

HODGE CLEMCO LTD

Abrasive Recovery System

Models: IND 200 P
IND 200 E

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Owner's Manual

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Machinery Directive

(89/392/EEC amended by 91/368/EEC, 93/44/EEC and 93/68/EEC)

EC Declaration of Conformity

We, HODGE CLEMCO LTD declare that the

Abrasive Recovery Systems, series IND 200P and IND 200E

which are manufactured by ourselves, when installed and used in accordance with the essential health and safety requirements of the Machinery Directive.

DM Jate

Engineering Manager

[Signature]

Managing Director



Maintenance Inspection Contract

In response to numerous requests we are now able to offer a Maintenance Inspection Contract for your Clemco Equipment.

These requests have been made by customers who appreciate the benefits of regular inspection/ servicing on a planned basis. The remedial work which follows a breakdown or worse, the need for early equipment replacement due to accelerated wear may easily exceed the cost of a Maintenance Inspection Contract.

If you would like further details please contact our Customer Services Department on 0114 254 8811 Ext 2231

A request for more information does not represent any form of commitment on your behalf, so can you afford to say 'NO' at this stage ?

We look forward to hearing from you soon.

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1. General Description

The complete IND 200 series abrasive recovery system comprises a suction filter unit a vacuum producer (either pneumatic or electrically powered), an abrasive storage silo for mounting directly upon a Clemco 2452, 2040, 1446 or 1440 blast machine for automatic refill, and a sweep in floor hopper complete with interconnecting hoses and gratings.

Optional extras which can be supplied with this equipment includes:-

- a) Larger floor hopper
- b) Heavy duty floor gratings
- c) Level sensor in storage silo
- d) Magnetic particle screen
- e) Intermediate cyclone
- f) Continuously operated reverse pulse cleaning
- g) Wall bush to facilitate alternative recovery by hose from work area direct to silo
- h) EDB 90 Eductoblast head and regrader
- i) EDBH 75 and EDBH 60 Eductoblast heads

The system is designed to recover spent recyclable abrasive from a blasting area into the silo for subsequent return to the connected blast machine. After depositing the abrasive into the silo/blast machine, the vacuum flow containing air and dust continues to the suction unit, where the dust particles are removed by a high performance polyester filter cartridge prior to air exhausting to the atmosphere.

2.0 Installation Instructions

**Warning: 1. All installation work must be carried out by suitable competent persons.
2. Static electricity can be generated during recovery operations, therefore the suction unit and the silo must be suitable earthed and only static conductive suction hoses must be used with this equipment .**

Note: These instructions should be used in conjunction with those appropriate to the blast machine, safety protection equipment etc.

2.1 Position the floor hopper in the prepared concrete foundations. (Foundation plan Pg.10)

2.2 Insert the suction nozzle into the bracket in the floor hopper.

2.3 Position the silo and blast machine to ensure that the suction nozzle points towards the silo inlet in a straight line. The two items must be securely connected and the seal between them in good condition.

2.4 Cut the length of the 2" suction hose supplied to fit to the 2" inlet spigot on the silo and on the 2" coupling, secure it using the hose clamps supplied

Note: It is important that the suction nozzle and the suction hose form a straight line (at app. 30° to the vertical) to the silo inlet. Any curves or bends will reduce efficiency of the recovery and accelerate hose wear.

2.5 At the blast machine connect a pressure equalising hose to the outlet of the RMS-2000 valve and to the appropriate silo connection elbow

2.6 Suitably position the suction unit and connect the 2. 1/2" vacuum hose to the suction unit inlet spigot and to the vacuum outlet spigot on the silo. Secure it by the hose clamps supplied.
Note: The length of the hose can be reduced if required.

Warning: 1 Under no circumstances must this unit be connected up to an air supply of greater pressure than 7 bar.

2. It is essential that all hose couplings are secure and that any sealing gaskets are in good condition and in position. Escaping air at connections will reduce efficiency and can be dangerous.

2.7 Securely close the sieve drawer on the silo

2.8 Pneumatically Operated Vacuum Producer Only (IND 200P A)

- a) Connect a suitably sized dry and clean compressed airline, minimum 1" (25mm I.D.) 2.55m³/min (90 cfm) to the suction unit (ensuring that the airline is first purged of water)
- b) Open the air shut off valve slowly to create the vacuum recovery
- c) To stop the vacuum recovery turn off the air shut off valve from below
- d) The cartridges must be cleaned by pressing the reverse pulse clean button, every 5 minutes duration of abrasive recovery (or one complete floor hopper)

2.9 Electrically Operated Vacuum Producer Only (IND 200E A)

- a) Connect a 240V single phase electrical supply using 3 core cable, to the terminal box on the suction unit.
Note: This machine must be earthed
- b) Connect a dry and clean compressed air supply minimum, 5 litre/min (0.2 cfm) at 7 bar to the air inlet connection on the suction unit
- c) Press the motor start buttons in turn to create the vacuum
- d) To stop the vacuum recovery press the stop buttons
- e) The cartridges must be cleaned by pressing the reverse pulse clean button, every 5 minutes duration of abrasive recovery (or one complete floor hopper)

2.10 a) Check the filter cartridge elements for dust contaminants. If there are any present, close the access door and press the reverse pulse cleaning button to clean the cartridge

b) Check all seals on the unit to ensure they are in good working order

2.11 Fill abrasive into the floor hopper

2.12 If necessary, readjust the air-gap in the suction nozzle to achieve optimum rate of recovery by:

- i. Loosening the 3 screws on the outer pipe
- ii. Adjusting the inner pipe up or down (a few millimetres at a time) until the optimum recovery rate has been achieved
- iii. Once optimum recovery rate has been established securely refasten the 3 screws

The system is now ready for operation.

3.0 Operating Instructions

Warning: Under no circumstances must this equipment be connected to an air supply in excess of 7 bar

3.1 Pneumatically Operated Vacuum Producer Only (IND 200P A)

- a) Open the air shut off valve on the suction unit slowly to create the desired vacuum recovery.
(If a full flow pressure regulator is fitted, adjust the pressure until the correct setting is achieved. Note: minimum 5 bar (70 psi)

- b) Fill the floor hopper with abrasive and recover until the blast machine is full

Note: The following figures are approximate only, it is advisable to check visually by looking through the sieve access hole that the silo contains the correct amount of abrasive.

DO NOT OVERFILL WITH ABRASIVE

The floor hopper when full contains approximately 330 kg of metallic abrasive (80 litres)

Blast Machine Size	Abrasive Capacity Litres (Estimated)
1440	40
2040	90
2452	150

Note: The average weight of abrasive per litre is as follows:-

Metallic	4.20 kg per litre
Al. Oxide	1.85 kg per litre
Glass Bead	1.65 kg per litre
Expendable	2.00 kg per litre
Aerolyte	0.80 kg per litre

- c) The silo above the blast machine holds 200 litres of abrasive. Do not fill above the removable screen level.
- d) When the silo contains 200 litre of abrasive, close the air shut off valve and press the reverse pulse button to clean the filter cartridge
- e) The filter cartridge must be cleaned after every 5 minutes of abrasive recovery to ensure that the recovery ratio are maintained and the dust build up is not excessive.

Empty the dust bin frequently

3.2 Electrically Operated Vacuum Producer Only (IND 200E A)

- a) Open the air shut off valve on the suction unit to pressurise the air storage pipework to the unit
- b) Switch on the electrical supply at the supply isolator
- c) Start the system by pressing the green 'start' button in turn to create the vacuum
- d) Follow instructions 3.1.b to 3.1.e (pneumatic operation) and then press the stop buttons in turn to stop the motors

Note: It is essential that the filter cartridge is cleaned frequently and all seals are in good working order to protect the motors.

3.3 Continuously Operated Reverse Pulse Cleaning System Only

- a) Ensure that the system is operating (i.e. cleaning) at its correct time period setting. The normal setting is one pulse every minute
- b) After stopping the vacuum recovery system, switch the reverse pulse button to manual operation to clean the cartridge prior to emptying the dust bin. Switch back to automatic cleaning before starting vacuum recovery

4.0 Maintenance

Warning: ensure that the electricity supply is switched off at the isolator and the plug removed from the socket before any maintenance work is carried out. Maintenance should only be carried out by trained and competent persons.

Warning: Never inspect the dust compartment or the inside of the silo whilst smoking or allow any naked lights in their proximity. Dust concentrations can be combustible, explosive and hazardous to health, respiratory protection should be used

Daily

4.1 Clean the filter cartridge by pressing the reverse pulse button after every 5 minutes of operation.

4.2 Empty the dust compartment in the suction unit. Emptying may be necessary more often than once a day, depending on the volume of dust generated in the blasting operation.

4.3 With the silo empty remove and clean both abrasive outlet sieves on the silo and ensure they are correctly repositioned and the access doors are securely closed

Weekly

4.4 Check the seals on the silo and the suction unit. Replace leaking or worn seals

4.5 Check that all hose connections and couplings are secure and any gaskets required are in

good condition and in place

4.6 Remove waste particles from the two sieves in the silo

4.7 Check seal or hoses between blast machines and silo outlets.

Warning: Never loosen or remove these seals when there is abrasive in the silo

4.8 Check the filter cartridge in the suction unit. If dust layers are attached to the cartridge, they should be cleaned off with a soft brush

Note: If these dust layers are difficult to remove from the filter cartridge, it can be the result of using a wet compressed air supply or because the dust generated in the blasting operation is excessively high.

The filter cartridge should be removed and cleaned using a covered water supply. Ensure the cartridge is completely dry before reinstalling.

If dust is emitted from the vacuum exhaust outlet the filter cartridge must be replaced with a new one immediately.

