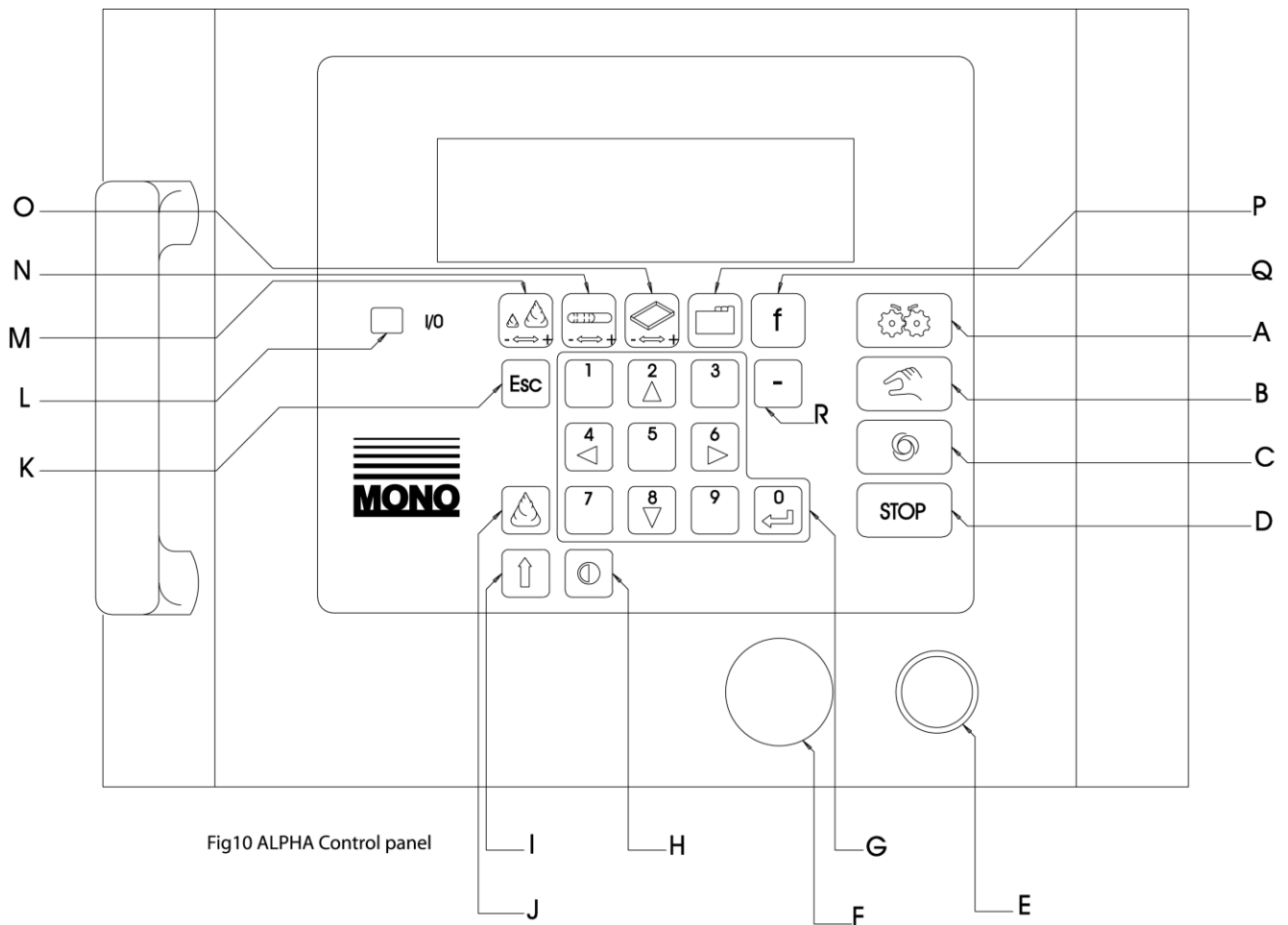
FITTING WIRECUT FINGERS

- 1 Select wirecut fingers that suit the chosen template i.e. the correct number of dies across the template.
 - 2 Remove drop arm pins and insert finger frame into arms. Ensure the follower arm roller is positioned on the cam track, replace pins.
 - 3 Replace drop arm pins.
 - 4 Remove motor release handle and push fingers forward in order to line up the wire with the dies.
 - 5 Adjust individual finger bolts to raise the wire to touch the bottom surface of the die.
Or
adjust cam follower arm to raise or lower all fingers together.
-

REPLACEMENT WIRE

- 1 Remove broken wire
- 2 Feed wire through eye on its end, to make a loop.
- 3 Place loop around fixing screw and tighten
- 4 Feed wire through eyeholes in the end of the fingers.
- 5 Feed wire through hole in tensioning screw and tighten until wire is taught.

10 CONTROL PANEL LAYOUT



11.0 DESCRIPTION OF CONTROL PANEL - KEY FUNCTIONS

DRG REF.

FUNCTION

DESCRIPTION

A

PRIME

This button activates the hopper pump for as long as it is pressed, providing either a product creation or run menus are on screen, and all safety guards are properly closed. It fulfils two functions: -

a. To prime the hopper pump and nozzles with product mix.

b. Aids the engagement of the hopper drive gear into the drive shaft.

B

MANUAL

Runs product program for one tray only, then returns tray to operator and stops. If a tray is already under the deposit pump, by pressing “manual” the tray will be returned to you.

C

AUTOMATIC

Activates an automatic machine cycle provided a tray is on the table and positioned correctly. At the end of the cycle the tray conveyor will continue running to displace full tray from machine and introduce empty tray to deposit start position

NOTE If two trays are placed too close to each other the machine will interpret this as one long continuous tray and will continue feeding both trays through the machine until a gap at the rear of the following tray is detected.

D

STOP BUTTON

Stop button for either the manual or automatic modes. Stops machine cycle but does not cut power to drives.

E

START BUTTON

Pressed once will power up controller screen. **Pressed a second time** will activate all power electric circuits. All machine facilities can be used once pressed provided all safety guards are properly closed and emergency stop button is released.

F

EMERGENCY STOP

Immediately isolates all power circuits.
To release - turn clockwise.

G

NUMERIC/DIRECTION

Whilst key (I) is being held down these BUTTON keys will allow entry of numerical values. If pressed by themselves they can be used for cursor movement and command activation.

H

CONTRAST

If pressed simultaneously with key (I) and then released, by using keys (I) and (H) the contrast of the screen can be changed. Five seconds after release the new setting will be fixed.

I

SHIFT BUTTON

If used in conjunction with (G) keys will allow numerical entry. Used for adjusting contrast (as above).

J

SINGLE DEPOSIT BUTTON

When in a program creation menu pressing this will run program to do a single row on a tray, then return the tray.

K

ESCAPE

Enables exit from menus to higher levels and exit from current on screen operations.

L

POWER INDICATOR

When illuminated all electric circuits have been activated.

M

DROP PRODUCT MENU Selects screen menu for creation of drop products i.e. products with no length.

N

STRIP PRODUCT MENU Selects screen menu for creation of strip products i.e. products with length.

O

TRAY MENU

Selects screen menu to enter values for positioning of product on tray.

P

FILE MENU

Selects screen menu to save, retrieve and delete programs.

Q

FUNCTION MENU

Selects screen menu to enter edit/create menu and machine set-up menus.

12.0 OPERATIONAL CONTROLS

(See Fig 10)

Emergency stop button (F)

Isolates all electric circuits immediately. To release the emergency stop button, turn clockwise.

NOTE: ONLY USE IN AN EMERGENCY

To stop the machine when in use only use **stop button (D)**.

Start button (E)

Activates all electric circuits. This must be pressed to start machine initially or on restarting machine after emergency stop button has been depressed, or if safety guard displaced, and subsequently replaced.

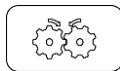
Stop button (D)

STOP

Will stop the machine cycle immediately in either AUTOMATIC or MANUAL modes. When the machine is started again in either of these modes, it will begin to deposit at the start of a deposit cycle, no matter at what stage of the cycle the machine was stopped.

If pressed when conveyor table is too close to the depositing head to remove the tray, then manual button (B) must be pressed in order to reset and lower table and eject tray that is currently on the table.

Prime button (A)



Primes the pump gears and nozzles with product after the hopper has been loaded with mix and the hopper guards have been closed. The conveyor will drop, take in a tray and then the deposit motor will run for as long as the button is pressed. The prime button can also be used to aid the engagement of hopper gears to the drive shaft. Prime button will only function in a product creation menu or the run menu.

Auto button (C)



This automatic operation is activated by the tray sensor on the table and allows the machine to be constantly fed with trays without the operator having to touch the control panel. The machine will operate when a tray is placed on the table and will stop cycling when each tray of deposit is completed. A minimum space of 50mm between trays allows for correct tray positioning. **To halt the automatic cycle, press the stop button.**

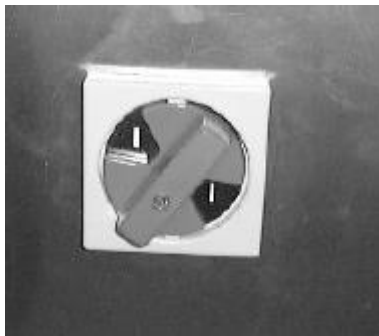
Manual button (B)



This initiates the machine to cycle for one tray only. On completion of the tray, it is returned to the front of the machine and stopped ready to accept the next tray that should be placed on the table and the above procedure repeated. **To halt the manual cycle, press the stop button.**

13.0 PREPARING FOR OPERATION

- 1 Fill hopper with mix and close hopper guard. It is recommended that when heavy mixes are used, the inside of the hopper should be coated with vegetable oil; for lighter mixes such as meringue, dampen with water. The oil or water will help the mix to settle down the hopper walls and prevent air being sucked in.
- 2 Turn on isolator switch.



Isolator switch

- 3 Press start button to turn on controller screen.
- 4 Select an existing or new program.
- 5 Press start button again to turn on all electric circuits.
- 6 Press prime button and place tray on table; hold down button until mix is deposited equally across all nozzles. Then release prime button. Press manual to return tray.
- 7 The machine is now ready for operation

14.0 MACHINE / PRODUCT PROGRAMMING

Please see controller operational manual for programming instructions

15.0 MAINTENANCE

WARNING: Isolate machine from mains supply before carrying out any maintenance procedures. Refer to sections 7.0, 8.0 and 9.0

WARNING: DO NOT UNDER ANY CIRCUMSTANCES USE A WATER HOSE TO CLEAN MACHINE.

A RESETTABLE MINIATURE CONTACT BREAKERS.

These are located on the electrical bracket in the base of the machine. If a circuit breaker trips out more than once in a short period of time, contact a qualified electrician immediately.

B AIR FILTER REPLACEMENT

Replacement of the **ALPHA**'s air filter must take place on a 3 monthly basis as otherwise, excessive restriction to air flow may result causing insufficient cooling of internal components and electrics. The air filter is mounted within its housing on the inside of the back removable panel.

C TABLE HEIGHT ADJUSTMENT YOKE

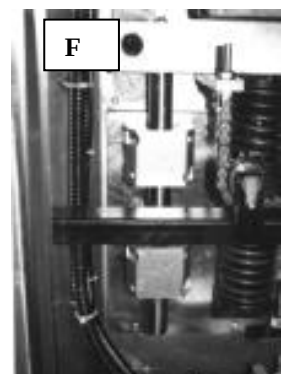
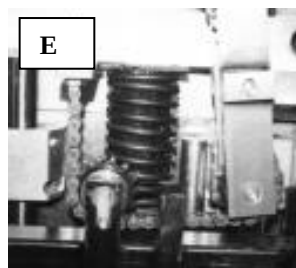
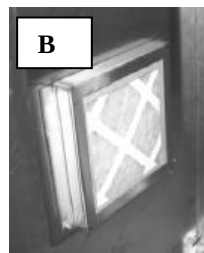
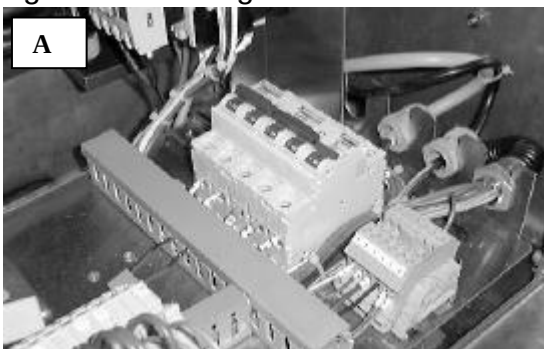
For smooth operation and prolonged life the thread within the table adjustment yoke should be re-greased on a 6 monthly basis.

D DRIVE SHAFT CHAIN MECHANISM / E JOG CHAIN

For smooth operation and prolonged life the jog chain and the drive shaft chain mechanism within the casting should be re-greased on a 6 monthly basis.

F LINEAR BEARINGS

For smooth operation and prolonged life the drive shaft chain mechanism within the casting should be re-greased on a 6 monthly basis.



