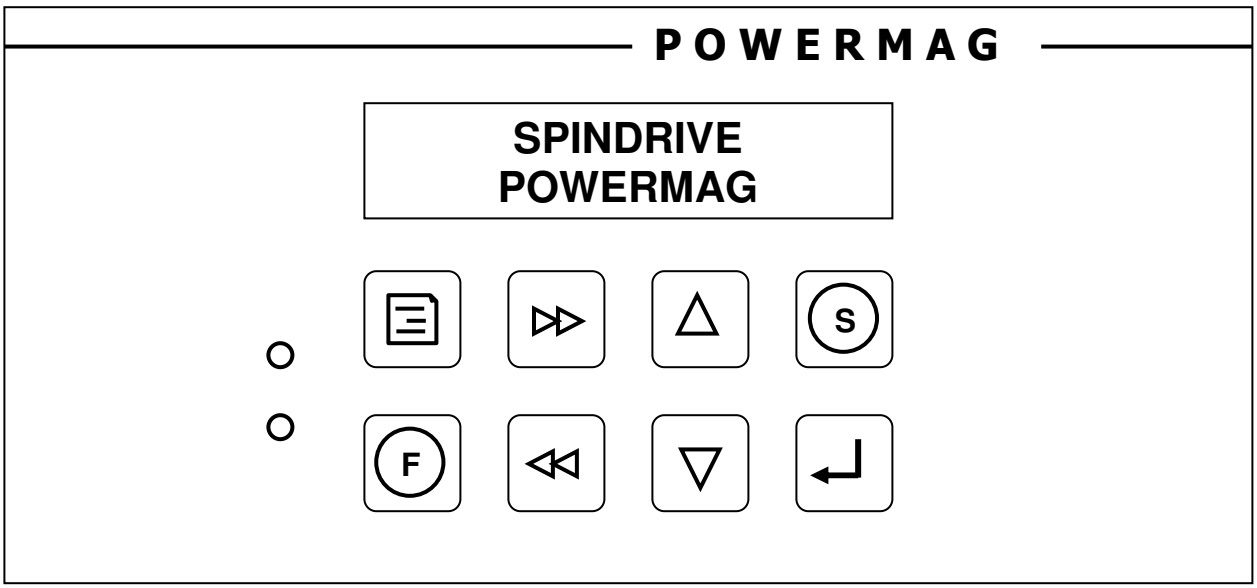
CHAPTER – I

INTRODUCTION

The main objective of the **YSOP - 7** is to monitor and control the spindle speed of the inverter machine. Running in different speed profiles based on the parameters like Length, Time and COP (***Current Operating Percentage****),* will maximize the production, and minimize the end breakages. The above said is implemented in our product by considering the pattern of the cone, which really makes you to feel helpful and comfortable in achieving your targets.

FRONT PANEL:

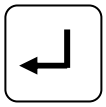


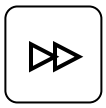
KEY DETAIL:

 → To enter Main Menu

 → To save the modified values

 → To view production details

 → To select the menu item and to move next step after feeding the data

 → To move the cursor position (**NEXT** key)

 → To move the cursor position (**PREV** key)

 → Increment the value (**INC** key)