4.9 Check the security and condition of the compressed air supply hoses and fittings and also the function of the reverse pulse valve

Spare Parts List

1. Blast Machine - see Clemco Owner's Manual

2. Suction Unit Type IND 200K - Base Kit

ITEM	PART NO.	DESCRIPTION	QTY
1	BW 10	COUPLING 1" MALE	1
2	HC 4292	SPIGOT - 60MM	1
3	HC 4292 2	GASKET FOR SPIGOT	1
4	KB 911	AIR HOSE	1.2M
5	IND 10527	VALVE - 3/4" QUICK EXHAUST	1
6	MB 10030	FILTER CARTRIDGE	1
7	P1	VALVE 1" BALL VALVE	1
8	MB 10055	SEAL FOR ACCESS DOORS	1
9	IND 10368	VALVE - PUSH BUTTON	1
9A	P 190	FILTER /REGULATOR	
9B	P 190E	FILTER ELEMENT 20 MICRON	

3. Suction Unit Type IND 200P K - Pneumatic Kit

ITEM	PART NO	DESCRIPTION	QTY
10	IND 10015	DUST SEAL 3MM X 25MM	1 ROLL
11	RCAMV 9A	JET	2

4. Suction Unit Type IND 200E K - Electrical Kit

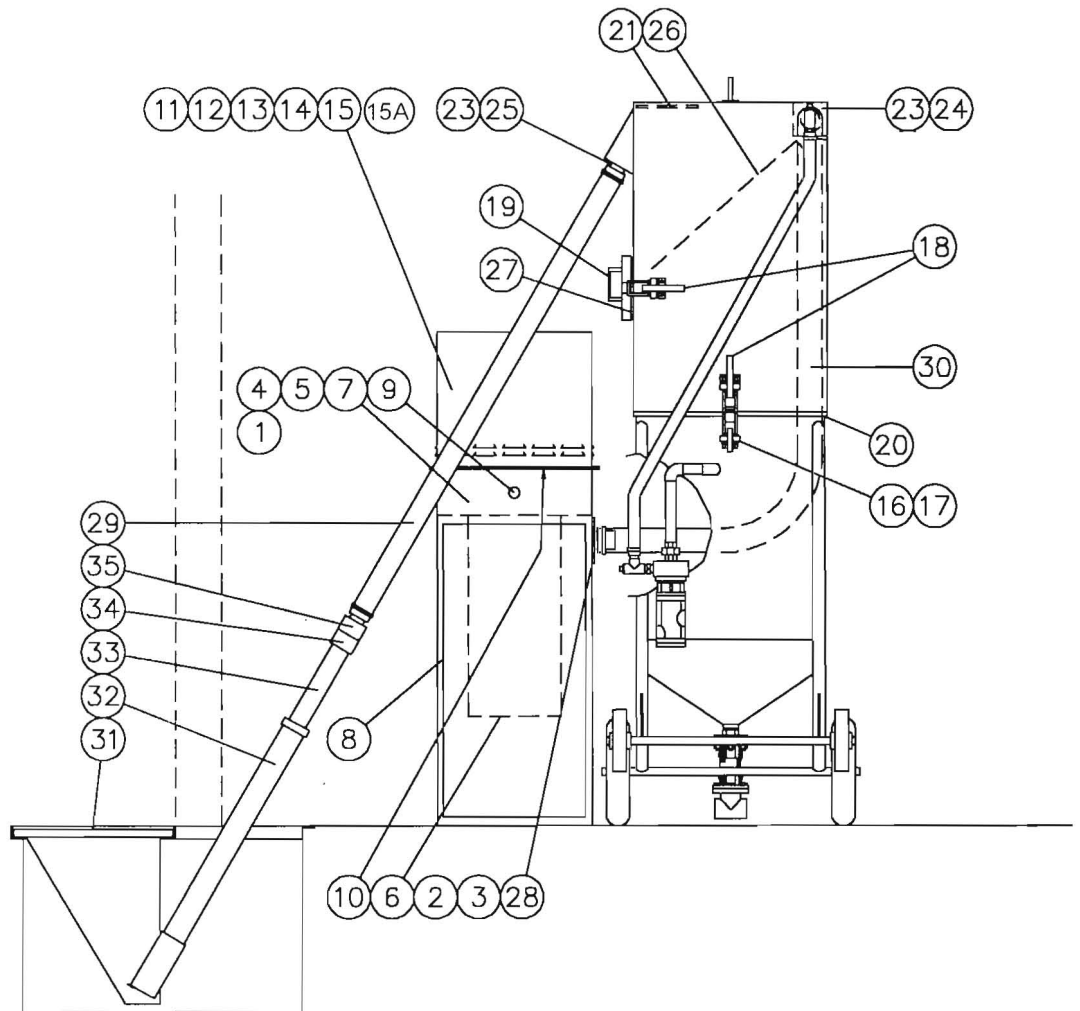
ITEM	PART NO	DESCRIPTION	QTY
12	IND 10015	DUST SEAL 3MM X 25MM	1 ROLL
13	MB 10180A	FUSE -16 AMP	3
14	IND 10420 C	THERMAL OVERLOAD (4A -6A)	3
15	IND 202	MOTOR - 1KW	3
15A	IND 203	SEAL -	3

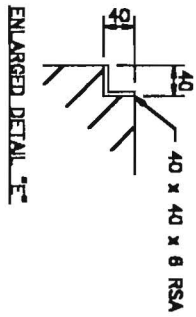
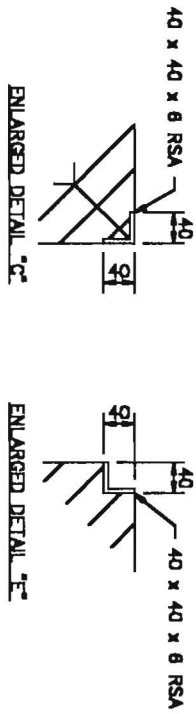
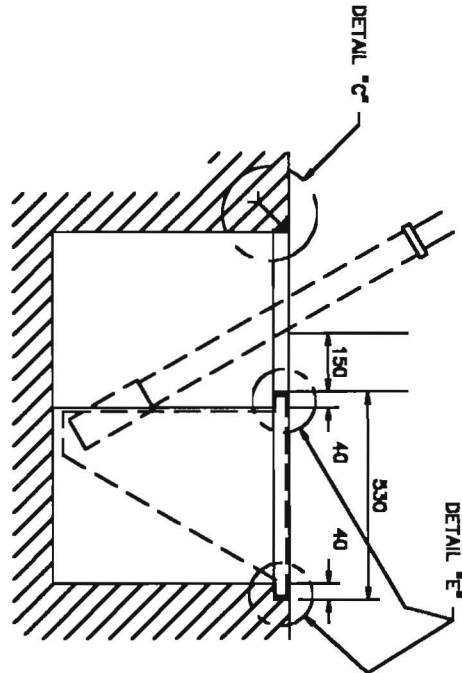
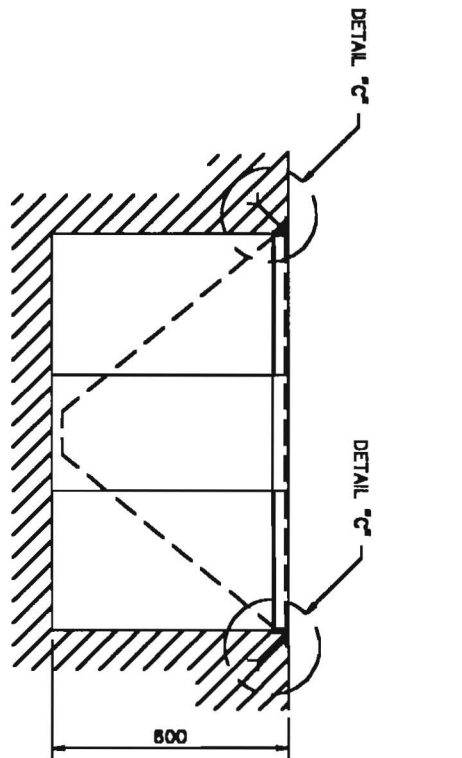
5. SILO/CLEANING UNIT 200 LTRS - IND 201 B

ITEM	PART NO	DESCRIPTION	QTY
16	IND 10135E	CLAMPS (SILO TO 20 & 24" POT)	2
17	IND 10135C	CLAMPS (SILO TO 14" POT)	2
18	MB 10206	HOOK LOCK CLAMP (DOOR)	2
19	BRLM HANDLE	HANDLE (BOX OF 2)	1
20	IND 10311	DOOR SEAL 12MM X 25MM	1ROLL
21	HC 4284	WEAR PAD - RUBBER	1
23	MB 10052 G	GASKET - INLET SPIGOT	1
24	MB 10052 A	SPIGOT - 60 MM FLANGED	1
25	MB 10052 HD	SPIGOT - 50 MM HD FLANGED	1
26	MB 10100	SIEVE	1
27	MB 10056	SEAL FOR ACCESS DOORS	1

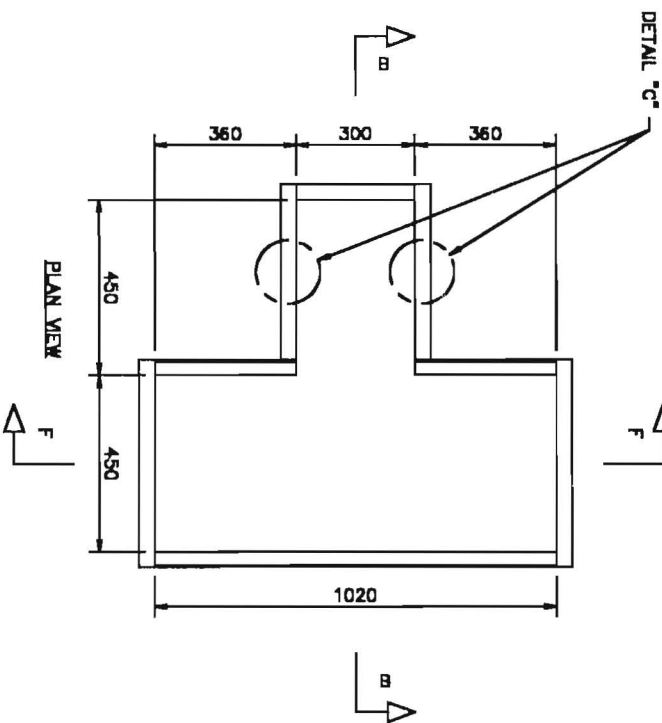
Other Spares

ITEM	PART NO	DESCRIPTION	QTY
28	HC 4293	SPIGOT 3" FLANGED & BAFFLED	1
29	HOSE 32	2" I.D. HEAVY DUTY HOSE	2M
30	EDB 22	2 1/2" I.D VACUUM HOSE	2M
31	MB 10130	FLOOR GRATING	1
32	MB 10142A	OUTER RECOVERY PIPE	1
33	MB 10141	INNER RECOVERY PIPE	1
34	MB 10150	2" FEMALE CAMCOUPLING	1
35	MB 10160	2" MALE CAMCOUPLING	1