16.0 SPARES AND SERVICE

If a fault arises, please do not hesitate to contact the Customer Service Department, quoting the **machine serial number** on the silver information plate of the machine and on the front cover of this manual

UK SERVICE:

MILLERS VANGUARD LTD

1 Chesham Fold Road
Bury
Lancashire.
BL9 6LE

email: service@millersvanguard.co.uk

web site: www.Millersvanguard.co.uk

Tel: 0161 7648646

Fax: 0161 7610016

SPARES and OVERSEAS SUPPORT:

MONO

Queensway
Swansea West Industrial Estate
Swansea. SA5 4EB UK

email: spares@monoequip.com

Web site: www.monoequip.com

Tel. 01792 561234

Fax. 01792 561016

17.0 Recommended spares list

ELECTRICAL SPARES LIST

<i>Spares Item Description</i>	<i>Mono Part No.</i>	<i>Qty Req. per M/C</i>
Pour through guard safety switch assy	M077-25-00400	1
Tray sensor assy	077-25-01500	1
Jog position sensor assy	077-25-01400	1
Transformer	B726-31-003	1
Control panel assy	B728-93-010	1
PCB interconnect card	B728-93-009	1
Deposit motor servo amplifier	B739-80-002	1
Tray motor servo amplifier	B739-80-002	1
Rack for servo amplifiers	B739-09-002	1
Deposit motor assy	077-25-01900	1
Tray motor assy	B912-74-021	1
Deposit motor encoder	B742-99-001	1
Stop button	B801-12-003	1
Start button	B801-12-029	1
Start button contact block	B801-14-001	1
Stop button contact block	B801-14-002	1
Varistor	B842-48-002	1
Filter unit	B842-48-009	1
Contacto	B859-08-044	1
Auxiliary contact block	B859-14-088	1
Suppressor diode	B859-48-002	1
Circuit breaker 110VAC supply	B872-22-002	1
Circuit breaker 18-0-18VAC supply	B872-22-075	1
Circuit breaker 72VAC supply	B872-22-098	1
Inverter unit	B807-80-001	1
ROTARY HEAD INVERTER(B807-80-001)		
11/05 ONWARDS	B801-80-010	1
Rotary motor/gearbox	B912-74-019	1
Wirecut motor	B912-74-025	1
Wirecut sensor	B819-99-002	1

BASE MACHINE SPARES LIST

<i>Spares Item Description</i>	<i>Mono Part No.</i>	<i>Qty Req. per M/C</i>
Flexible bellow	077-01-02600	2
Castor locked	A900-20-043	2
Castor	A900-20-044	2
Air filter	A900-30-001	1
H.D Drive shaft	077-02-00400	1
S.D Drive shaft	077-02-00500	1
Drive gear chain	A900-08-056	1
Drive gear chain link	A900-08-055	1
Main deposit gearbox	A900-11-082	1
Damper	A900-29-013	1
Clutch	077-04-02100	1
	(UP TO JUNE '99 077-04-00100)	
Jog keeper pin	077-04-00400	1
Link pivot pin	077-04-01100	1
Jog control sleeve	077-04-01200	1
Jog control shaft	077-04-01300	1
Jog chain assy	077-04-02000	1
Jog sensor trigger plate	077-04-01900	1
Table adjuster shaft	077-05-00100	077-05-01200 (matched set) 1
Yoke	077-05-00200	
Yoke pin	077-05-00300	2
Upper sprocket pin	077-05-00500	1
Lower sprocket pin	077-05-00600	1
Fixed sprocket pin	077-05-010**	1
Jog sprocket	077-05-01100	3
Table drive roller shaft	077-06-00600	1
Table drive roller shaft (motor in side position)	077-22-00100	1
Table idler shaft	077-06-00700	1
Table motor drive shaft	077-06-00800	1
Table bearings	077-06-01700	2
Table drive belt (old machines)	A900-21-079	1
Conveyor belt	A900-22-101	2
Rotary drive gear	077-09-00500	1
Rotary drive shaft	077-09-00100	1
Cutting wire (wirecut)	A900-25-285	1

HOPPER SPARES LIST

- **HOPPER 400mm WIDE**

<i>Spares Item Description</i>	<i>Mono Part No.</i>	<i>Qty Req. per M/C</i>
Template clamp strip	073-09-00400	1
End cap - drive side	073-09-00500	1
End cap - non drive end	073-09-00502	1
End cap bush	073-09-00600	4
Template clamp stud	073-09-01000	4
End cap stud	073-09-01100	4
Hopper stud	073-09-01200	2
End cap 'O' ring	A900-12-074	2
Hopper seal	A900-12-083	1
Clamp strip nut	072-07-20902	4

- **HOPPER 450mm WIDE**

<i>Spares Item Description</i>	<i>Mono Part No.</i>	<i>Qty Req. per M/C</i>
Template clamp strip	073-09-00402	1
End cap - drive side	073-09-00500	1
End cap - non drive end	073-09-00502	1
End cap bush	073-09-00600	4
Template clamp stud	073-09-01000	4
End cap stud	073-09-01100	4
Hopper stud	073-09-01200	2
End cap 'O' ring	A900-12-074	2
Hopper seal	A900-12-084	1
Clamp strip nut	072-07-20902	4

18.0 ELECTRICAL INFORMATION

SECTION “A” - BASIC MACHINE

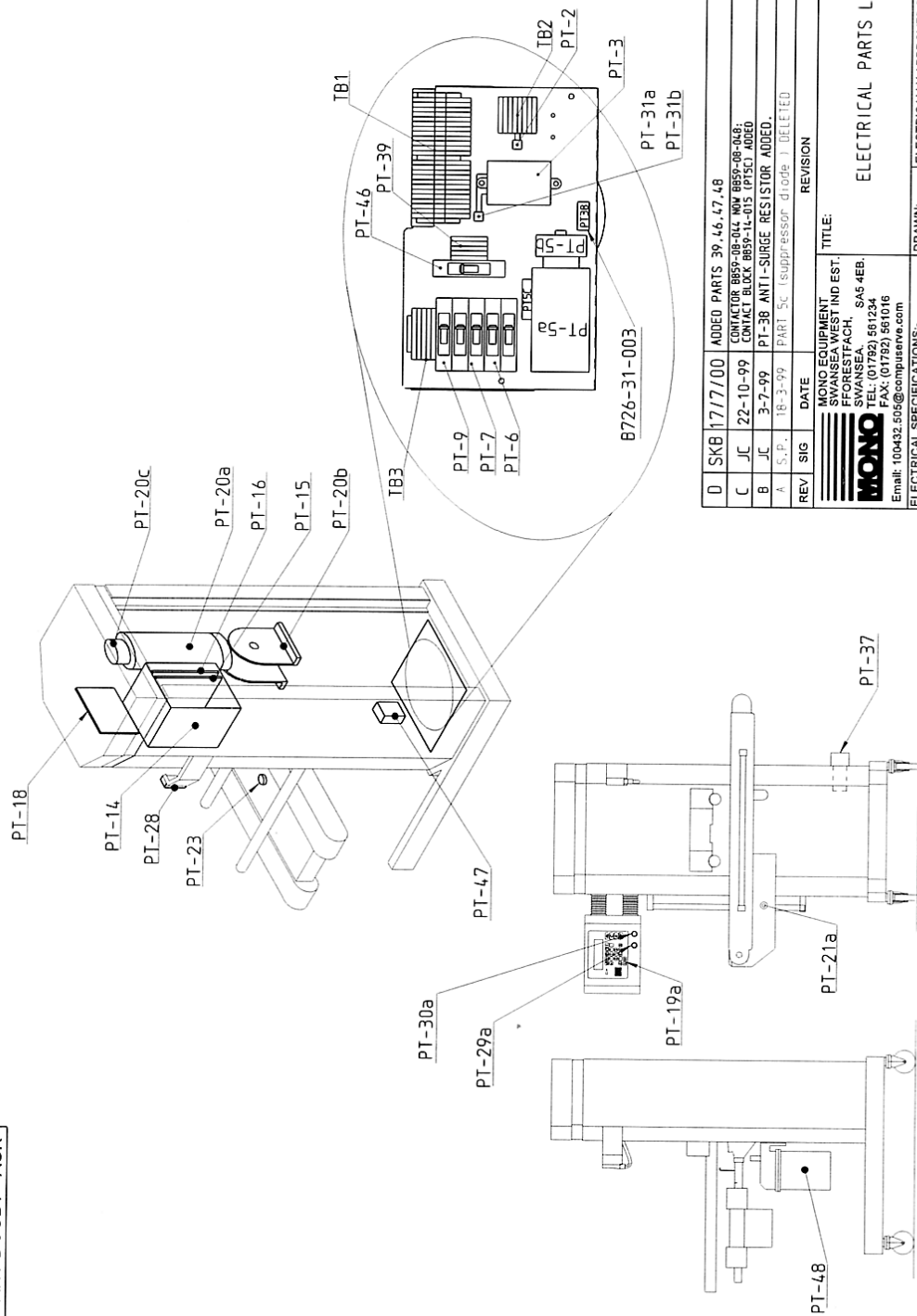
SECTION “B” - WIRECUT VERSION

SECTION “C” - ROTARY VERSION

SECTION “D” - ROTARY & WIRECUT VERSION

SECTION “A”

BASIC MACHINE



D	SKB	17/7/00	ADDED PARTS 39, 46, 47, 48			12/2/1
C	JC	22-10-99	CONTACTOR BB59-08-044 NOW BB59-08-046; CONTACT BLOCK BB59-11-015 (PTSC) ADDED			10/6/1
B	JC	3-7-99	PT-38 ANTI-SURGE RESISTOR ADDED.			09/9/0
A	S.P.	18-3-99	PART 58 (suppressor diode) DELETED			09/6/2
REV	SIG	DATE	REVISION			ECN NO.
			TITLE: MONO EQUIPMENT MONO ELECTRIC IND. EST. FORESTSTADT, SWANSEA, SA6 4EB. TEL: (01792) 561234 FAX: (01792) 561016 Email: 100432.505@comcast.com			
ELECTRICAL SPECIFICATIONS:-			ELECTRICALLY APPROVED BY:-			
DRAWN: SKB			DRAWING NO.			
DATE: 4/11/98			REV: 0			
			M077-25-03000			

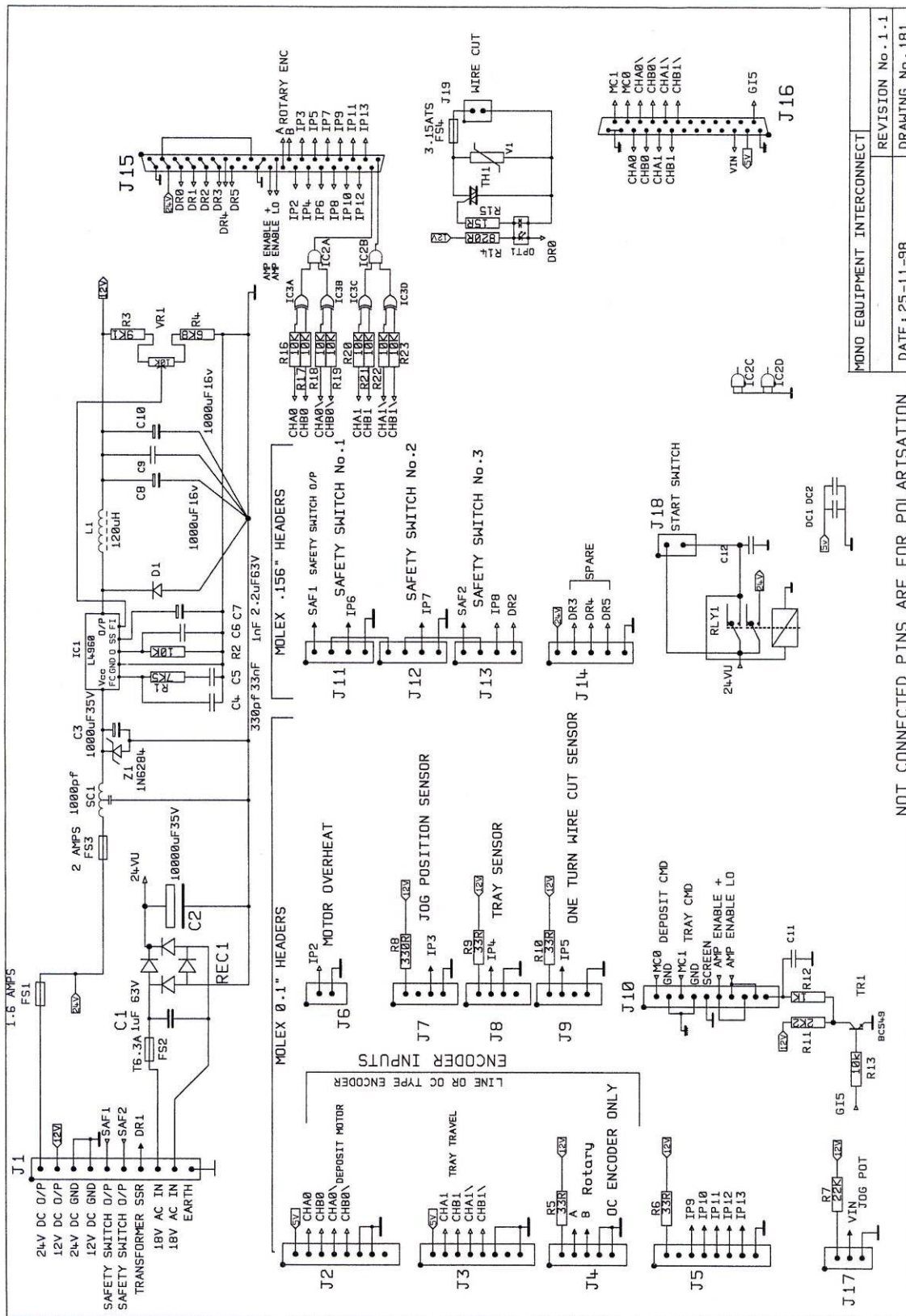
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OR ITS CONTENTS DIVULGED WITHOUT PRIOR WRITTEN PERMISSION.

ELECTRICAL COMPONENT LAYOUT PARTS LIST

DRAWING PT-Ref	DESCRIPTION	MONO PART NUMBER
PT-1	SLEEVE	B842-48-008
PT-2	VARISTOR	B842-48-002
PT-3	FILTER UNIT	B842-48-009
PT-5a	MAIN CONTACTOR N' 1	B859-08-048
PT-5b	AUXILIARY CONTACT BLOCK	B859-14-011
PT-5c	AUXILIARY CONTACT BLOCK	B859-14-015
PT-6	DEPOSIT CONTROLLER 72 VAC SUPPLY M.C.B.	B872-22-098
PT-7	DEPOSIT CONTROLLER 18-0-18 VAC BUS SUPPLY M.C.B.	B872-22-075
PT-9	FAN POWER SUPPLY M.C.B.	B872-22-002
PT-11	TRANSFORMER	B726-31-003
PT-14	CONTROLLER UNIT ENCLOSURE & POWER SUPPLY UNIT	B739-09-002
PT-15	DEPOSIT MOTOR CONTROLLER	B739-80-002
PT-16	TRAY TRAVEL MOTOR CONTROLLER	B739-80-002
PT-18	INTERFACE P.C.B. UNIT	B728-93-009
PT-19a	COMPUTER DISPLAY UNIT	B728-93-010
PT-19b	25 WAY RIBBON LEAD	B728-63-002
PT-19c	37 WAY RIBBON LEAD	B728-63-004
PT-20a	DEPOSIT DRIVE MOTOR.	B741-74-004
PT-20b	DEPOSIT DRIVE MOTOR GEARBOX	A900-11-076
PT-20c	DEPOSIT MOTOR ENCODER	B742-99-001
PT-21a	TRAY TRAVEL DRIVE MOTOR.	B912-74-021
PT-23	TRAY SENSOR UNIT	B735-99-001
PT-27	JOG POSITION SENSOR	B842-99-001
PT-28	HOPPER SAFETY SWITCH	B818-07-010
PT-29a	STOP BUTTON	B801-12-003
PT-29b	STOP BUTTON CONTACT BLOCK	B801-14-002
PT-30a	START BUTTON	B801-12-029
PT-30b	START BUTTON CONTACT BLOCK	B801-14-004
PT31a	TRANSFORMER SUPPRESSOR CAPACITOR	B900-48-003
PT-31b	TRANSFORMER SUPPRESSOR V.D.R.	B842-48-002
PT-32	FAN MOTOR SUPPRESSOR CAPACITOR	B900-48-002
PT-33a	TRAY TRAVEL ENCODER PLUG	B900-06-004
PT-33b	TRAY TRAVEL ENCODER SOCKET	B900-25-004
PT-34a	TRAY TRAVEL MOTOR PLUG HOOD	B715-25-011
PT-34a	TRAY TRAVEL MOTOR PLUG INSERT	B715-25-006
PT-34b	TRAY TRAVEL MOTOR SOCKET MOUNTING BASE	B715-06-001
PT-34b	TRAY TRAVEL MOTOR SOCKET INSERT	B715-06-005
PT-35a	TRAY SENSOR PLUG	B900-06-003
PT-35b	TRAY SENSOR SOCKET	B900-25-003
PT-37	MAIN ROTARY ISOLATOR SWITCH	B748-03-002
PT-37	MAIN ROTARY ISOLATOR SWITCH (AMERICAN)	B748-03-003
PT-38	SURGE SUPPRESSOR RESISTOR	B842-59-014