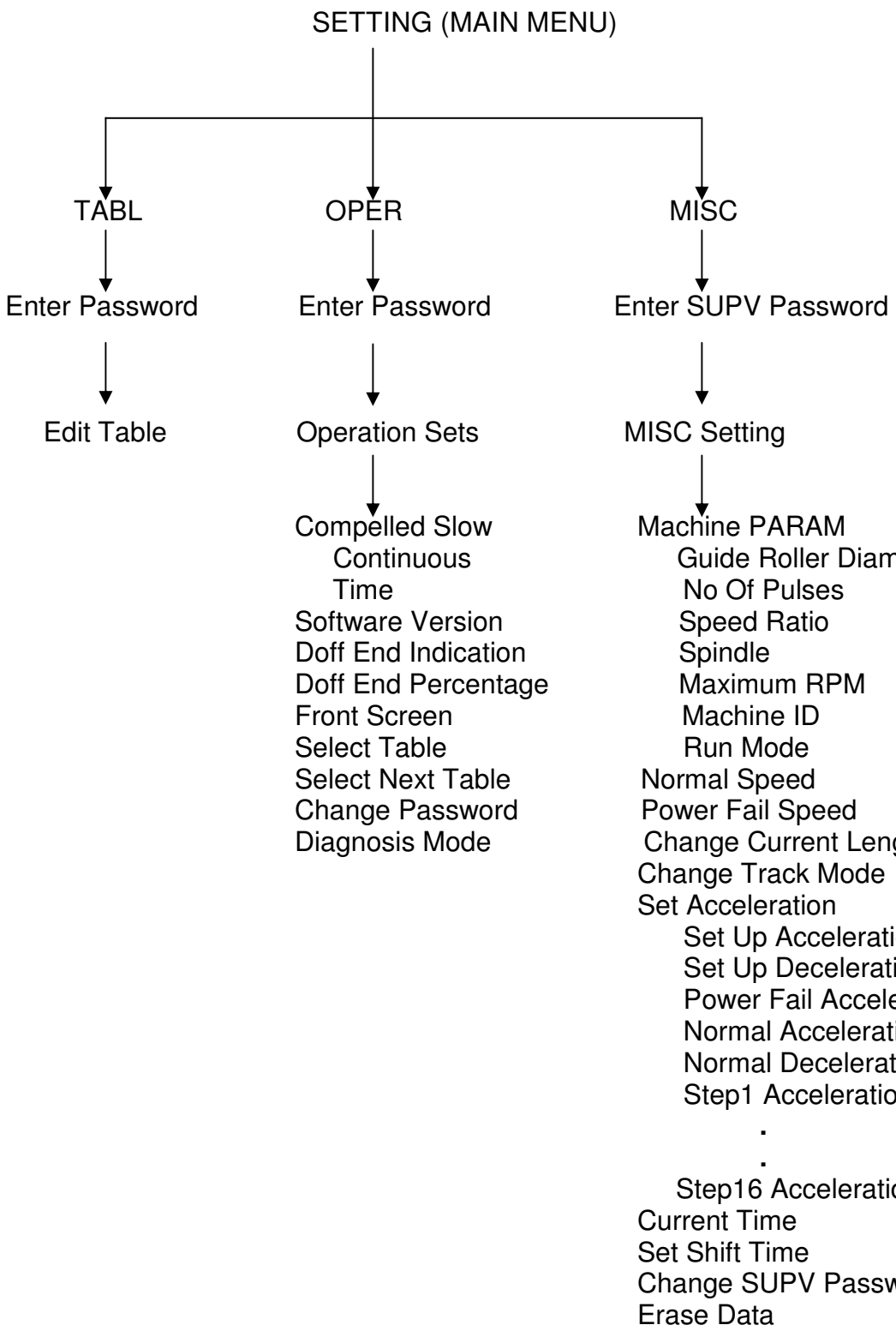
 → Decrement the value (**DEC** key)

OPTIONAL:

We can interface all machines to PC through this unit. This feature in our product facilitates machines ***to monitor the production details continuously and modify the settings values through a single PC***. This paves for effective production with minimum breakages.

I. SET MODE:

Set mode given three options TABL, OPER and MISC.



OPERATION					
S.NO	PARAMETER	MIN	MAX	UNIT / Formula	DESCRIPTIONS
1	COMPL SL	0	99999	CONT, TIME	Cont — It will ask for rpm value, and then the machine will be running in set rpm continuously. Time —It will ask for rpm value and time duration. Now the Machine run for given time in given rpm.
2	COUNT	0	999		To calculate the kgm value, the count of the cotton should be entered
3	DF INDICN	0	99	%	Doff Indication: this is the% set to indicate, before, the doff end
4	DF. END PR	0	99	Doff reset length = (100 - %).	Doff end percentage is used to calculate the doff reset length, after reach the doff reset length the machine is ready to doff sensor active.