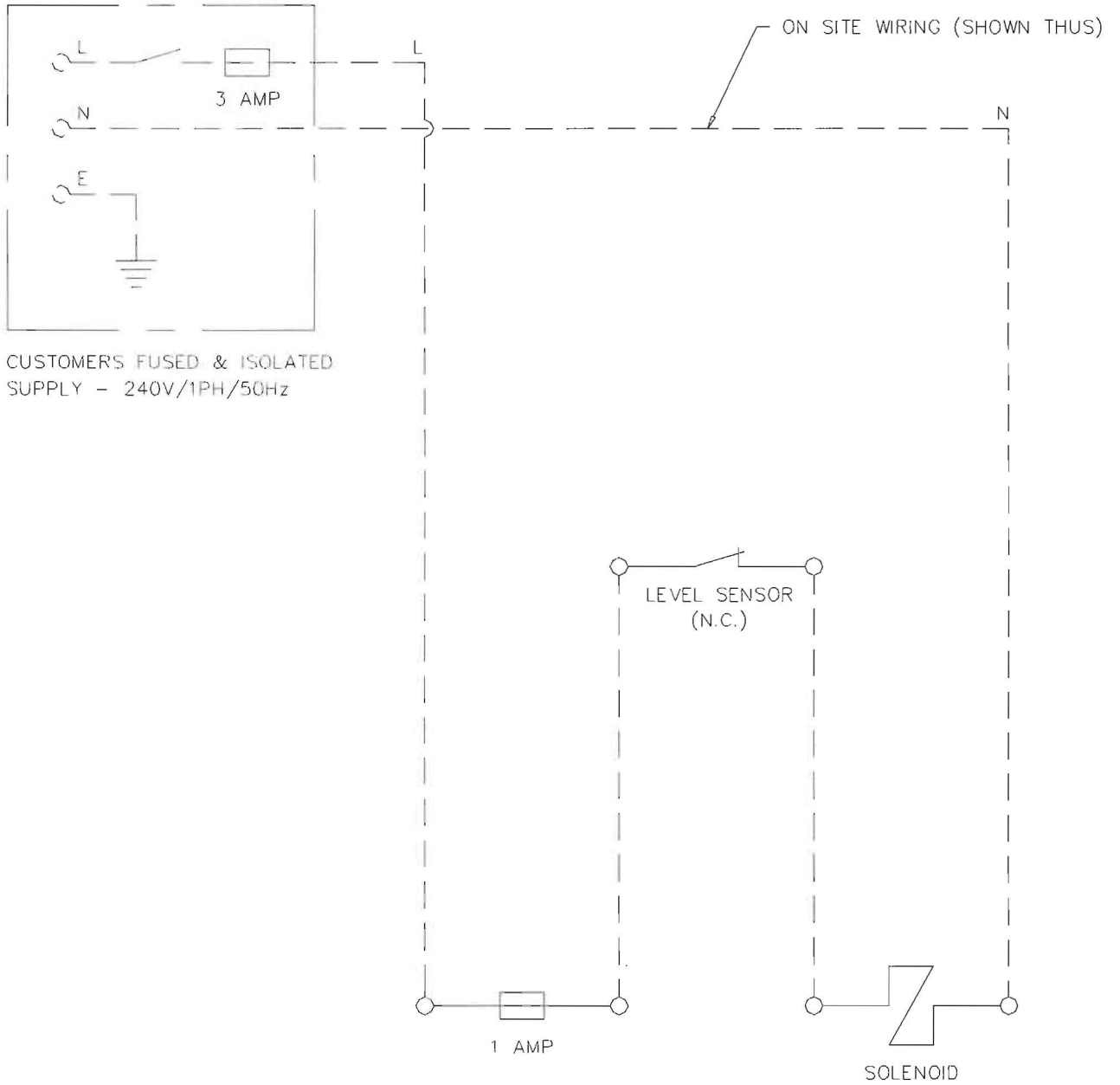




- FOUNDATIONS NOTES:**
CUSTOMER RESPONSIBLE FOR:
- 1) THICKNESS & MIX OF CONCRETE TO SUIT SITE CONDITIONS
 - 2) FOUNDATIONS TO BE WATERPROOF
 - 3) ALL FLOOR AREA AROUND EQUIPMENT TO BE FLAT & LEVEL
 - 4) FOUNDATION WALLS TO BE PERPENDICULAR & PARALLEL (-0mm +10mm)

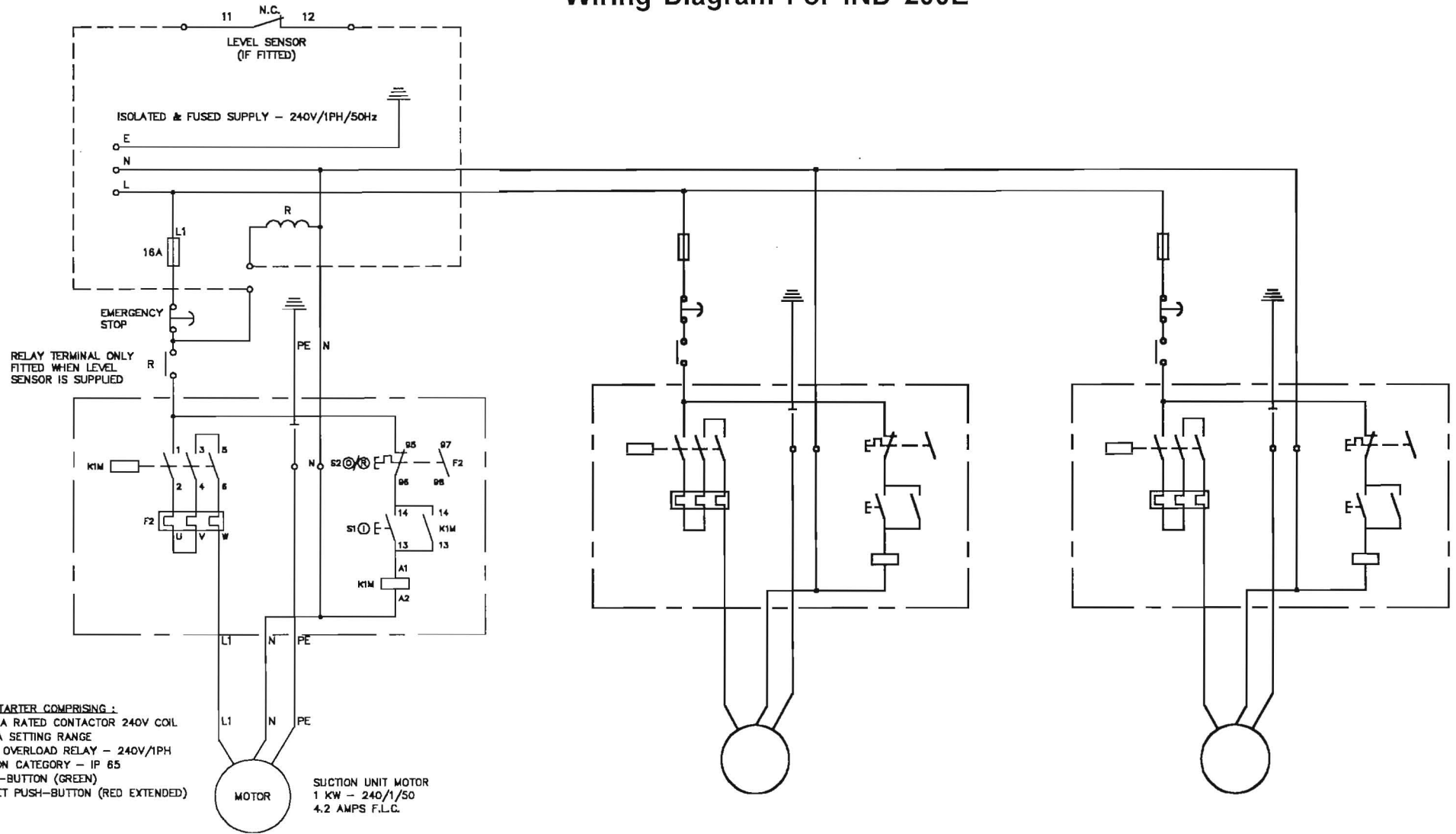


Circuit Diagram IND 200P with Level Sensor



Wiring Diagram For IND 200E

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RELAY TERMINAL ONLY
FITTED WHEN LEVEL
SENSOR IS SUPPLIED

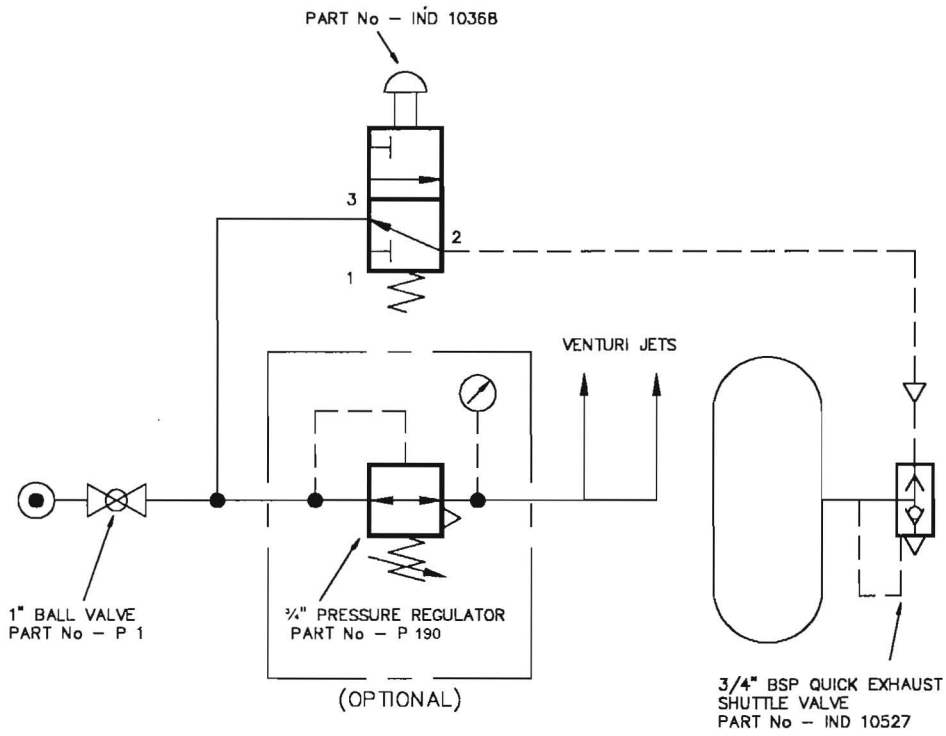
MOTOR STARTER COMPRISING :
 2.2KW/16A RATED CONTACTOR 240V COIL
 4A TO 6A SETTING RANGE
 THERMAL OVERLOAD RELAY - 240V/1PH
 INSULATION CATEGORY - IP 65
 ON PUSH-BUTTON (GREEN)
 OFF/RESET PUSH-BUTTON (RED EXTENDED)

SUCTION UNIT MOTOR
 1 KW - 240/1/50
 4.2 AMPS F.L.C.