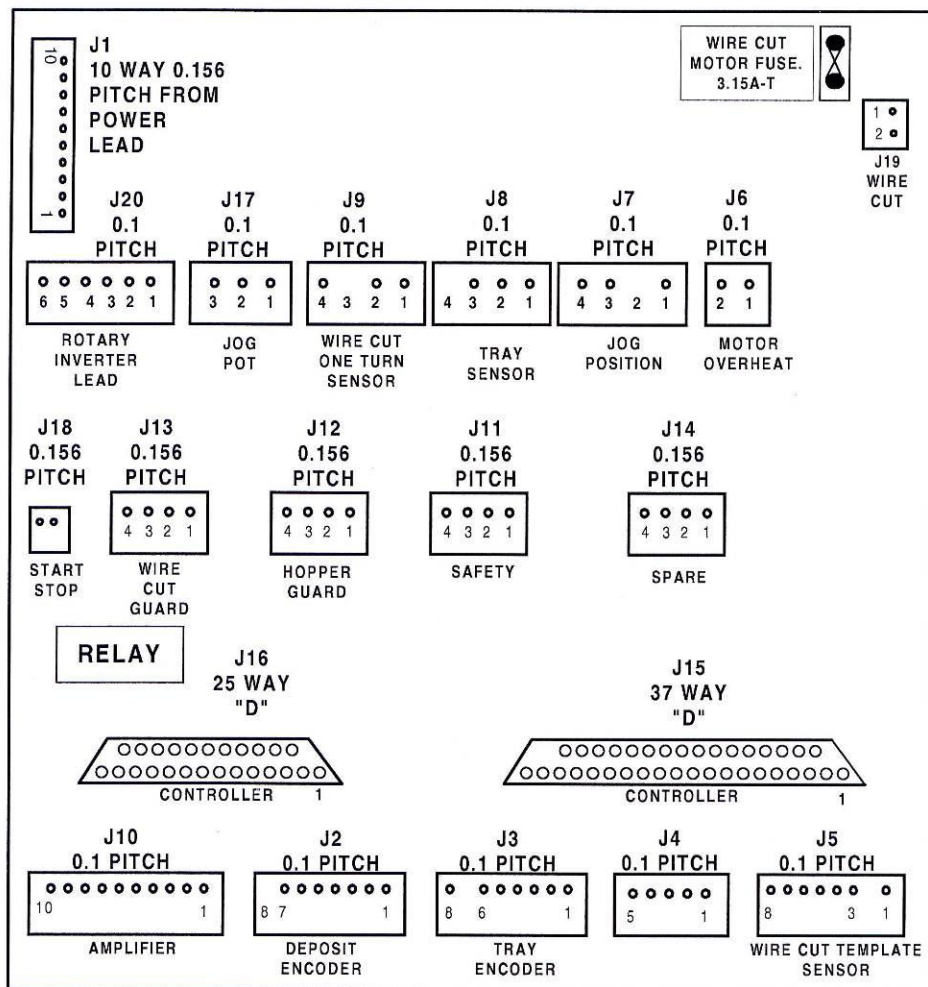
COMPONENT LAYOUT PARTS LIST

DRAWING		<i>MONO</i>
PT-Ref DESCRIPTION		PART NUMBER
PT 39	MAIN CONTACTOR N' 2	B859-08-055
PT 40	WIRECUT MOTOR FUSE ON INERFACE PCB	B842-85-026
PT 41	WIRECUT ONE TURN SENSOR	B919-99-002
PT 42	WIRECUT MOTOR UNIT	B912-74-025
PT 43	FRONT ACCESS COVER SAFETY SWITCH	B818-07-010
PT 44	REAR ACCESS COVER SAFETY SWITCH	B818-07-010
PT 45	WIRECUT TEMPLATE SENSOR	B819-99-002
PT 46	ROTARY HEAD MOTOR MCB	B872-22-064
PT 47	ROTARY HEAD INVERTER (B807-80-001)	
	11/05 ONWARDS	B801-80-010
PT 48	ROTARY HEAD MOTOR	B912-74-019



NOT CONNECTED PINS ARE FOR POLARISATION

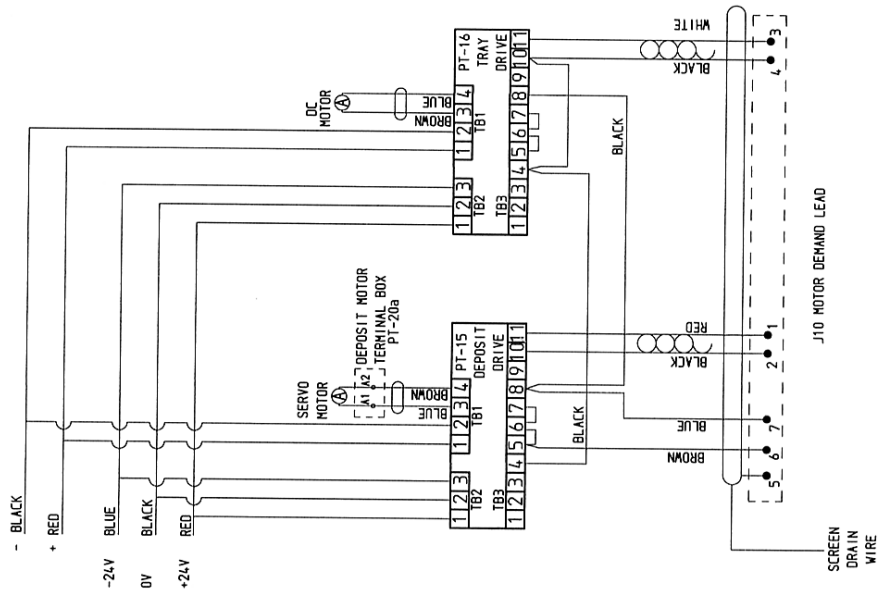
MONO EQUIPMENT INTERCONNECT	REVISION No. 1-1
DATE : 25-11-98	DRAWING No. 181



 SWANSEA IND. EST. FFORESTFACH, SWANSEA. SA5 4EB TEL: (01792) 561234 FAX: (01792) 561016 Email: 100432.505@compuserve.com	TITLE: ALPHA DEPOSITOR INTERFACE PCB. VERSION 1.2		
	DRAWN: P.B.	ELECTRICALLY APPROVED BY: P. BOYLES.	
ELECTRICAL SPECIFICATIONS :	DATE: 29-08-00	DRAWING NO. M077-25-07800	REV:

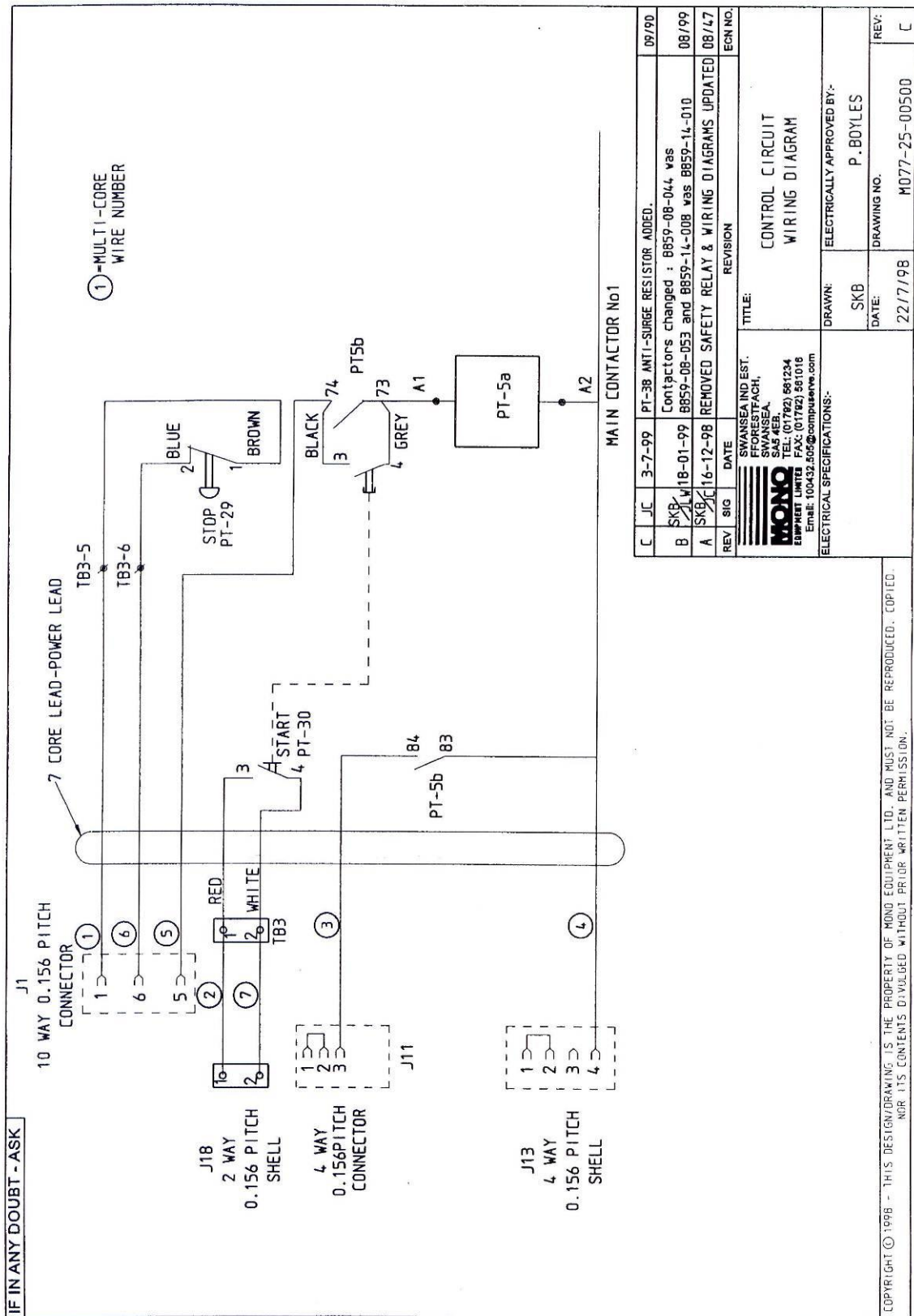


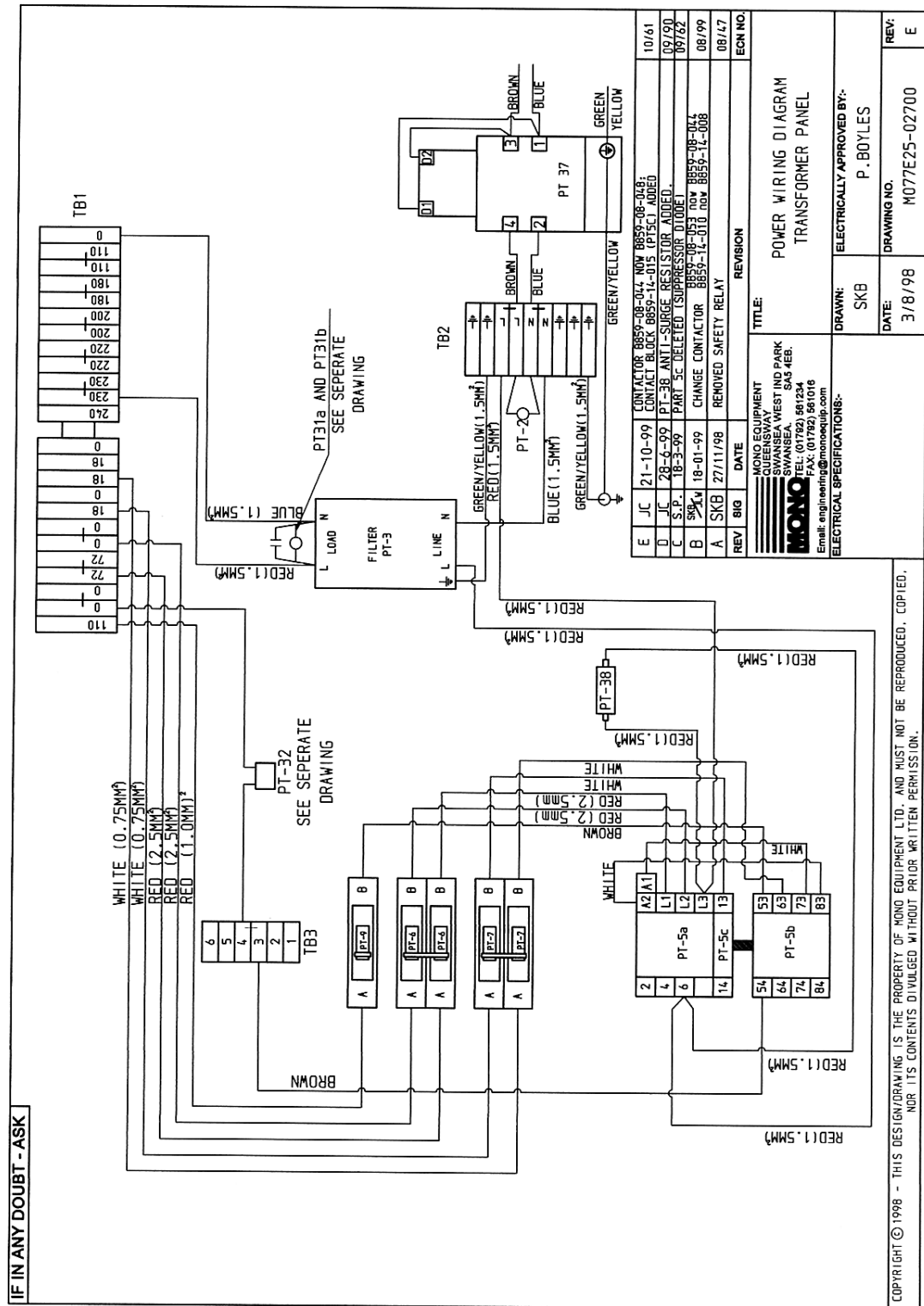
IF IN ANY DOUBT - ASK



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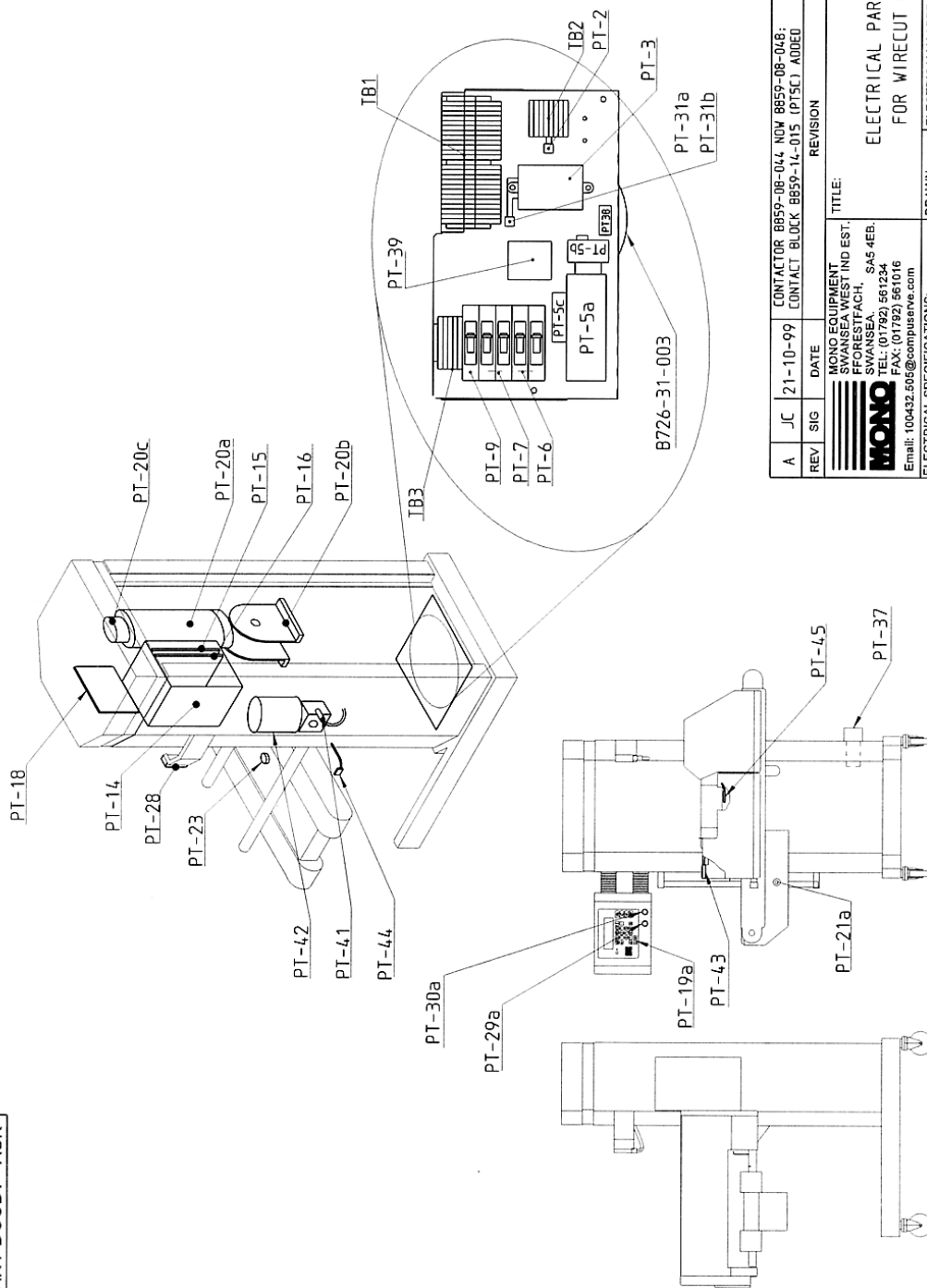
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SECTION “B” WIRECUT VERSION

IF IN ANY DOUBT - ASK



REV	JC	DATE	SIG	REVISION	ECN NO.
A	JC	21-10-99		CONTACTOR B859-08-044 NOW B859-08-048; CONTACT BLOCK B859-14-015 (PT5C) ADDED	10/61
MONO EQUIPMENT SWANSEA WEST IND EST. FFORESTFACH, SA45 4EB. TEL: (01792) 561924 FAX: (01792) 561016 Email: 100432.505@compuserve.com					
TITLE: ELECTRICAL PARTS LAYOUT FOR WIRECUT MACHINE					
ELECTRICAL SPECIFICATIONS:-			ELECTRICALLY APPROVED BY:- P. BOYLES		
DRAWN: SKB			DATE: 4/11/98		
			DRAWING NO: M077-25-04200		
			REV: A		

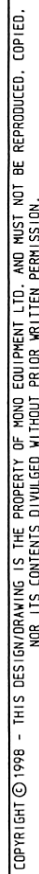
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ELECTRICAL COMPONENT LAYOUT PARTS LIST

DRAWING PT-Ref	DESCRIPTION	MONO PART NUMBER
PT-1	SLEEVE	B842-48-008
PT-2	VARISTOR	B842-48-002
PT-3	FILTER UNIT	B842-48-009
PT-5a	MAIN CONTACTOR N' 1	B859-08-048
PT-5b	AUXILIARY CONTACT BLOCK	B859-14-011
PT-5c	AUXILIARY CONTACT BLOCK	B859-14-015
PT-6	DEPOSIT CONTROLLER 72 VAC SUPPLY M.C.B.	B872-22-098
PT-7	DEPOSIT CONTROLLER 18-0-18 VAC BUS SUPPLY M.C.B.	B872-22-075
PT-9	FAN POWER SUPPLY M.C.B.	B872-22-002
PT-11	TRANSFORMER	B726-31-003
PT-14	CONTROLLER UNIT ENCLOSURE & POWER SUPPLY UNIT	B739-09-002
PT-15	DEPOSIT MOTOR CONTROLLER	B739-80-002
PT-16	TRAY TRAVEL MOTOR CONTROLLER	B739-80-002
PT-18	INTERFACE P.C.B. UNIT	B728-93-009
PT-19a	COMPUTER DISPLAY UNIT	B728-93-010
PT-19b	25 WAY RIBBON LEAD	B728-63-002
PT-19c	37 WAY RIBBON LEAD	B728-63-004
PT-20a	DEPOSIT DRIVE MOTOR.	B741-74-004
PT-20b	DEPOSIT DRIVE MOTOR GEARBOX	A900-11-076
PT-20c	DEPOSIT MOTOR ENCODER	B742-99-001
PT-21a	TRAY TRAVEL DRIVE MOTOR.	B912-74-021
PT-23	TRAY SENSOR UNIT	B735-99-001
PT-27	JOG POSITION SENSOR	B842-99-001
PT-28	HOPPER SAFETY SWITCH	B818-07-010
PT-29a	STOP BUTTON	B801-12-003
PT-29b	STOP BUTTON CONTACT BLOCK	B801-14-002
PT-30a	START BUTTON	B801-12-029
PT-30b	START BUTTON CONTACT BLOCK	B801-14-004
PT31a	TRANSFORMER SUPPRESSOR CAPACITOR	B900-48-003
PT-31b	TRANSFORMER SUPPRESSOR V.D.R.	B842-48-002
PT-32	FAN MOTOR SUPPRESSOR CAPACITOR	B900-48-002
PT-33a	TRAY TRAVEL ENCODER PLUG	B900-06-004
PT-33b	TRAY TRAVEL ENCODER SOCKET	B900-25-004
PT-34a	TRAY TRAVEL MOTOR PLUG HOOD	B715-25-011
PT-34a	TRAY TRAVEL MOTOR PLUG INSERT	B715-25-006
PT-34b	TRAY TRAVEL MOTOR SOCKET MOUNTING BASE	B715-06-001
PT-34b	TRAY TRAVEL MOTOR SOCKET INSERT	B715-06-005
PT-35a	TRAY SENSOR PLUG	B900-06-003
PT-35b	TRAY SENSOR SOCKET	B900-25-003
PT-37	MAIN ROTARY ISOLATOR SWITCH	B748-03-002
PT-37	MAIN ROTARY ISOLATOR SWITCH (AMERICAN)	B748-03-003
PT-38	SURGE SUPPRESSOR RESISTOR	B842-59-014

COMPONENT LAYOUT PARTS LIST

DRAWING		MONO
PT-Ref DESCRIPTION		PART NUMBER
PT 39	MAIN CONTACTOR N' 2	B859-08-055
PT 40	WIRECUT MOTOR FUSE ON INERFACE PCB	B842-85-026
PT 41	WIRECUT ONE TURN SENSOR	B919-99-002
PT 42	WIRECUT MOTOR UNIT	B912-74-025
PT 43	FRONT ACCESS COVER SAFETY SWITCH	B818-07-010
PT 44	REAR ACCESS COVER SAFETY SWITCH	B818-07-010
PT 45	WIRECUT TEMPLATE SENSOR	B819-99-002
PT 46	ROTARY HEAD MOTOR MCB	B872-22-064
PT 47	ROTARY HEAD INVERTER (B807-80-001) 11/05 ONWARDS	B801-80-010
PT 48	ROTARY HEAD MOTOR	B912-74-019







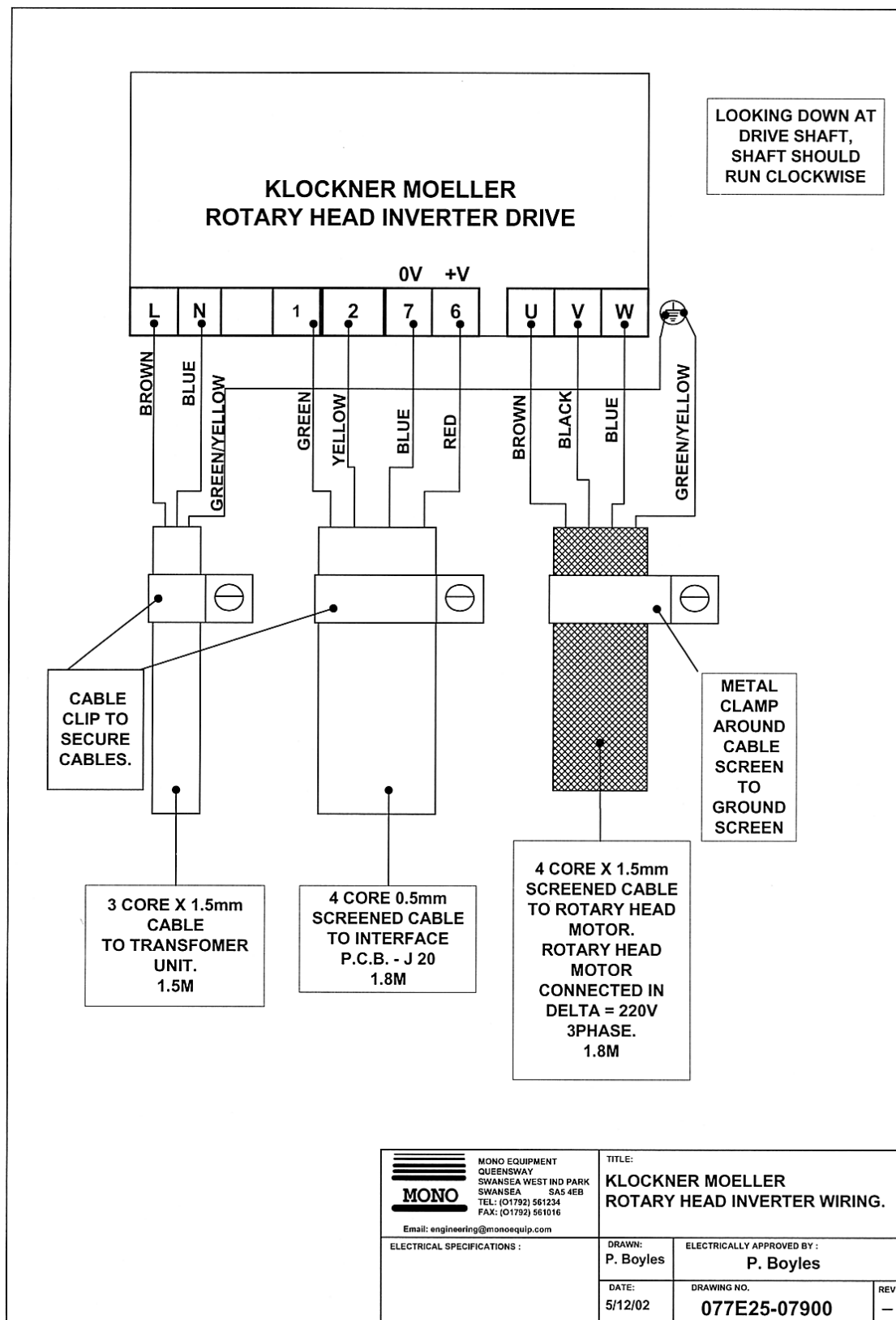
SECTION “C” ROTARY VERSION

ELECTRICAL COMPONENT LAYOUT PARTS LIST

DRAWING PT-Ref	DESCRIPTION	MONO PART NUMBER
PT-1	SLEEVE	B842-48-008
PT-2	VARISTOR	B842-48-002
PT-3	FILTER UNIT	B842-48-009
PT-5a	MAIN CONTACTOR N' 1	B859-08-048
PT-5b	AUXILIARY CONTACT BLOCK	B859-14-011
PT-5c	AUXILIARY CONTACT BLOCK	B859-14-015
PT-6	DEPOSIT CONTROLLER 72 VAC	
	SUPPLY M.C.B.	B872-22-098
PT-7	DEPOSIT CONTROLLER 18-0-18 VAC BUS	
	SUPPLY M.C.B.	B872-22-075
PT-9	FAN POWER SUPPLY M.C.B.	B872-22-002
PT-11	TRANSFORMER	B726-31-003
PT-14	CONTROLLER UNIT ENCLOSURE & POWER	
	SUPPLY UNIT	B739-09-002
PT-15	DEPOSIT MOTOR CONTROLLER	B739-80-002
PT-16	TRAY TRAVEL MOTOR CONTROLLER	B739-80-002
PT-18	INTERFACE P.C.B. UNIT	B728-93-009
PT-19a	COMPUTER DISPLAY UNIT	B728-93-010
PT-19b	25 WAY RIBBON LEAD	B728-63-002
PT-19c	37 WAY RIBBON LEAD	B728-63-004
PT-20a	DEPOSIT DRIVE MOTOR.	B741-74-004
PT-20b	DEPOSIT DRIVE MOTOR GEARBOX	A900-11-076
PT-20c	DEPOSIT MOTOR ENCODER	B742-99-001
PT-21a	TRAY TRAVEL DRIVE MOTOR.	B912-74-021
PT-23	TRAY SENSOR UNIT	B735-99-001
PT-27	JOG POSITION SENSOR	B842-99-001
PT-28	HOPPER SAFETY SWITCH	B818-07-010
PT-29a	STOP BUTTON	B801-12-003
PT-29b	STOP BUTTON CONTACT BLOCK	B801-14-002
PT-30a	START BUTTON	B801-12-029
PT-30b	START BUTTON CONTACT BLOCK	B801-14-004
PT31a	TRANSFORMER SUPPRESSOR CAPACITOR	B900-48-003
PT-31b	TRANSFORMER SUPPRESSOR V.D.R.	B842-48-002
PT-32	FAN MOTOR SUPPRESSOR CAPACITOR	B900-48-002
PT-33a	TRAY TRAVEL ENCODER PLUG	B900-06-004
PT-33b	TRAY TRAVEL ENCODER SOCKET	B900-25-004
PT-34a	TRAY TRAVEL MOTOR PLUG HOOD	B715-25-011
PT-34a	TRAY TRAVEL MOTOR PLUG INSERT	B715-25-006
PT-34b	TRAY TRAVEL MOTOR SOCKET	
	MOUNTING BASE	B715-06-001
PT-34b	TRAY TRAVEL MOTOR SOCKET INSERT	B715-06-005
PT-35a	TRAY SENSOR PLUG	B900-06-003
PT-35b	TRAY SENSOR SOCKET	B900-25-003
PT-37	MAIN ROTARY ISOLATOR SWITCH	B748-03-002
PT-37	MAIN ROTARY ISOLATOR SWITCH (AMERICAN)	B748-03-003
PT-38	SURGE SUPPRESSOR RESISTOR	B842-59-014