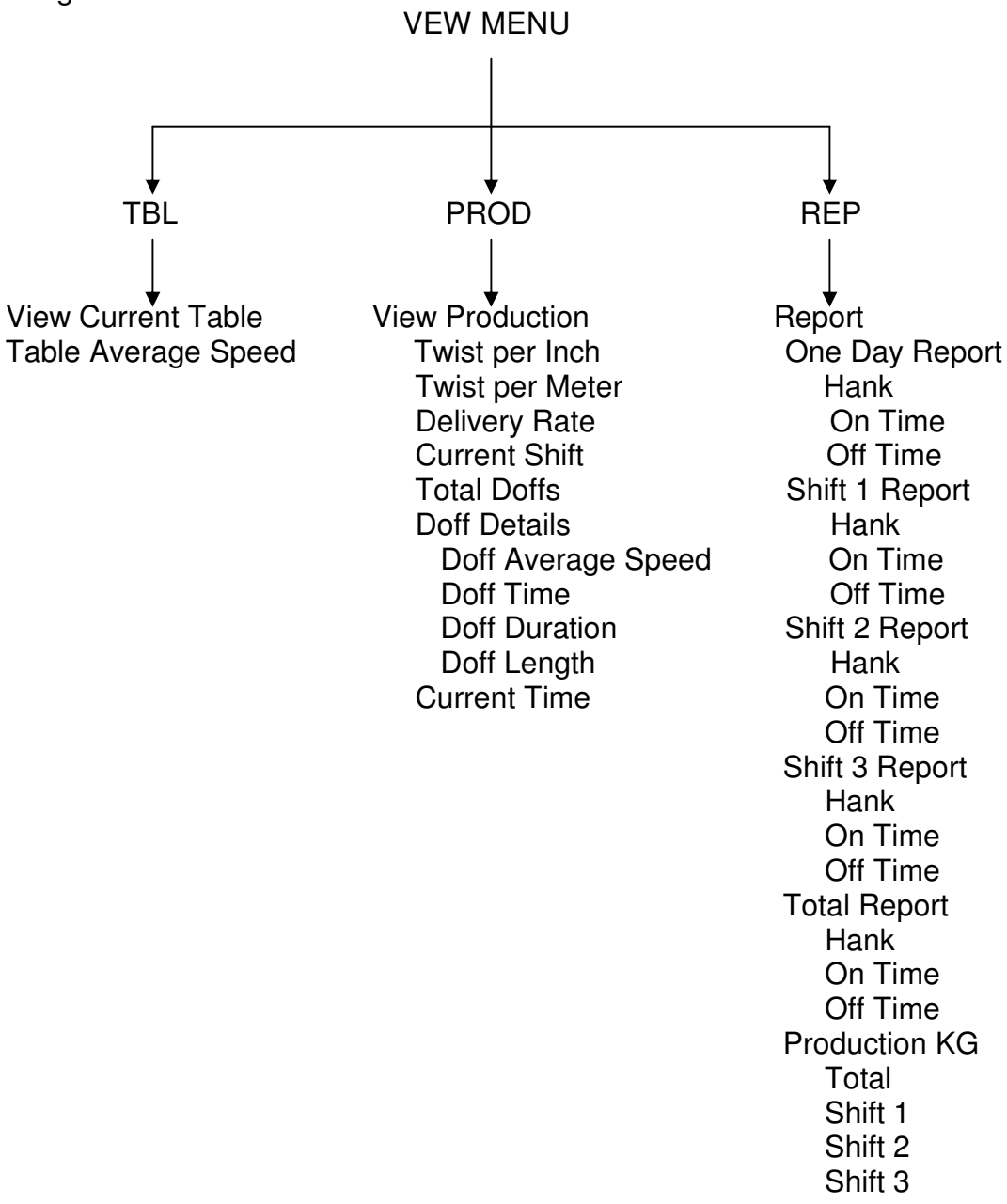
5	FRONT SCREEN	0	6	Screen: 0. All type of running screen 1. ST, LEN and RPM 2. ST, PER and RPM 3. ST, LEN and DEL.RATE 4. CL, CR, SL and SR 5 screen 6 screen	Here the value0 - allows viewing all type of running screen 0. The value 1 – only screen1 The value 2 – only screen 2. The value 3 – only screen 3. The value 4 – only Screen 4. The value 5 – normally the rpm will not set displayed in view all screen but the rpm will not get displayed. By pressing INC key continually for 10 seconds enable us to view rpm and release INC key the rpm disappears. The value 6 – RPM block
6	SELECT TABLE	0	9	LENGTH TABLE	Select Table
7	SELECT NXT. TABLE	0	9	LENGTH TABLE	Select Next Table
8	CHG PASSWORD	000	999		This Password is said to be user password it is works for both table and operation setting. And this password will not work for MISC setting. The password values can be set from 0 to 9 and A to Z
9	DIAGNOSIS	MAN 0 AUTO 0	MAN 1 AUTO 1	MAN **0** AUTO **0**	Diagnosis mode enable to check the doff auto and manual reset, output voltage.