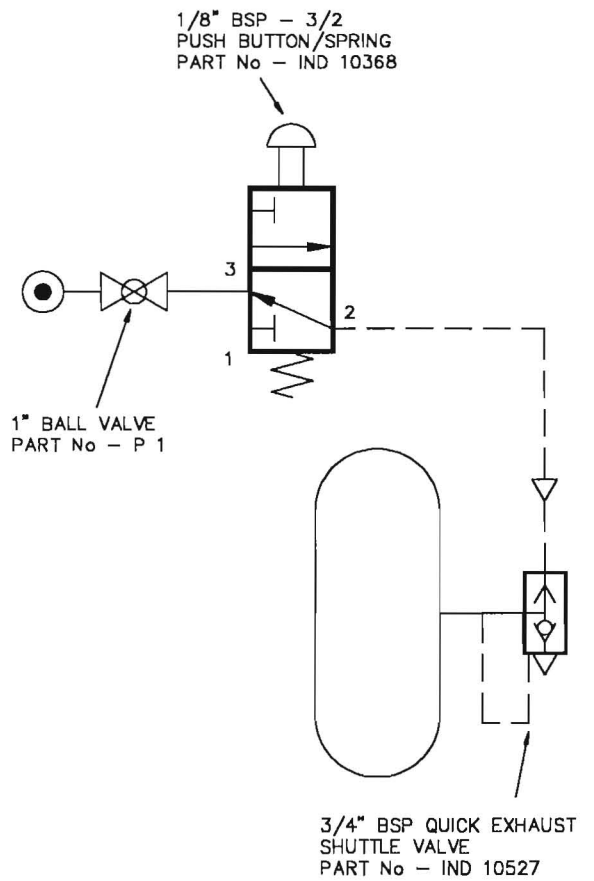
MOTOR NO. 1

MOTOR NO. 2

MOTOR NO. 3

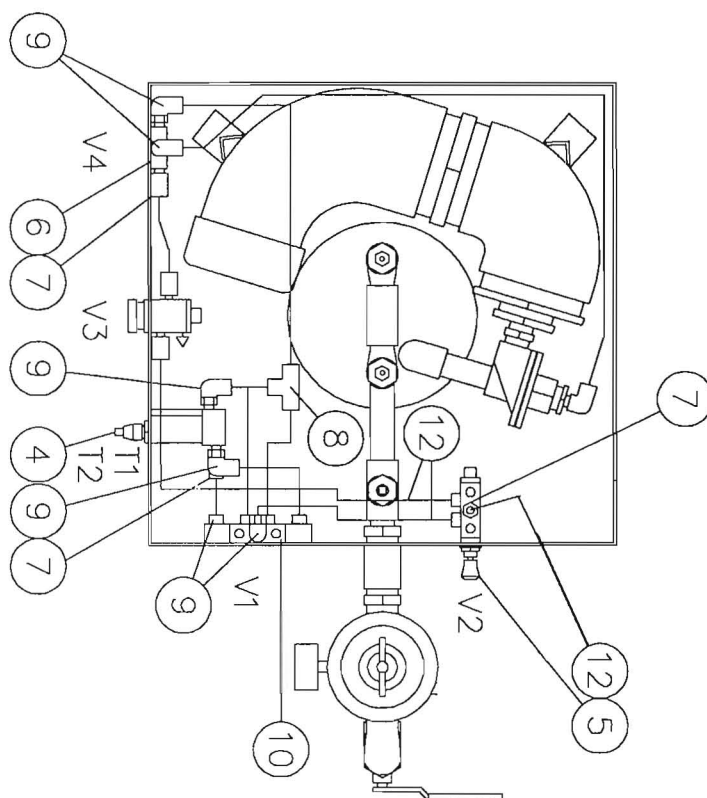


PNEUMATIC DIAGRAM - IND 200P

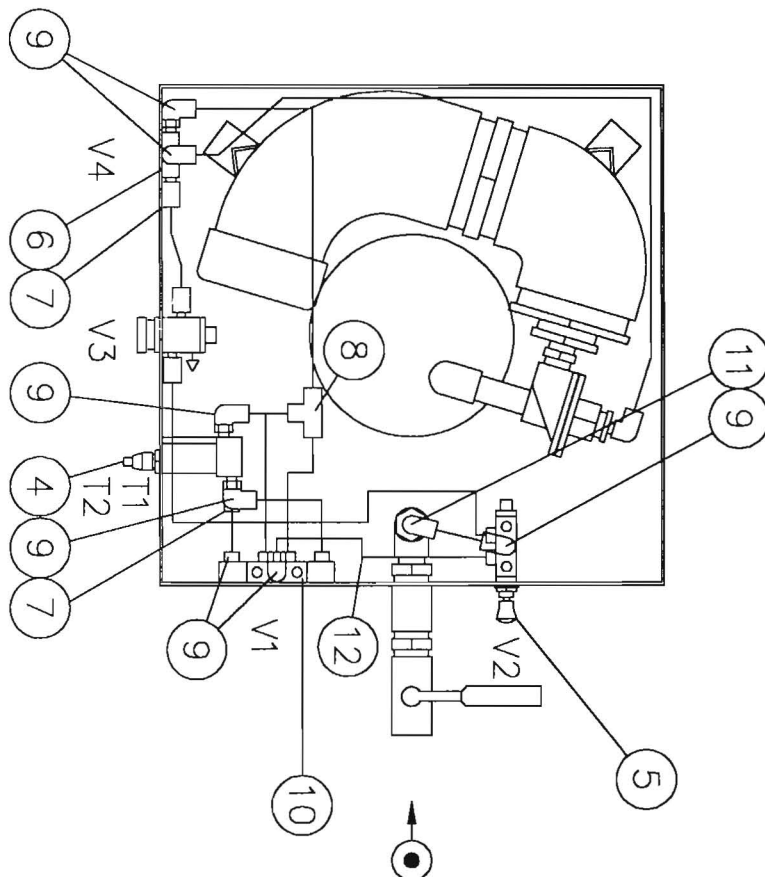


PNEUMATIC DIAGRAM - IND 200E

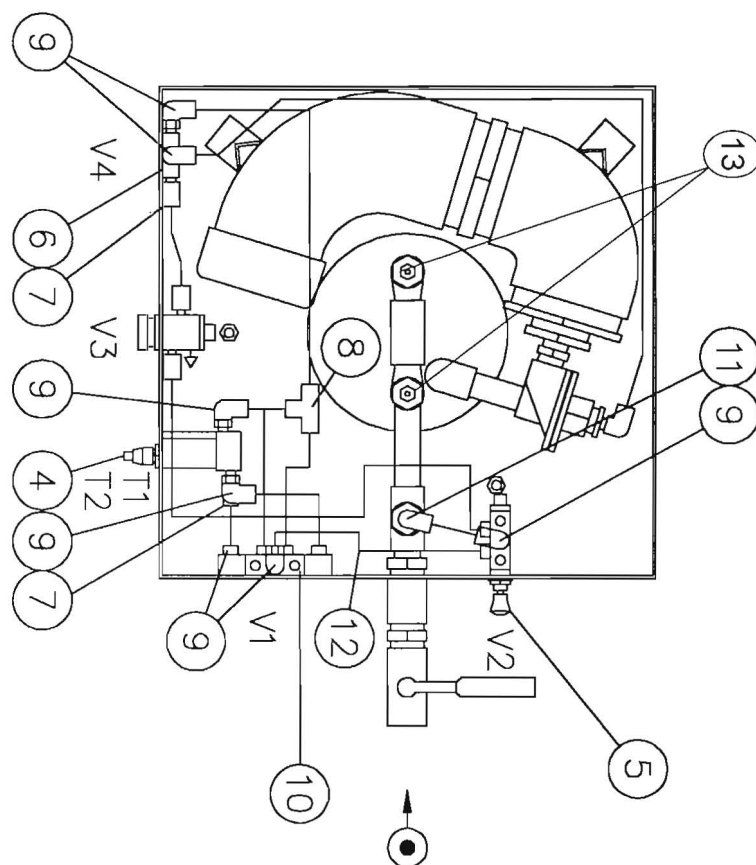
Timer Assembly Fitted To IND 200P A



Timer Assembly Fitted To IND 200E A



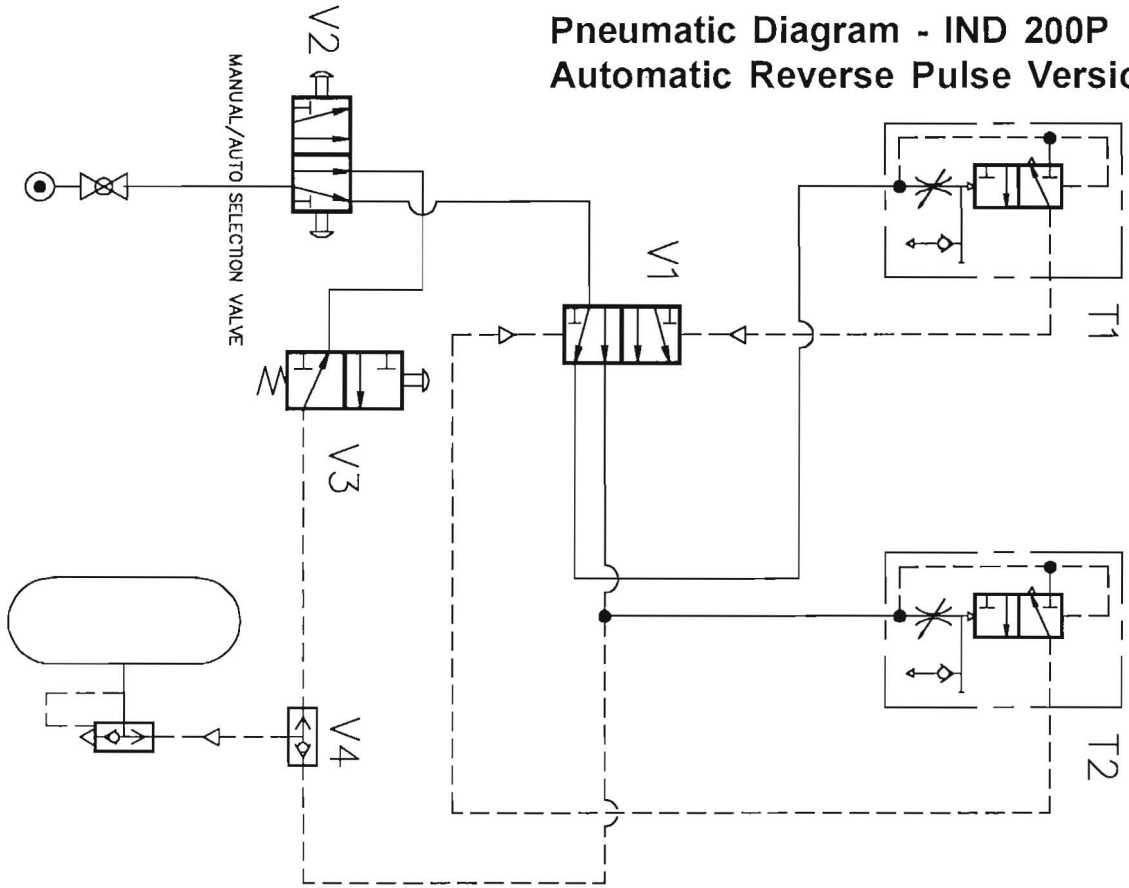
Timer Assembly Fitted To IND 200P A



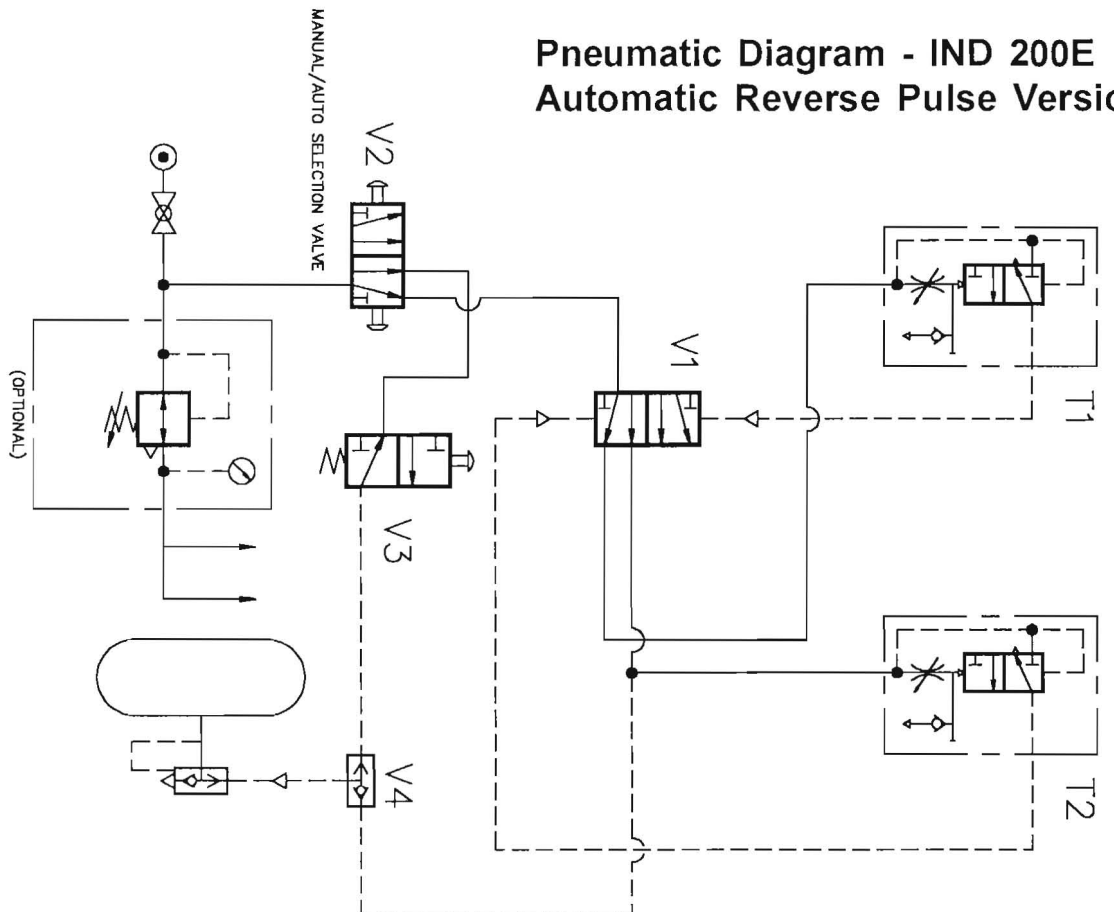
PARTS LIST

4	IND 10290	VALVE - TIME DELAY	2
5	IND 10303	VALVE - 1/8" X 5/2/PUSH/PULL	1
6	IND 10304	VALVE - 1/8" SHUTTLE	1
7	IND 10353	ADAPTOR - 1/8" X 8MM P.I. STRAIGHT	3
8	IND 10354	ADAPTOR - 8MM P.I. TEE	1
9	IND 10370	ADAPTOR - 1/8" X 8MM P.I. ELBOW	13
10	IND 10397	VALVE - 1/8" X 5/2 PILOT/PILOT	1
11	KB 809	ADAPTOR - 1/4" X 8MM ELBOW	1
12	KB 911	TUBE - 8MM	3M
13	RCAMV 9A	AIR JET	

**Pneumatic Diagram - IND 200P
Automatic Reverse Pulse Version**



**Pneumatic Diagram - IND 200E
Automatic Reverse Pulse Version**



IND 200P EDB (STATIC OR MOBILE) FITTED WITH EDBH 90, 75, OR 60

WARNING: The maximum recommended working pressure of the system is 110 psi under no circumstances must it be connected to an air supply of higher pressure

WARNING: All installation, operation and maintenance must be carried out by suitably trained, qualified and authorised personnel

5.0 Installation instructions

5.1. Site the mobile unit in the required position on firm level foundations and remove the towing assembly

5.2. Connect suitable static conductive cable to the base of the mobile and to good earth point ensuring a good connection is made

WARNING: Static electricity can be generated in the operation of this equipment and it is essential that good continuous dissipation of static is maintained at all times

5.3. Connect one end of the media recovery hose to the regrader inlet and secure with hose clamp

5.4. To the other end of the media recovery hose, securely attach the Eductoblast head

5.5. Connect the compressed air supply hose (minimum bore 1") to the inlet connection on the blast machine/media generator and to the compressed air supply valve ensuring that any gaskets required are in good condition and correctly positioned

Warning: Air leaks will reduce efficiency and can be dangerous

5.6. Check that the 1" i.d. air supply hose from the inlet pipework to the vacuum unit is securely connected and any gaskets required are in good condition and correctly positioned

5.7. At the vacuum unit ensure that the manual air valve is closed with the handle at right angles to the valve body

5.8. Check that the door of the vacuum unit is correctly closed