COMPONENT LAYOUT PARTS LIST

DRAWING		<i>MONO</i>
PT-Ref DESCRIPTION		PART NUMBER
PT 39	MAIN CONTACTOR N' 2	B859-08-055
PT 40	WIRECUT MOTOR FUSE ON INERFACE PCB	B842-85-026
PT 41	WIRECUT ONE TURN SENSOR	B919-99-002
PT 42	WIRECUT MOTOR UNIT	B912-74-025
PT 43	FRONT ACCESS COVER SAFETY SWITCH	B818-07-010
PT 44	REAR ACCESS COVER SAFETY SWITCH	B818-07-010
PT 45	WIRECUT TEMPLATE SENSOR	B819-99-002
PT 46	ROTARY HEAD MOTOR MCB	B872-22-064
PT 47	ROTARY HEAD INVERTER (B807-80-001) 11/05 ONWARDS	B801-80-010
PT 48	ROTARY HEAD MOTOR	B912-74-019



SECTION “D”

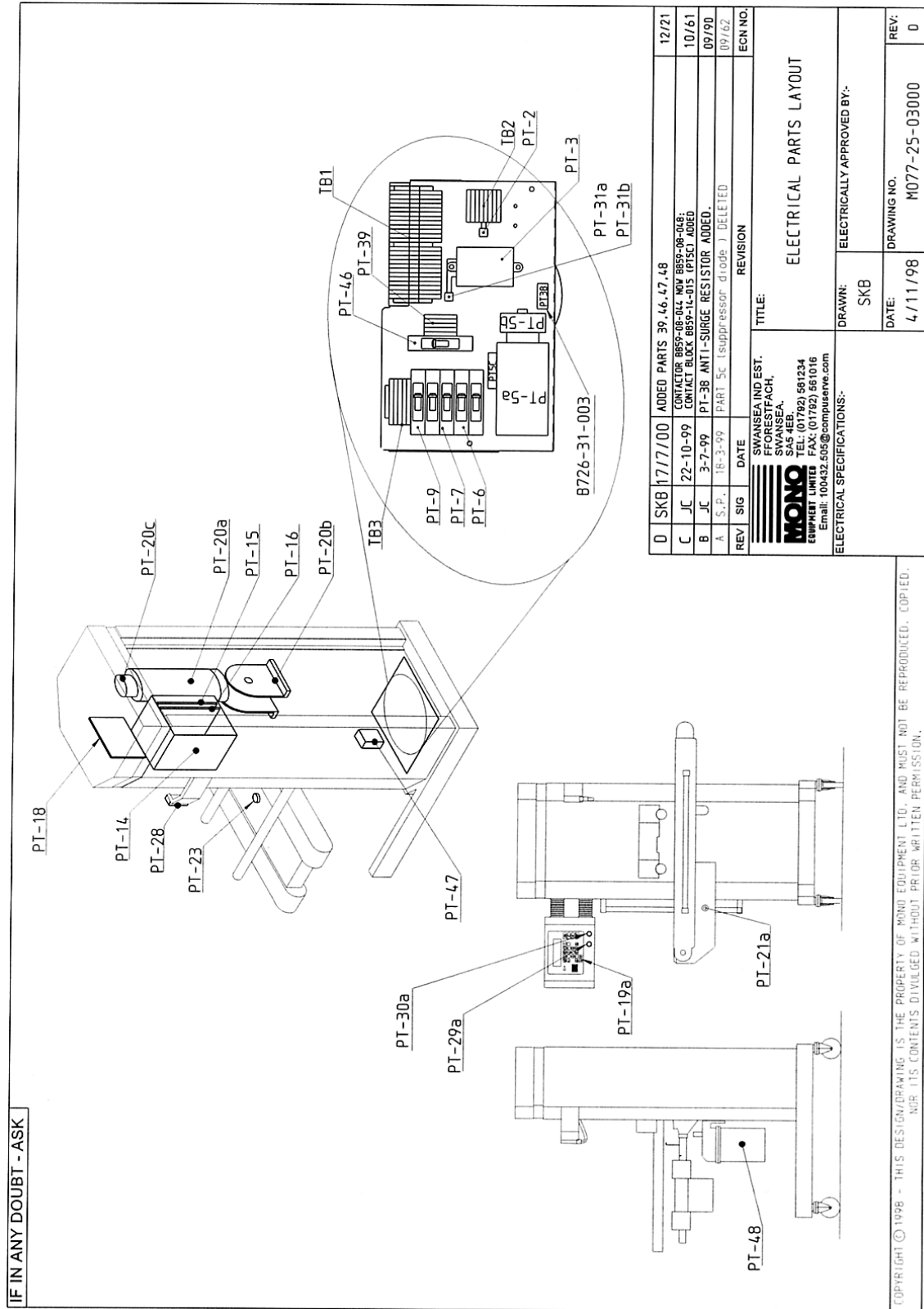
ROTORY AND WIRECUT VERSION

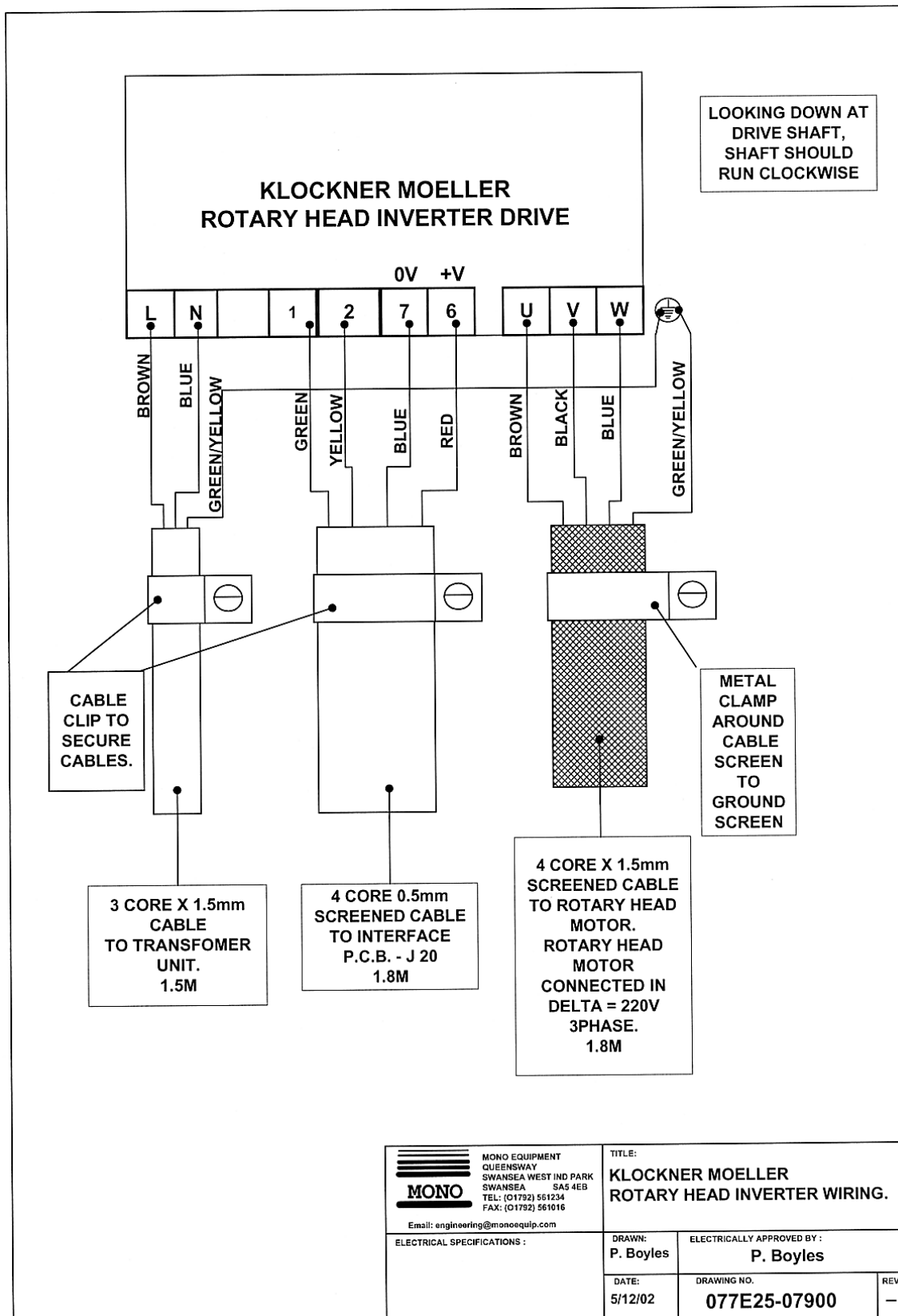
ELECTRICAL COMPONENT LAYOUT PARTS LIST

DRAWING PT-Ref	DESCRIPTION	MONO PART NUMBER
PT-1	SLEEVE	B842-48-008
PT-2	VARISTOR	B842-48-002
PT-3	FILTER UNIT	B842-48-009
PT-5a	MAIN CONTACTOR N' 1	B859-08-048
PT-5b	AUXILIARY CONTACT BLOCK	B859-14-011
PT-5c	AUXILIARY CONTACT BLOCK	B859-14-015
PT-6	DEPOSIT CONTROLLER 72 VAC	
	SUPPLY M.C.B.	B872-22-098
PT-7	DEPOSIT CONTROLLER 18-0-18 VAC BUS	
	SUPPLY M.C.B.	B872-22-075
PT-9	FAN POWER SUPPLY M.C.B.	B872-22-002
PT-11	TRANSFORMER	B726-31-003
PT-14	CONTROLLER UNIT ENCLOSURE & POWER	
	SUPPLY UNIT	B739-09-002
PT-15	DEPOSIT MOTOR CONTROLLER	B739-80-002
PT-16	TRAY TRAVEL MOTOR CONTROLLER	B739-80-002
PT-18	INTERFACE P.C.B. UNIT	B728-93-009
PT-19a	COMPUTER DISPLAY UNIT	B728-93-010
PT-19b	25 WAY RIBBON LEAD	B728-63-002
PT-19c	37 WAY RIBBON LEAD	B728-63-004
PT-20a	DEPOSIT DRIVE MOTOR.	B741-74-004
PT-20b	DEPOSIT DRIVE MOTOR GEARBOX	A900-11-076
PT-20c	DEPOSIT MOTOR ENCODER	B742-99-001
PT-21a	TRAY TRAVEL DRIVE MOTOR.	B912-74-021
PT-23	TRAY SENSOR UNIT	B735-99-001
PT-27	JOG POSITION SENSOR	B842-99-001
PT-28	HOPPER SAFETY SWITCH	B818-07-010
PT-29a	STOP BUTTON	B801-12-003
PT-29b	STOP BUTTON CONTACT BLOCK	B801-14-002
PT-30a	START BUTTON	B801-12-029
PT-30b	START BUTTON CONTACT BLOCK	B801-14-004
PT31a	TRANSFORMER SUPPRESSOR CAPACITOR	B900-48-003
PT-31b	TRANSFORMER SUPPRESSOR V.D.R.	B842-48-002
PT-32	FAN MOTOR SUPPRESSOR CAPACITOR	B900-48-002
PT-33a	TRAY TRAVEL ENCODER PLUG	B900-06-004
PT-33b	TRAY TRAVEL ENCODER SOCKET	B900-25-004
PT-34a	TRAY TRAVEL MOTOR PLUG HOOD	B715-25-011
PT-34a	TRAY TRAVEL MOTOR PLUG INSERT	B715-25-006
PT-34b	TRAY TRAVEL MOTOR SOCKET	
	MOUNTING BASE	B715-06-001
PT-34b	TRAY TRAVEL MOTOR SOCKET INSERT	B715-06-005
PT-35a	TRAY SENSOR PLUG	B900-06-003
PT-35b	TRAY SENSOR SOCKET	B900-25-003
PT-37	MAIN ROTARY ISOLATOR SWITCH	B748-03-002
PT-37	MAIN ROTARY ISOLATOR SWITCH (AMERICAN)	B748-03-003
PT-38	SURGE SUPPRESSOR RESISTOR	B842-59-014

COMPONENT LAYOUT PARTS LIST

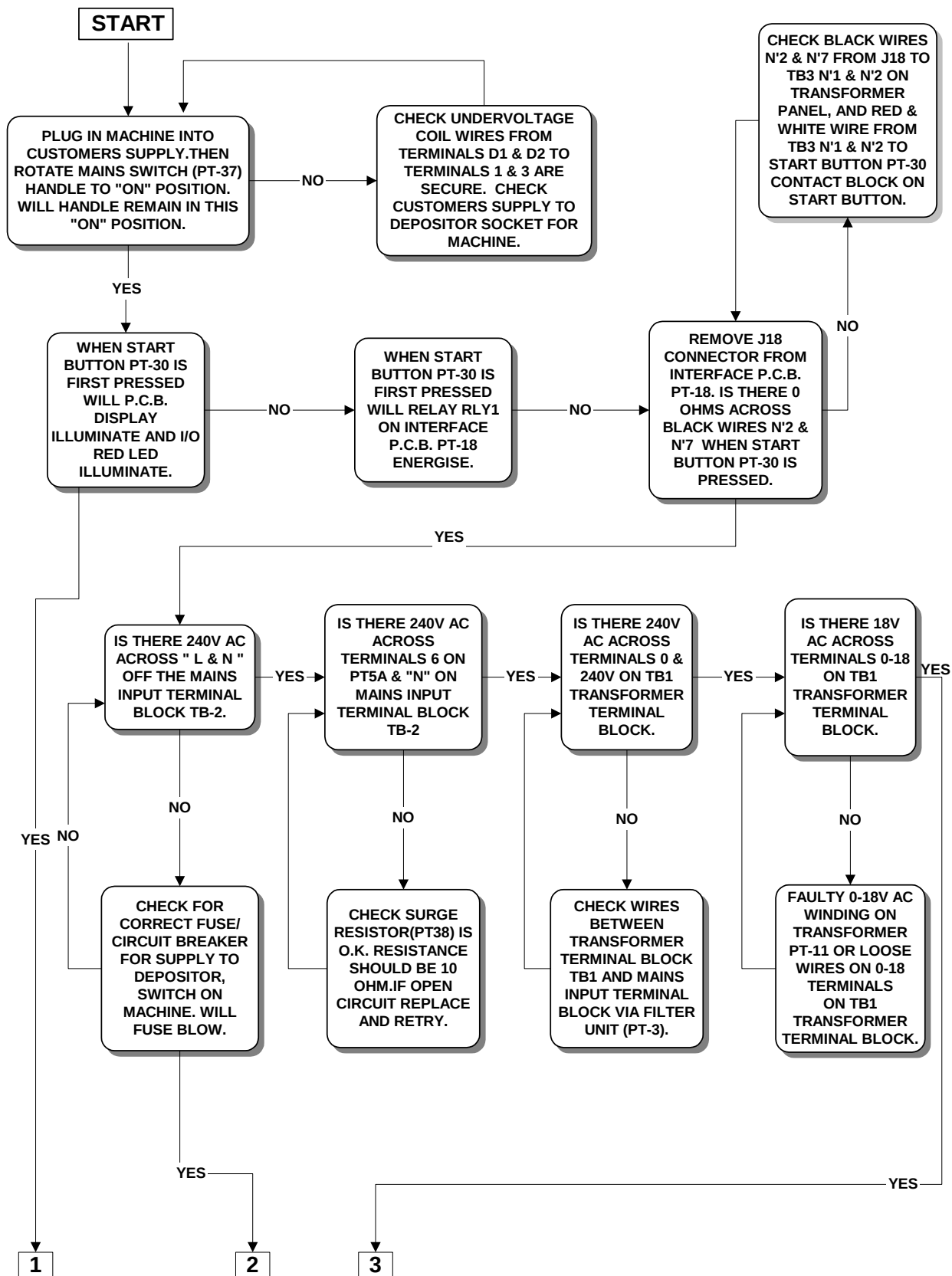
DRAWING		MONO
PT-Ref	DESCRIPTION	PART NUMBER
PT 39	MAIN CONTACTOR N' 2	B859-08-055
PT 40	WIRECUT MOTOR FUSE ON INERFACE PCB	B842-85-026
PT 41	WIRECUT ONE TURN SENSOR	B919-99-002
PT 42	WIRECUT MOTOR UNIT	B912-74-025
PT 43	FRONT ACCESS COVER SAFETY SWITCH	B818-07-010
PT 44	REAR ACCESS COVER SAFETY SWITCH	B818-07-010
PT 45	WIRECUT TEMPLATE SENSOR	B819-99-002
PT 46	ROTARY HEAD MOTOR MCB	B872-22-064
PT 47	ROTARY HEAD INVERTER (B807-80-001) 11/05 ONWARDS	B801-80-010
PT 48	ROTARY HEAD MOTOR	B912-74-019