5.9. Set the vacuum unit dial air regulator to suit the abrasive/hose lengths being used

5.10. Connect the media blast hose coupling to the outlet coupling at the base of the blast machine and secure with split pins (or the integral wire locking mechanism if fitted), ensuring that the gaskets in each coupling are in good condition and correctly positioned

5.11. Set the dial air control to the specified stripping pressure

5.12. Close the media metering valve by turning the handle fully clockwise

5.13. Check that all control hoses are securely and correctly connected (see circuit diagram)

- 5.14.** Check that the vacuum hoses between the regrader outlet, cyclone inlet cyclone outlet and vacuum unit are correctly and securely fitted.
- 5.15.** Ensure that the nozzle gasket is in good condition and correctly positioned then screw the nozzle into the nozzle holder until it seats firmly on the gasket. Fit the nozzle into the Eductoblast head if required
- 5.16.** Check that the deadman handle is securely positioned on the blast hose adjacent to the nozzle and ensure that the rubber button is in good condition and in position in the handle
- 5.17.** Ensure that the deadman handle lever operates freely and is laid in the open position
- 5.18.** Ensure that the choke valve on the blast machine is fully open, i.e. with the handle in line with the valve body
- 5.19.** Ensure that the dust collector door is closed and that the seals are in good condition

6.0 Setting - Up Procedure

- 6.1** Loading with initial charge of media
- 6.2** Ensure that the equipment and all supply hoses and control hoses etc are connected and installed as detailed in Section 5 above
- 6.3** Turn on compressed air supply to unit at the supply source valve
- 6.4** At the water separator, open the drain cock at the base of the bowl to achieve slight bleed of air, sufficient to constantly purge any accumulation of moisture (See TS-OM/35A)
- 6.5** Turn on the vacuum unit by turning the handle of the manual valve to the vertical position, i.e. handle in line with valve body
- 6.6** Check pressure gauge and readjust to suit media type
- 6.7** Present suction end of vacuum recovery hose to media and load the system for approximately one minute
- 6.8** Allow time for the charge of media to reach the regrader and blast machine
- 6.9** Turn off the manual valve on the vacuum unit
- 6.10** Open the access door to the cartridge on the base of the vacuum unit and inspect the contents. If any presence of useable media, reduce the operating pressure for the vacuum unit and/or see regrader adjustment
- 6.11** Securely close the access door

6.12 Continue to recover media into the system. Do not overfill

Blast Machine Size	Abrasive Capacity Litres (Estimated)
1440	40
2040	90
2452	150

Note: The average weight of abrasive per litre is as follows:-

Metallic	4.20 kg per litre
Al. Oxide	1.85 kg per litre
Glass Bead	1.65 kg per litre
Expendable	2.00 kg per litre
Aerolyte	0.80 kg per litre

The regreder above the blast machine holds approximately 30 ltr (1440) 50 ltr (2040)

6.13 Check the sieve above the blast machine and remove any accumulated debris and oversized particles.

6.14 Check that the petcock (RM-9) on the RMS-2000 valve is in the closed position (handle at right angles to petcock body)

6.15 Ensure that the specified nozzle pressure for the stripping process has been correctly set on the dial air regulator

At this point personnel should don protective equipment and set up breathing air supply in line with procedures laid down in the manufacturer's instructions

6.16 Check that the media metering valve is closed fully clockwise

6.17 Connect the static conductive cable to the workpiece (If required)

6.18 Ensure the vacuum production unit is operative by opening the ball valve on the inlet.

6.19 Take secure hold of the Eductoblast head assembly and present it to the surface, ensuring that the complete perimeter of the brush head is in contact with the work surface. Do not flatten the brush head on the work surface as this will result in reduced blast pattern, poor abrasive/dust recovery and rapid wear of the brush head

6.20 Close the lever of deadman handle and the blast machine will pressurise and compressed air will pass through the nozzle, then move the sleeve valve to the ON position at the deadman handle

6.21 The machine tender should now gradually and slowly open the media metering valve by turning the adjustment handle anticlockwise allowing sufficient time for the result of each adjustment to reach the work surface, until desired stripping effect is achieved

6.22 Move the sleeve valve to the OFF position at the deadman handle. Media flow will cease

6.23 Release the deadman handle lever and air and media flow will cease and blast machine will depressurise

Note: In an emergency the stripping operation can also be stopped by opening the petcock (RM-9) on the RMS-2000 valve on the blast machine

6.24 Shut off compressed air supply to the equipment at source

7.0 Operating Instructions

Warning: Only trained qualified and authorised personnel to operate this equipment

Warning: Under no circumstances must this equipment be connected to an air supply of greater pressure than 110 p.s.i.

7.1 Stripping Procedure

7.2 Ensure that all hoses are securely and correctly installed as detailed in previous section.

7.3 Turn on the air supply to the equipment at source

7.4 Check that the vacuum producing system is switched on and operating

7.5 Ensure that the bleed valve on the moisture separator is adjusted slightly open

7.6 Check that the stripping pressure is correctly set in accordance with work specification

7.7 Check that the lever of the deadman handle operated freely and is laid in the open position and that the nozzle is securely seated on the nozzle gasket

7.8 Ensure that the cartridge door on the vacuum unit is securely closed

7.9 Ensure that the choke valve handle is in the vertical position

At this point the personnel should turn on the breathing air system and don protective equipment in accordance with the manufacturer's owner's manuals

7.10 Close petcock (RM-9) on the RMS-2000 valve on the blast machine

7.11 Connect the static conductive cable to the workpiece if required

Warning: Static electricity can be generated in the operation of this equipment and it is essential that good continuous dissipation of static is maintained at all times

7.12 Ensure that no unauthorised personnel are within the vicinity then securely take hold of the Eductoblast head and present to the surface ensuring that the complete perimeter of the brush head is in contact with the work surface. Do not flatten the brush pattern, poor abrasive/dust recovery and rapid wear of the brush head.

7.13 Close the deadman handle lever and pull the sleeve valve to the ON position and the stripping process will commence as the blast machine pressurises. (NB after stripping is completed, work piece can be 'blown down' by moving the sleeve valve to the OFF position).

7.14 Release of deadman handle lever will stop the operation and depressurise the blast machine

Note: The operation can also be stopped by opening the petcock (RM-9) on the RMS-2000 valve on the blast machine

8.0 Shut down procedure

8.1 Close compressed air supply valve

8.2 Switch off workplace ventilation system

8.3 Check that breathing air equipment is not being worn, then turn off breathing air system supply

8.4 Store protective clothing and equipment in accordance with manufacturer's instructions.

9.0 Regrader Adjustment

On these versions abrasive separation is controlled by adjustment of the knobs A & B on the regrader unit. The cyclone bin serves to collect any unwanted fines separated off at the regrader. It is advisable when introducing a new grade or type of media into the blast system to check the deposits in the bin and adjust the regrader accordingly

9.1 Re-usable particles in cyclone bin:-

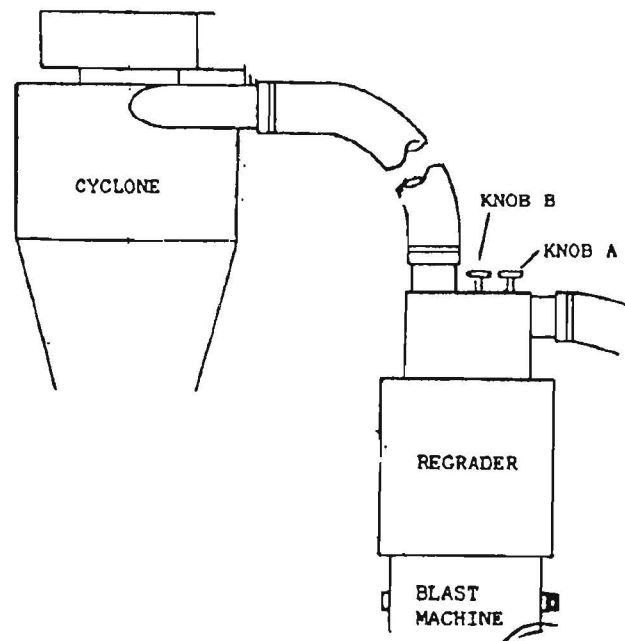
9.2 At the regrader, unscrew knob 'A' anticlockwise one full turn, then carefully screw knob 'B' clockwise until resistance is met. Do not overtighten as this will damage the deflector plate

9.3 After the next blasting and recovery operation has been completed, check the cyclone bin contents and repeat operation 9.2 until only unwanted fines are collected

9.4 Unwanted fines returned to the nozzle

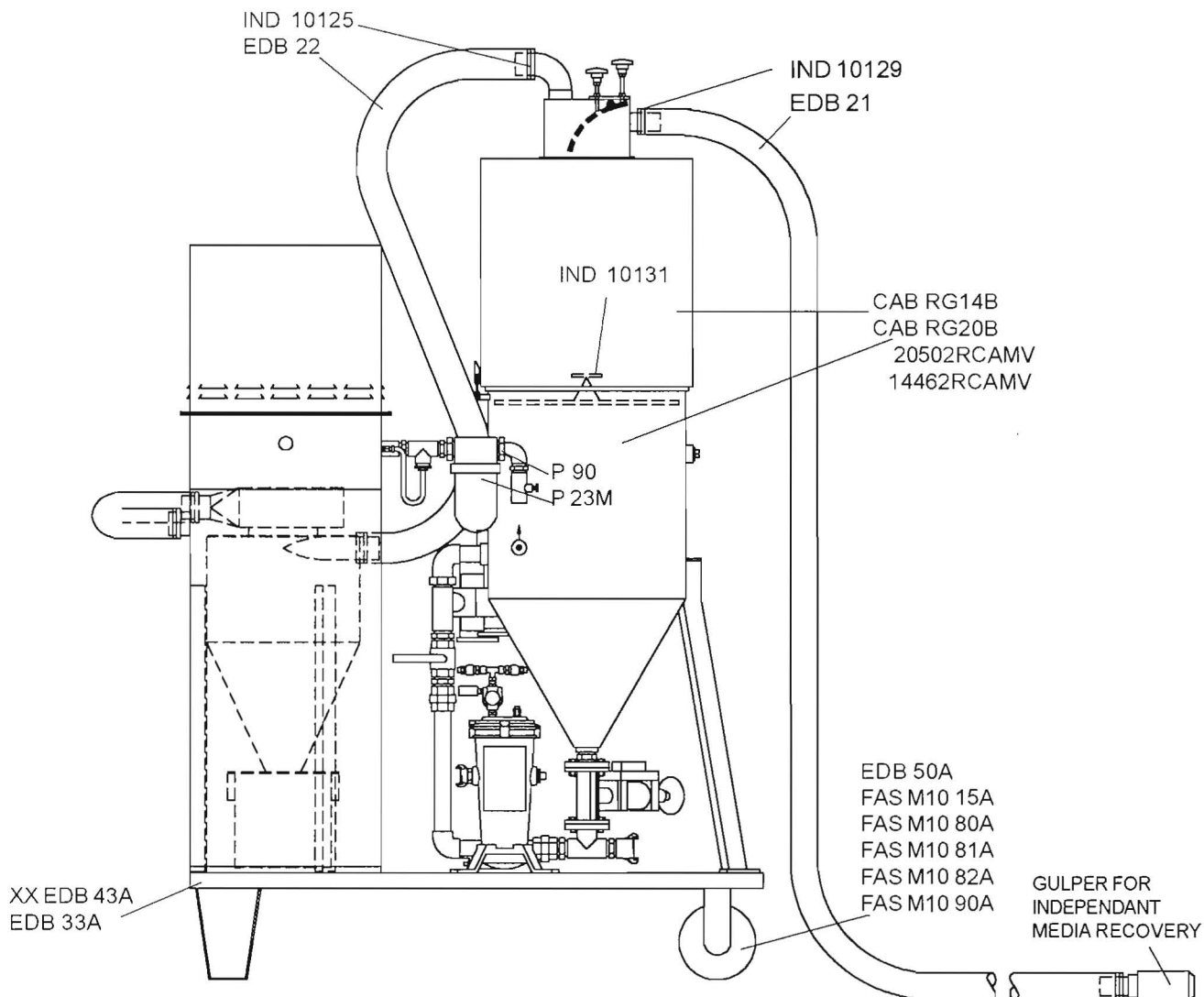
9.5 Unscrew knob 'B' anticlockwise one full turn then carefully screw knob 'A' until resistance is detected. DO NOT overtighten as this will cause damage to the deflector plate