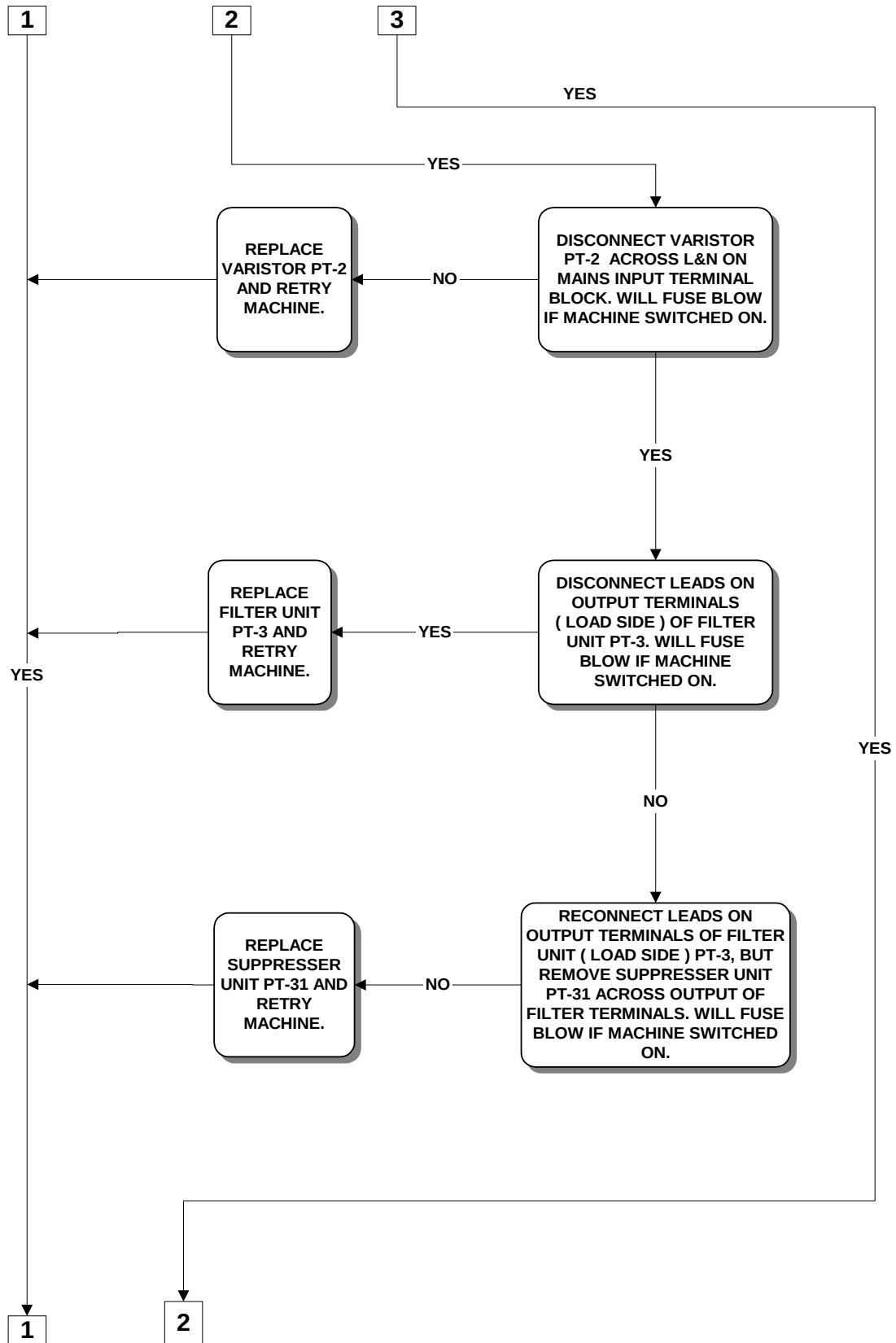
18.0 Fault Analysis Charts

ALPHA DEPOSITOR FAULT ANALYSIS FLOW CHART



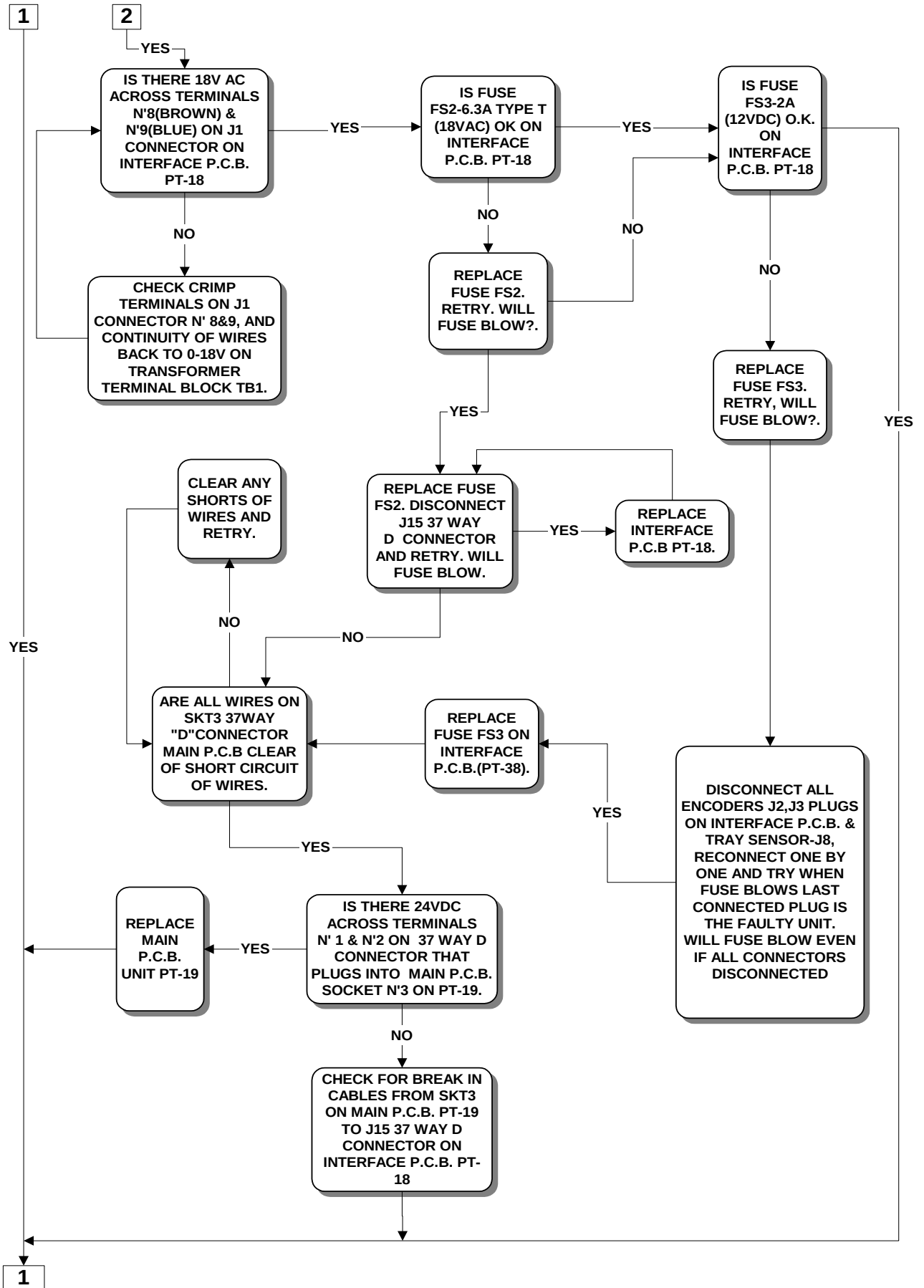
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ALPHA DEPOSITOR FAULT ANALYSIS FLOW CHART



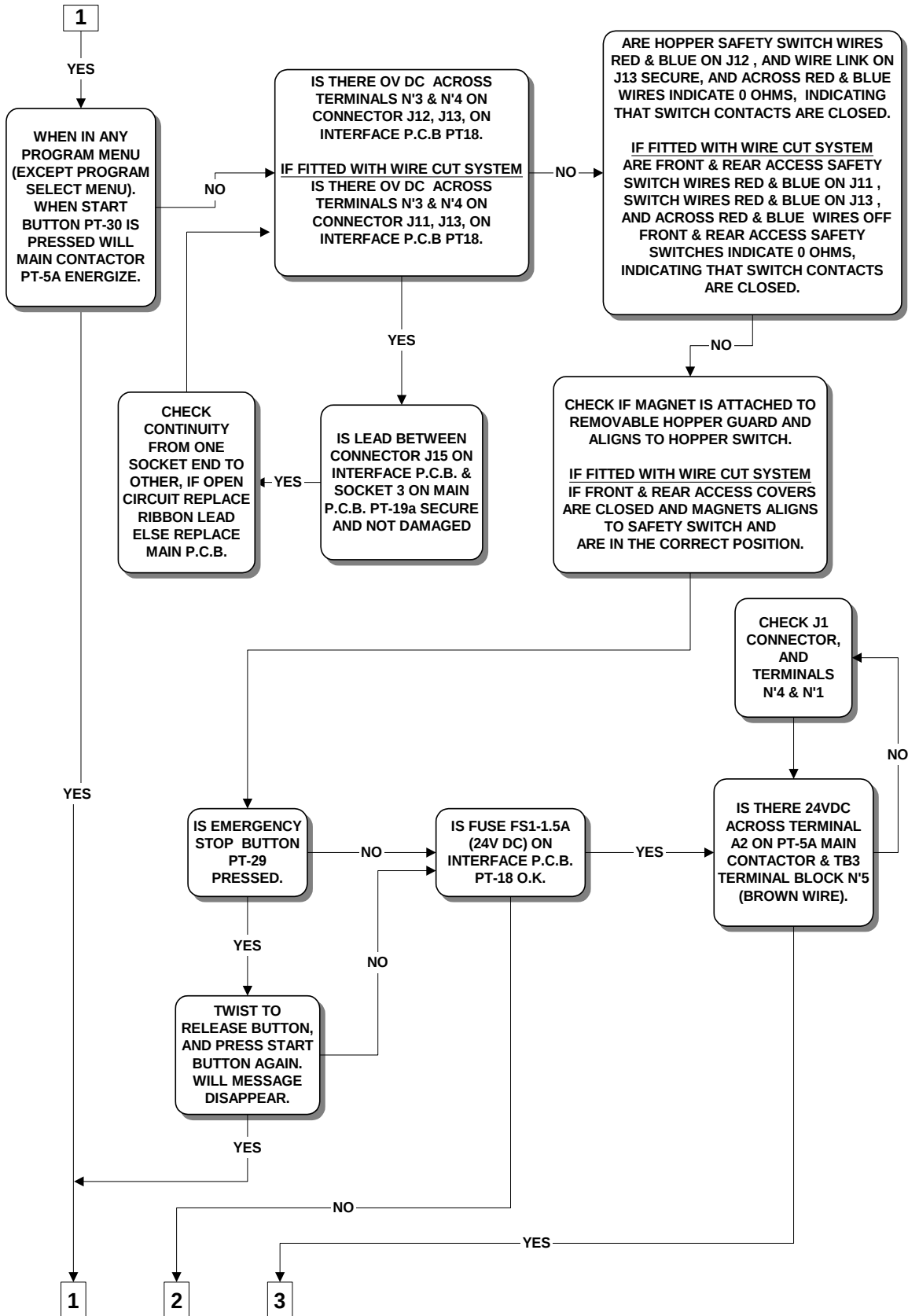
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ALPHA DEPOSITOR FAULT ANALYSIS FLOW CHART