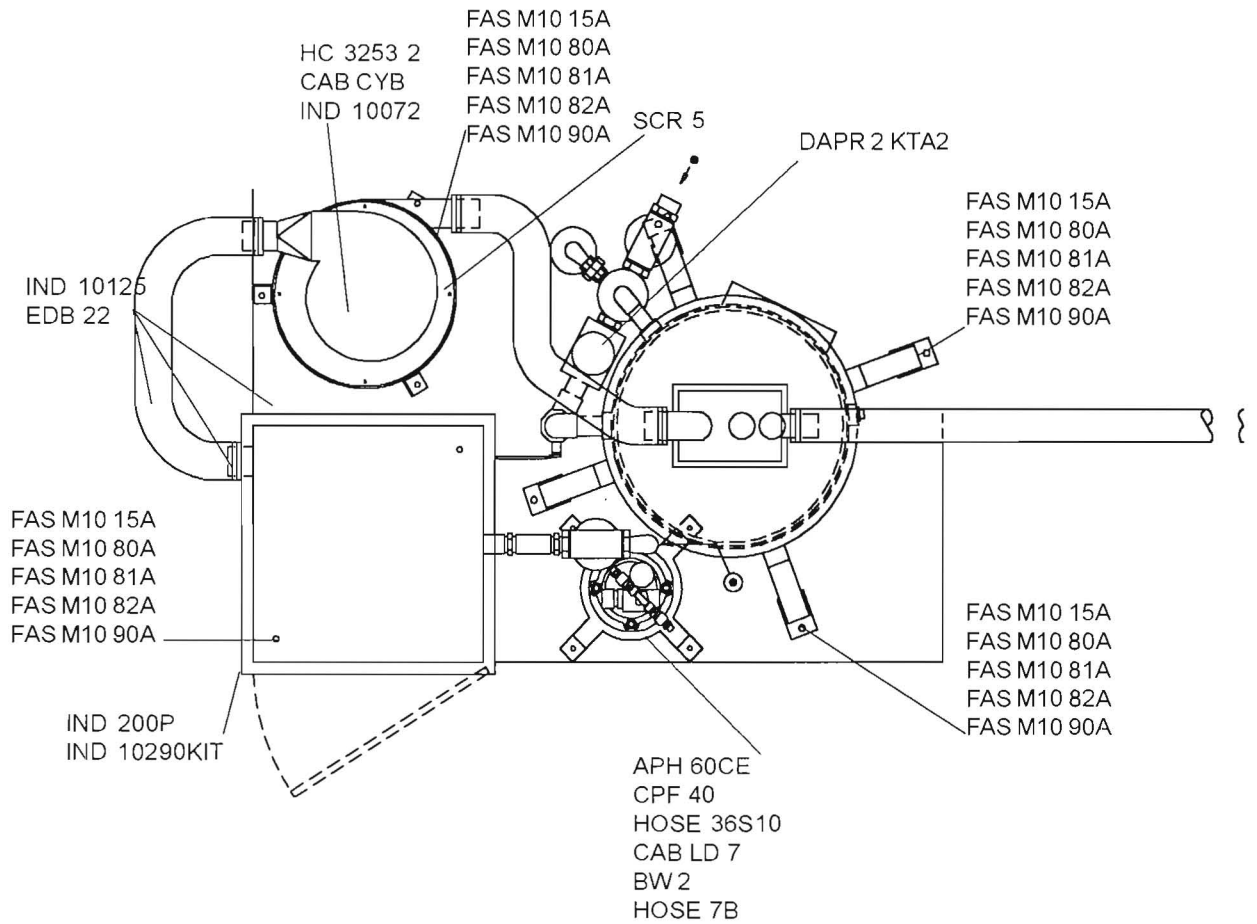
9.6 Repeat operation 9.5 after each subsequent recovery operation until required level of fines removal is achieved.



IMPORTANT NOTICE: THE INLET DAMPERS ON THE CYCLONE SHOULD BE IN THE FULLY OPEN POSITION FOR MOST COMMON ABRASIVE TYPES AND GRADES. THESE DAMPERS ENABLE MORE FINITE SEPARATION TO BE ACHIEVED WHEN FINE GRADES OF LIGHTER MATERIAL IS BEING RECYCLED

EDB 21	HOSE	10M
IND 10129	CLIP	2
IND 10125	CLIP	4
EDB 22	HOSE	3M
IND 10131	SIEVE & CONE	1
P 90	BUSH	1
P 23M	FILTER WATER	1
CAB RG20B	REGRADER	1
CAB RG14B	REGRADER	1
20502RCAMV	BLAST MACHINE	1
14462RCAMV	BLAST MACHINE	1
EDB 50A	WHEEL	2
FAS M10 15A	SCREW	20
FAS M10 80A	WASHER - PLAIN	10
FAS M10 81A	WASHER - SPRING	10
FAS M10 82A	WASHER - LARGE	20
FAS M10 90A	NUT	20
XX EDB 43A	TROLLEY	1
EDB 33A	HANDLE	1
CV 15 50	GULPER	1





CAB CYB	CYCLONE BIN	1
HC 3253 2	CYCLONE	1
IND 10072	DUST SEAL	
SCR 5	SCREW	10
DAPR 2 KTA2	PRESSURE REGULATOR KIT	1
APH 60 CE	AIR FED BLASTING HELMET	1
CPF 40	BREATHING AIR FILTER	1
HOSE 36S10		
CAB LD 7	ADAPTOR	1
BW 2	COUPLER	1
HOSE 7B		
IND 10290 KIT	TIMER KIT	1

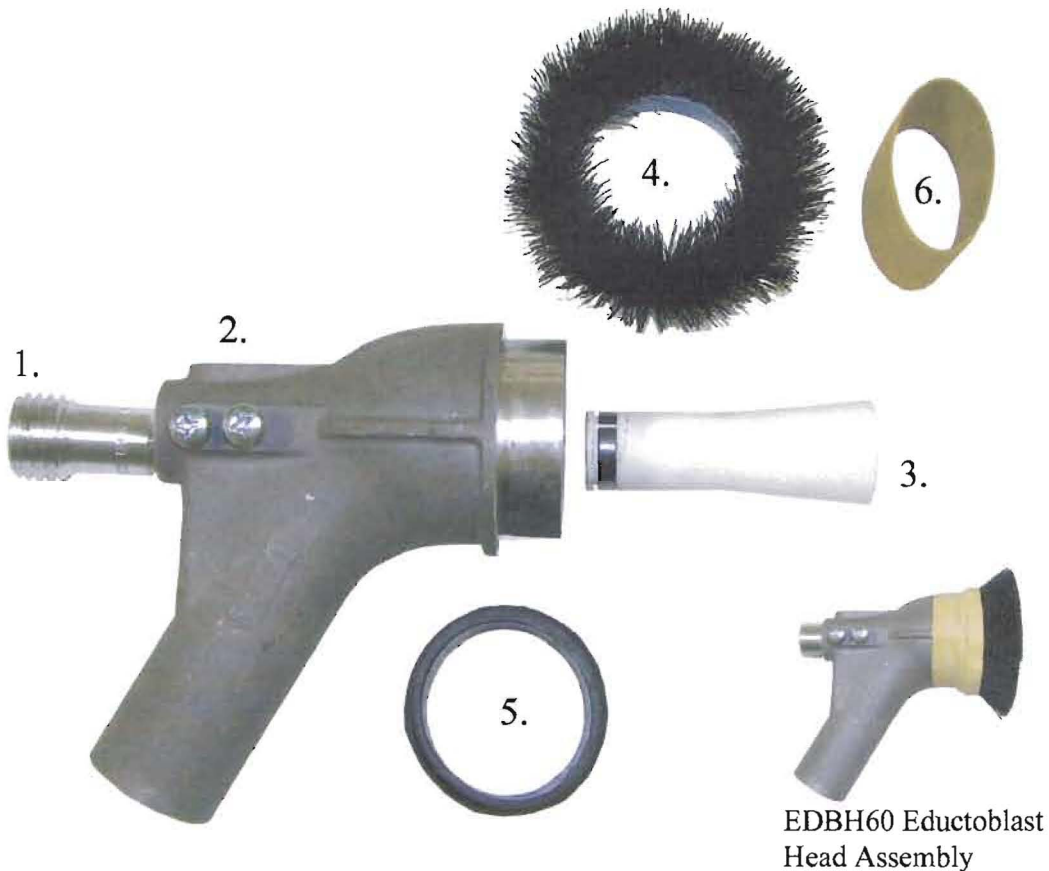
Parts List

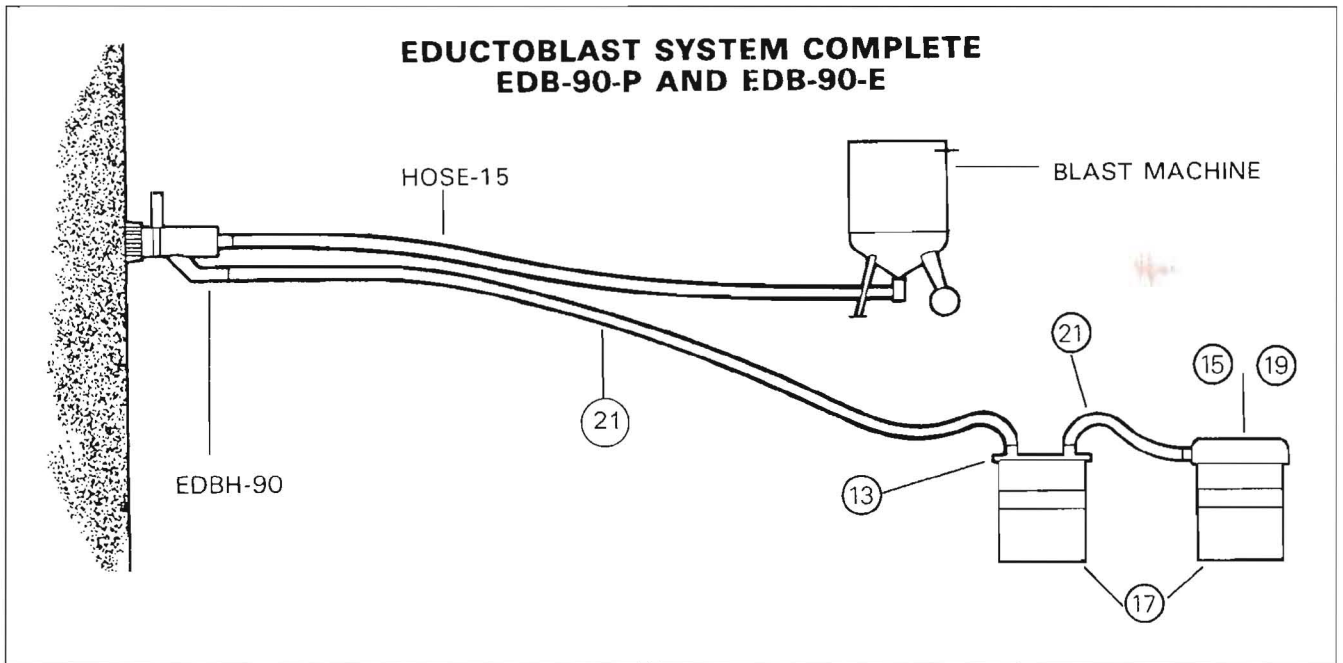
EDBH 75 Eductoblast Head

	Part No.	Description	Quantity
	SMR 4	Nozzle SC Lined	1
	EDB 75 1	Body	1
	EDB 75 2	Handle	1
	EDB 75 3	Nozzle Guard	1
	EDB 75 4	Brush-Flat-Outer	1
	EDB 75 5	Brush-Flat-Inner	1
	JC4	Hose Clip	1
	NHP1	Nozzle Holder & Gasket	1
	RM21A	Deadman Handle	1
	SCR 1B	Screw	4

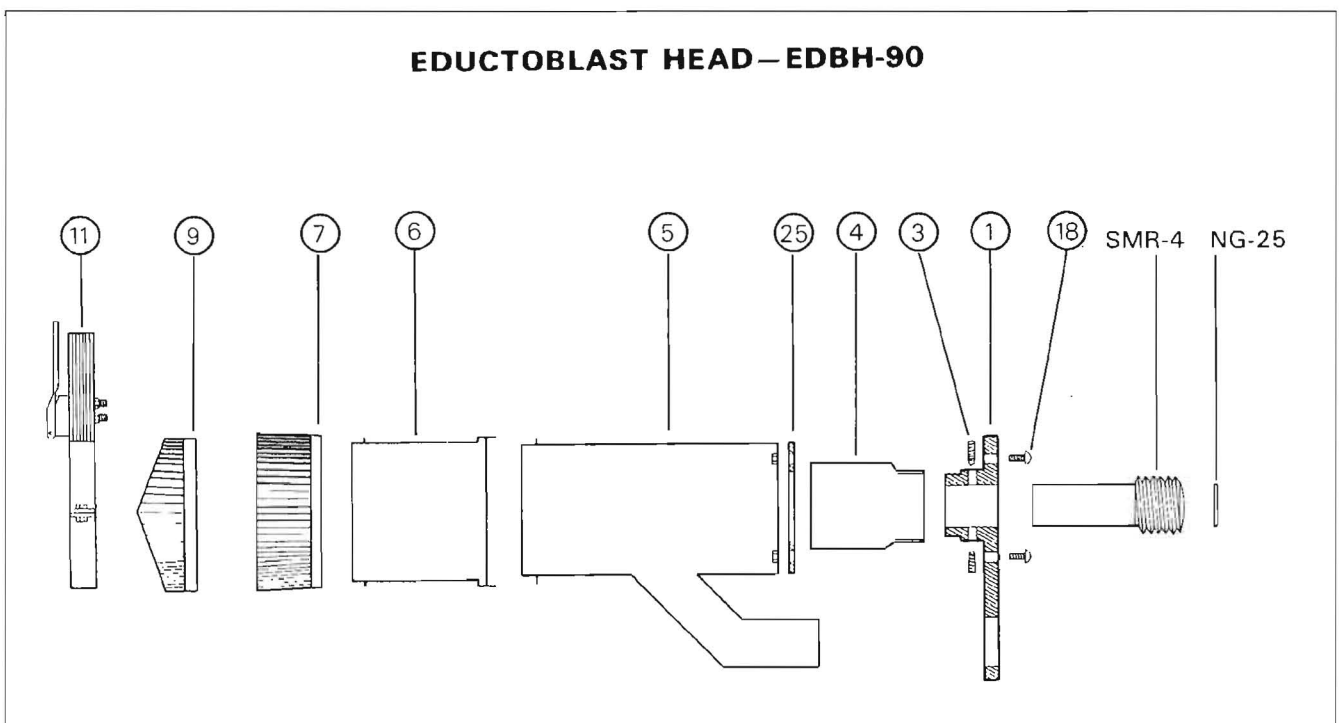
EDBH 60 Eductoblast Head

Item No.	Part No.	Description	Quantity
1	CT 4 L	Nozzle	1
2	EDBH 60A	Body	1
3	EDBH 60B	Inner Cone Assembly	1
4	EDBH 60C	Brush-Flat	1
5	EDBH 60D	Rubber Insert	1
6	EDBH 60E	Brush Retainer	1





- | | | | | | |
|----|--------|----------------------------------|---------|--------|---------------------------------|
| 1 | EDB 1 | NOZZLE MOUNTING PLATE | 17 | EDB 17 | RECOVERY DRUMS |
| 3 | EDB 3 | GRUB SCREW (2) | 18 | EDB 18 | PAN HEAD SCREWS (14) |
| 4 | EDB 4 | NOZZLE GUARD | 19 | | VACUUM RECOVERY UNIT (ELECTRIC) |
| 5 | EDB 5 | BODY | 21 | EDB 21 | 2" FLEXIBLE SUCTION HOSE |
| 7 | EDB 7 | FLAT BRUSH | 25 | EDB 25 | BODY GASKET |
| 9 | EDB 9 | ANGLED BRUSH | HOSE 15 | | 1" ID BLAST HOSE |
| 11 | EDB 11 | HANDLE | SMR 4 | | CLEMLITE NOZZLE |
| 13 | | ABRASIVE RECOVERY DRUM LID | NG 25 | | NOZZLE GASKET |
| 15 | | VACUUM RECOVERY UNIT (PNEUMATIC) | | | |



Typical Airborne Noise Emissions Expected

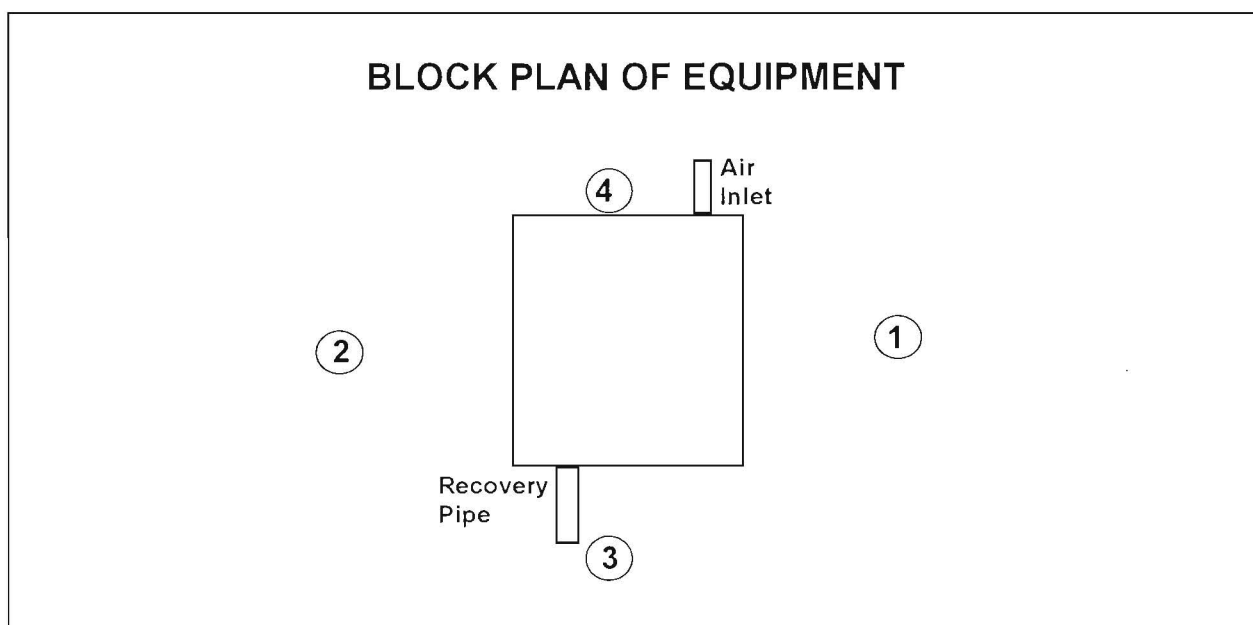
The following are readings taken from identical equipment operated under the conditions detailed below

The readings recorded should be used to determine the level of ear protection required by the operator(s) and personnel at risk

Equipment Description: IND 200P 14

Location and Test Conditions: HODGE CLEMCO LTD WORK AREA

Power and Load Conditions: 110 P.S.I.



Position 1.6m High	Continuous		Test Duration	High Surge Reading		Back-ground Noise	Notes
	Max dBA	Min dBA		Max dBA	Period		
1. Operators Position	85	83	5 mins				
2. 1.6m (H) x 1m (Dist)	85	83	5 mins				
3. 1.6m (H) x 1m (Dist)	85	83	5 mins				
4. 1.6m (H) x 1m (Dist)	85	83	5 mins				
5. Position of any High Surge	NA	NA	NA	NA	NA	60	NA

Maintenance/Service Record

Date	Comments	Signed