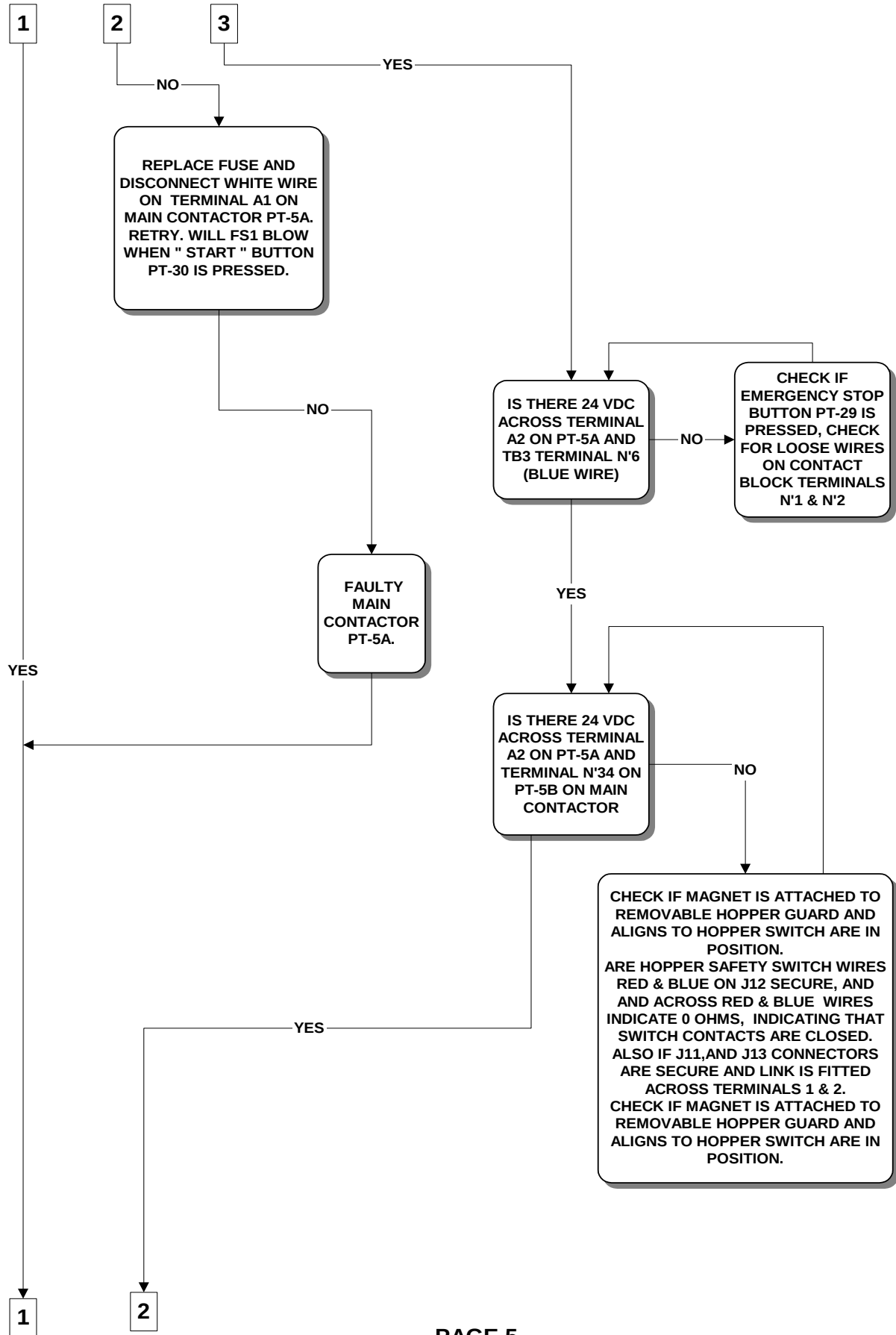


PAGE 3

ALPHA DEPOSITOR FAULT ANALYSIS FLOW CHART

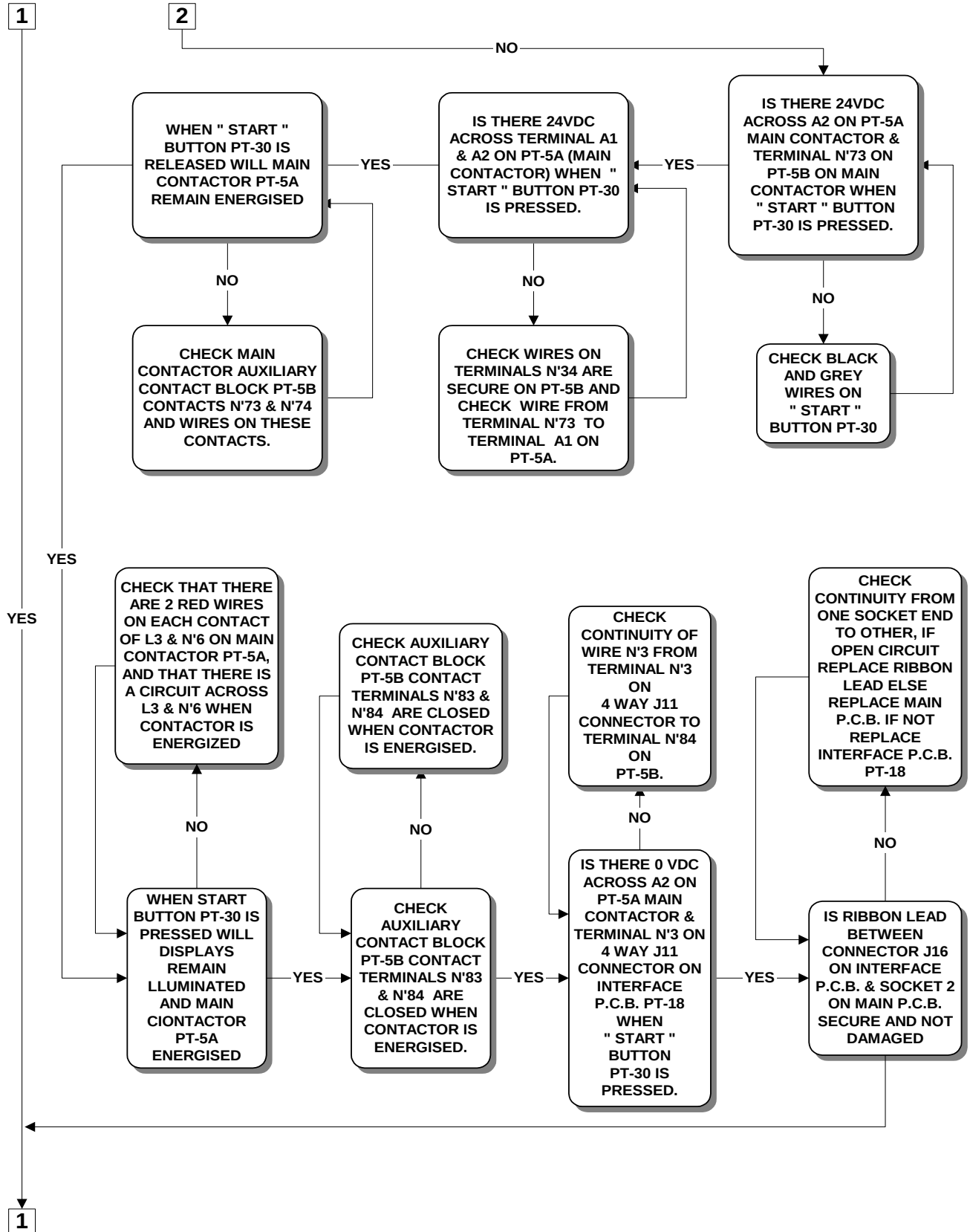


ALPHA DEPOSITOR FAULT ANALYSIS FLOW CHART

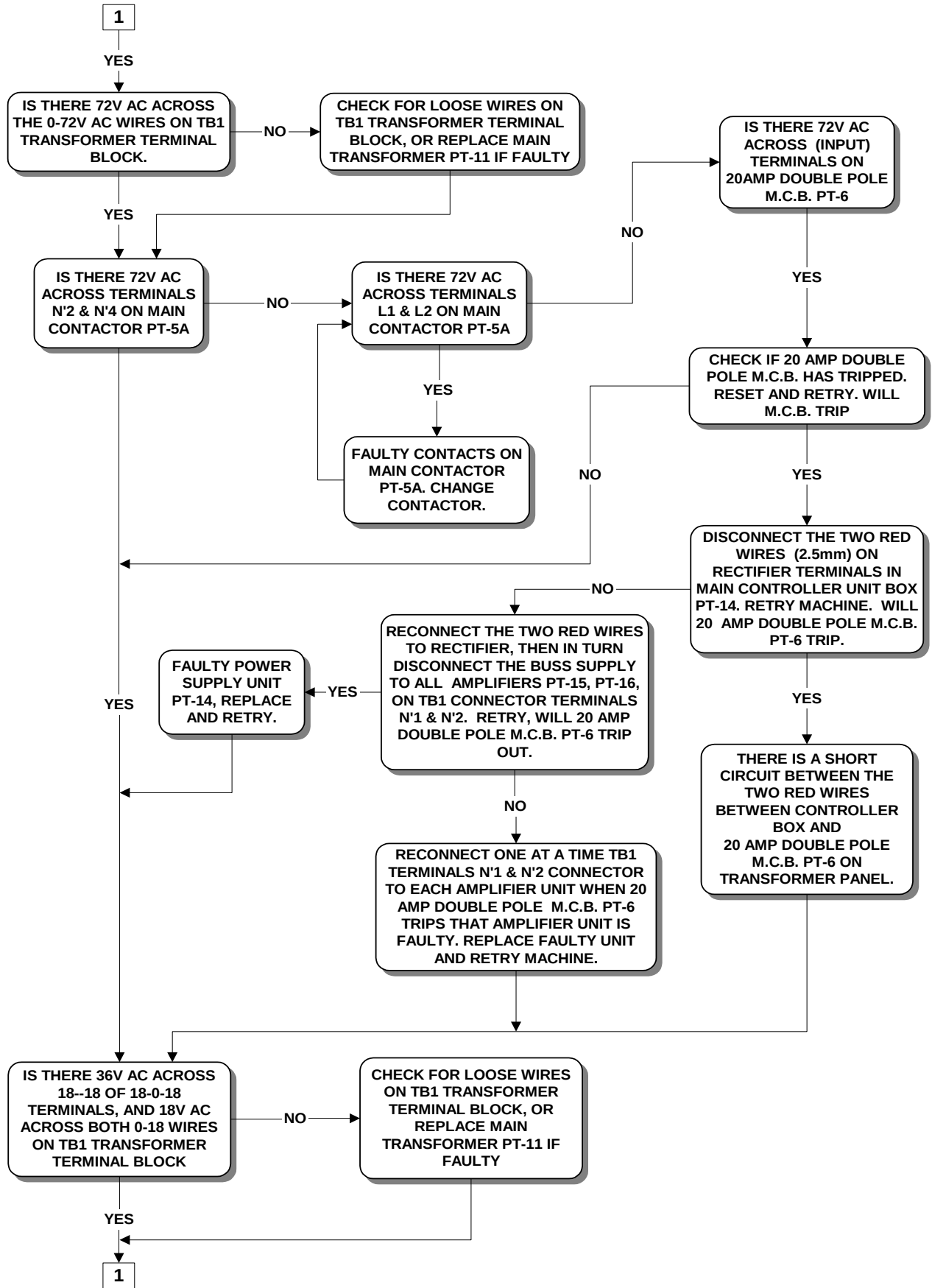


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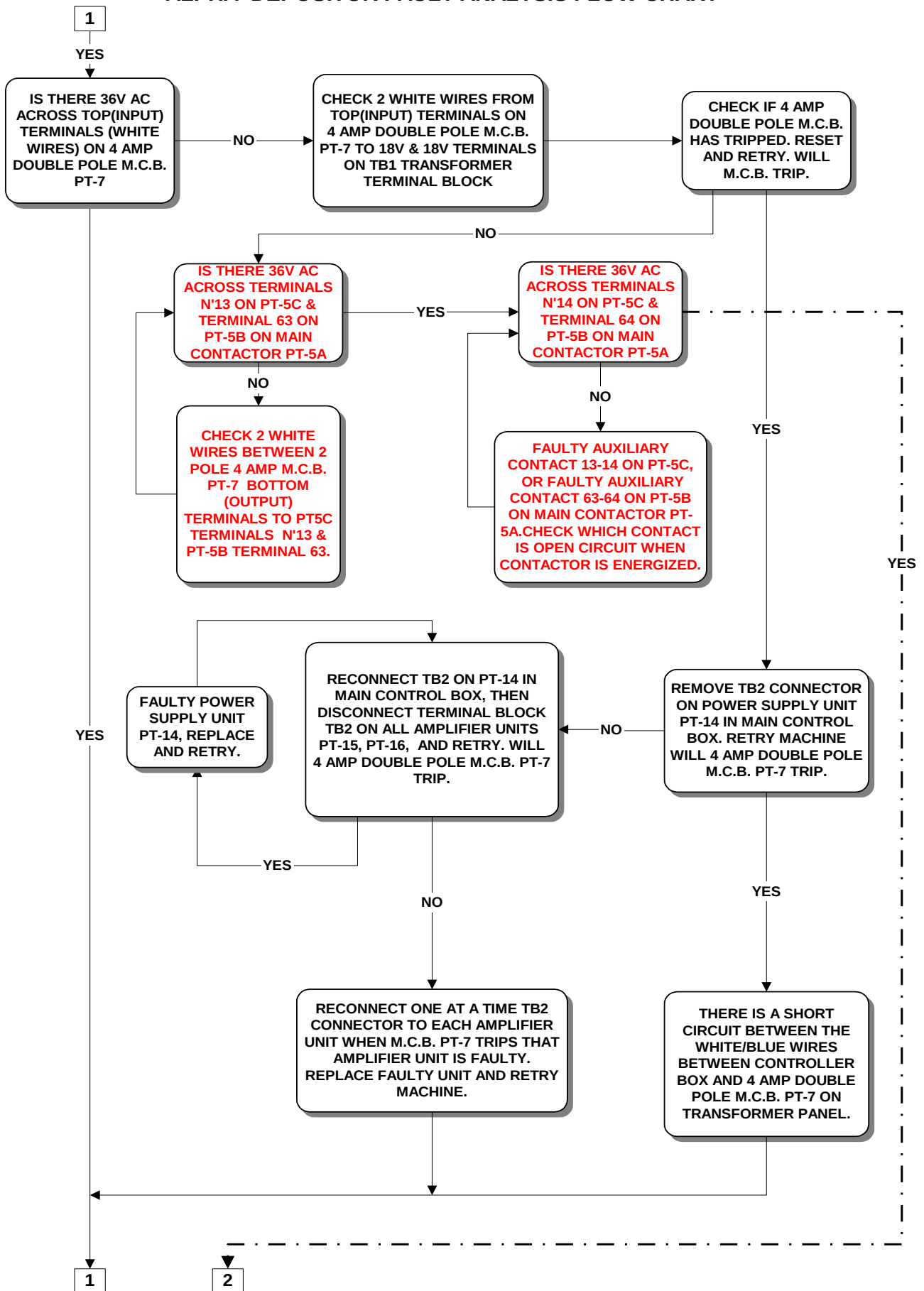
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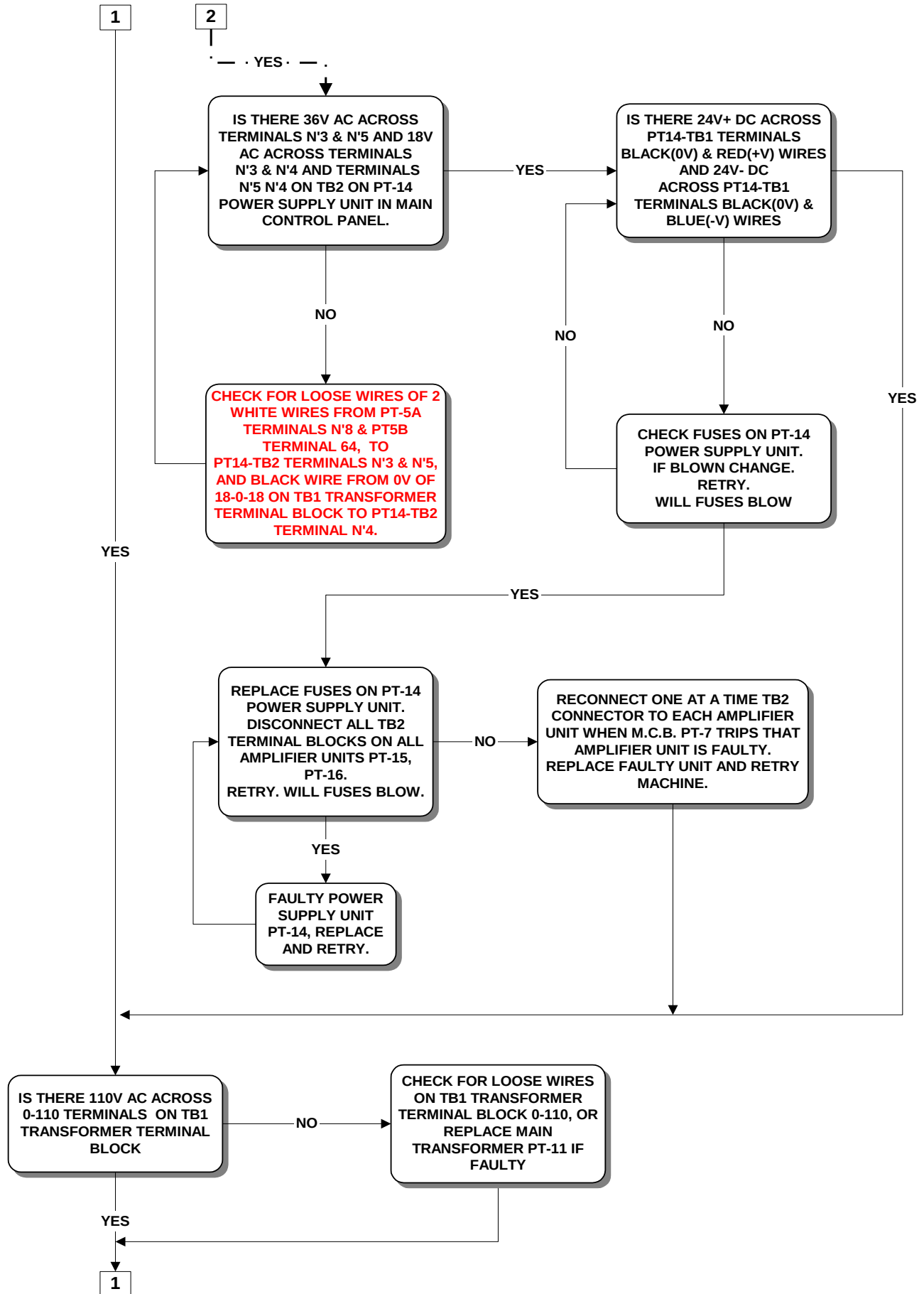
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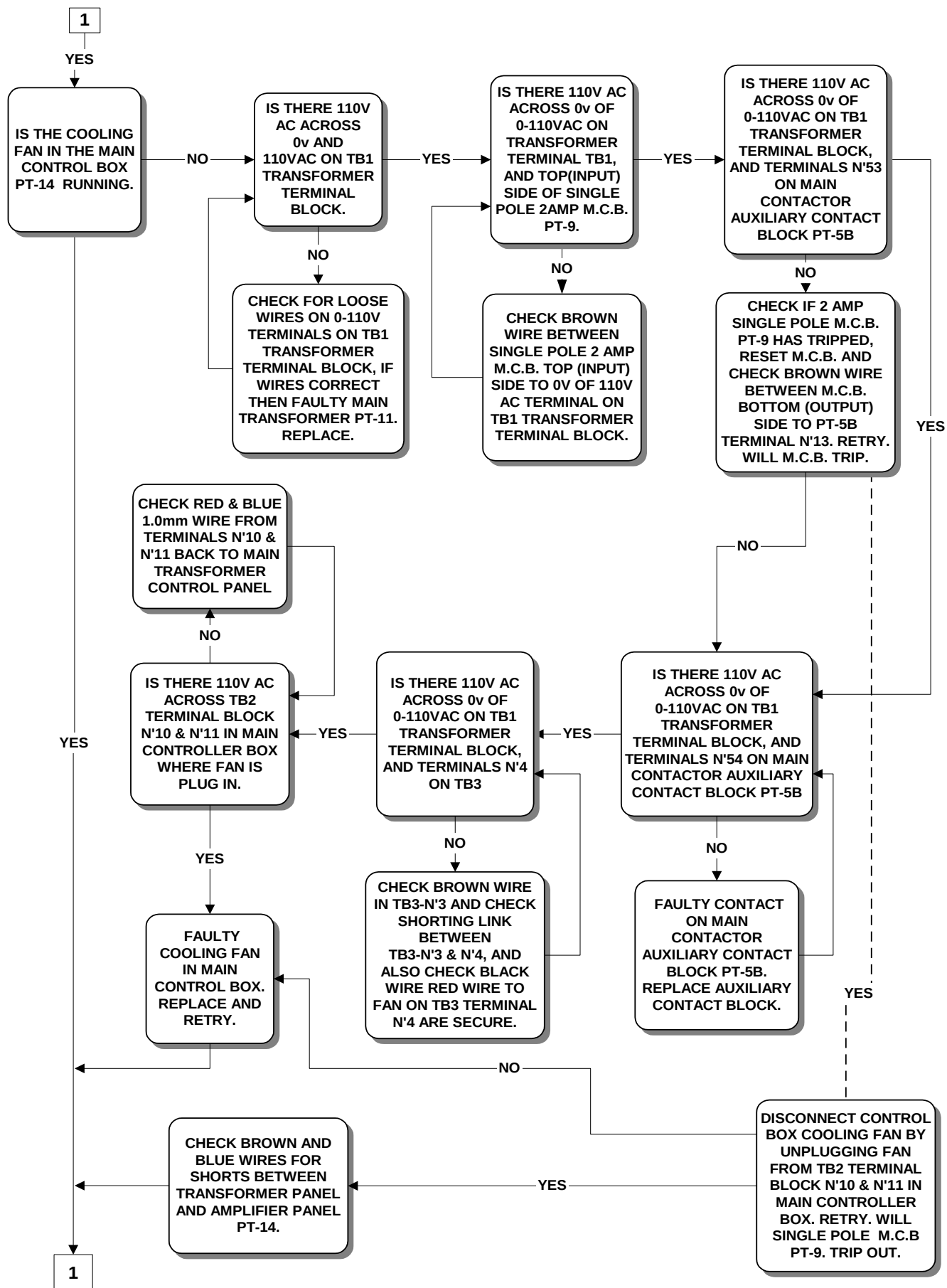
ALPHA DEPOSITOR FAULT ANALYSIS FLOW CHART



ALPHA DEPOSITOR FAULT ANALYSIS FLOW CHART

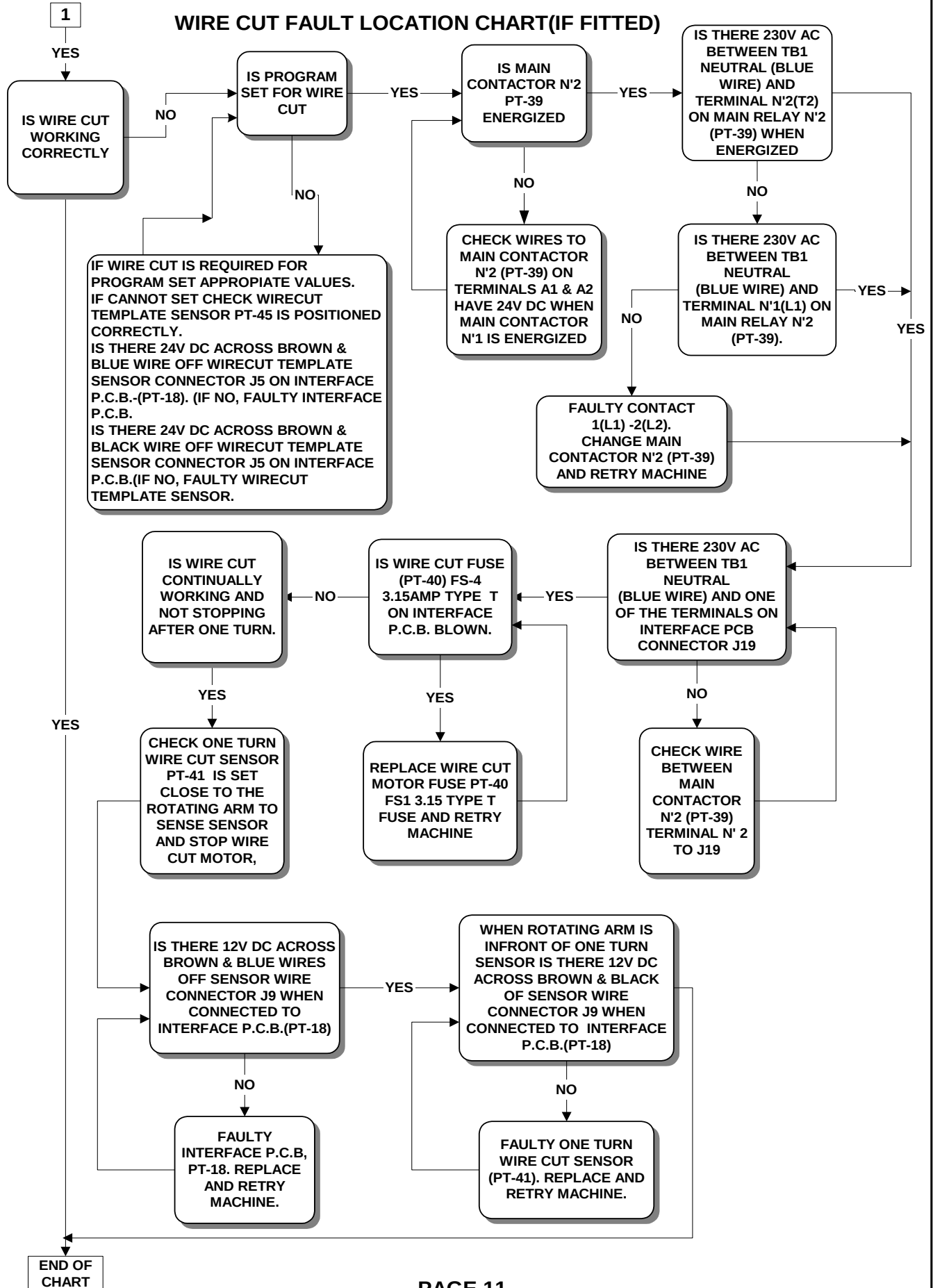


ALPHA DEPOSITOR FAULT ANALYSIS FLOW CHART



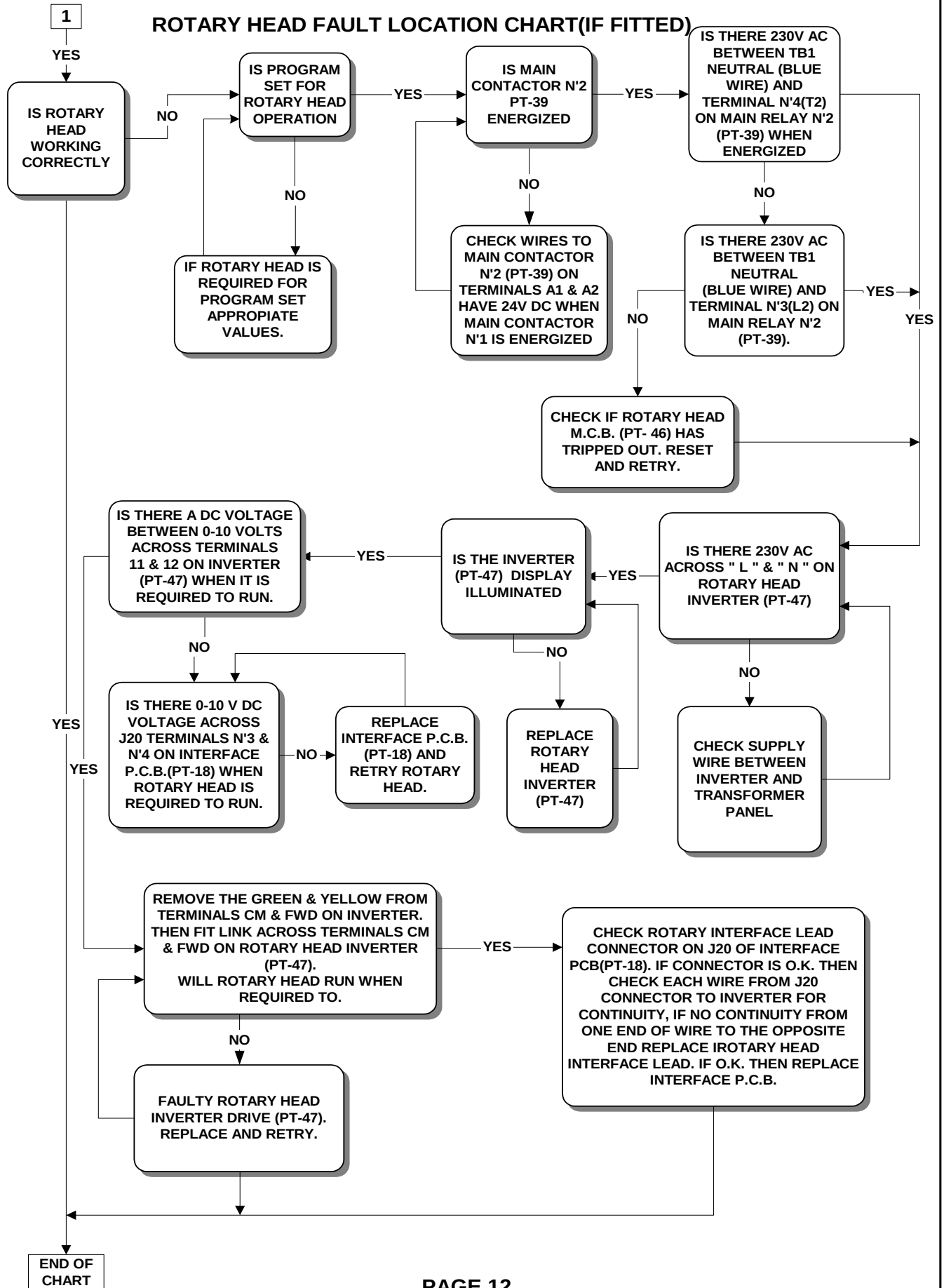
ALPHA DEPOSITOR FAULT ANALYSIS FLOW CHART

WIRE CUT FAULT LOCATION CHART(IF FITTED)



ALPHA DEPOSITOR FAULT ANALYSIS FLOW CHART

ROTARY HEAD FAULT LOCATION CHART(IF FITTED)





MONO Equipment.

Queensway Swansea Industrial Estate Swansea SA5 4EB UK
Tel. 01792 561234 Fax. 01792 561016

As it is our policy to improve our machines continuously, we reserve the right to change specifications without prior notice.