MISC SETTING					
S.NO	PARAMETER	MIN	MAX	UNIT / Formula	DESCRIPTION
1	G. ROLL DIA	00.0	99.9		Guide Roller Diameter – This parameter should be set to calculate the length and delivery rate
2	NO OF PULSES	00	99		No Of Pulses –from machine shaft for no of pulse per rotation
3	SPD RATIO	00.00	99.99		Speed Ratio – is ratio of main shaft to spindle ware
4	SPINDLE	0000	9999		Spindle – enter here the no of spindle
5	MAX RPM	00000	99999		Maximum RPM — is the max limits of rpm.
6	MACHINE ID	000	999		Machine ID — is identification of machine when interfacing
7	RUN MODE	0	1		0 – is parabolic speed process 1 – is step base speed process
8	NORMAL SPD	00000	99999	LENGTH, RPM	Manually stopped machine runs in normal speed when the machine starts, the machine runs in the normal speed up to the length set in normal speed length menu.
9	POWER FAIL SPD	00000	99999	LENGTH, RPM	Whenever the power failure occurs this setting, tells the machine how much speed it should run and how many length it should maintain that speed.
10	CHG CRT LENGTH	00000	99999		This enables to reset the length for any where to any value.
11	CHG TRACK MODE			LEN TIM PER-LE	Change Track Mode RPM is varied with respect to the **LENGTH** RPM is varied with respect to the **TIME** RPM is varied with respect to the **PERCENTAGE**

12	S. UP ACC	000	999	Seconds	Start Up Acceleration
13	S. UP DEC	000	999	Seconds	Start Up Deceleration
14	P. F ACC	000	999	M	Power Fail Acceleration
15	NOR ACC	000	999	M	Normal Acceleration
16	NOR DEC	000	999	M	Normal Acceleration
17	ST X ACC	000	999	M	Step X Acceleration (X= 1 to 16)
18	CURRENT TIME	00.00	23.59		The user can set current time
19	SET SHIFT TIME	00.00	23.59		The user can set shift time
20	CHG SUPV PASSWORD	000	999		This password is said to be SUPV Password it is works for both table and operation setting. And this password will not work for MISC setting. The password values can be set from 0 to 9 and A to Z
21	ERASE DATA			ALL, REPORT, NO	Report: If the user wants to erase only total and shift details All: If the user wants to erase miscellaneous mode parameters and also total shift details

II. VIEW MODE

View mode given three options TBL, PROD and REP. There are option is viewing the table

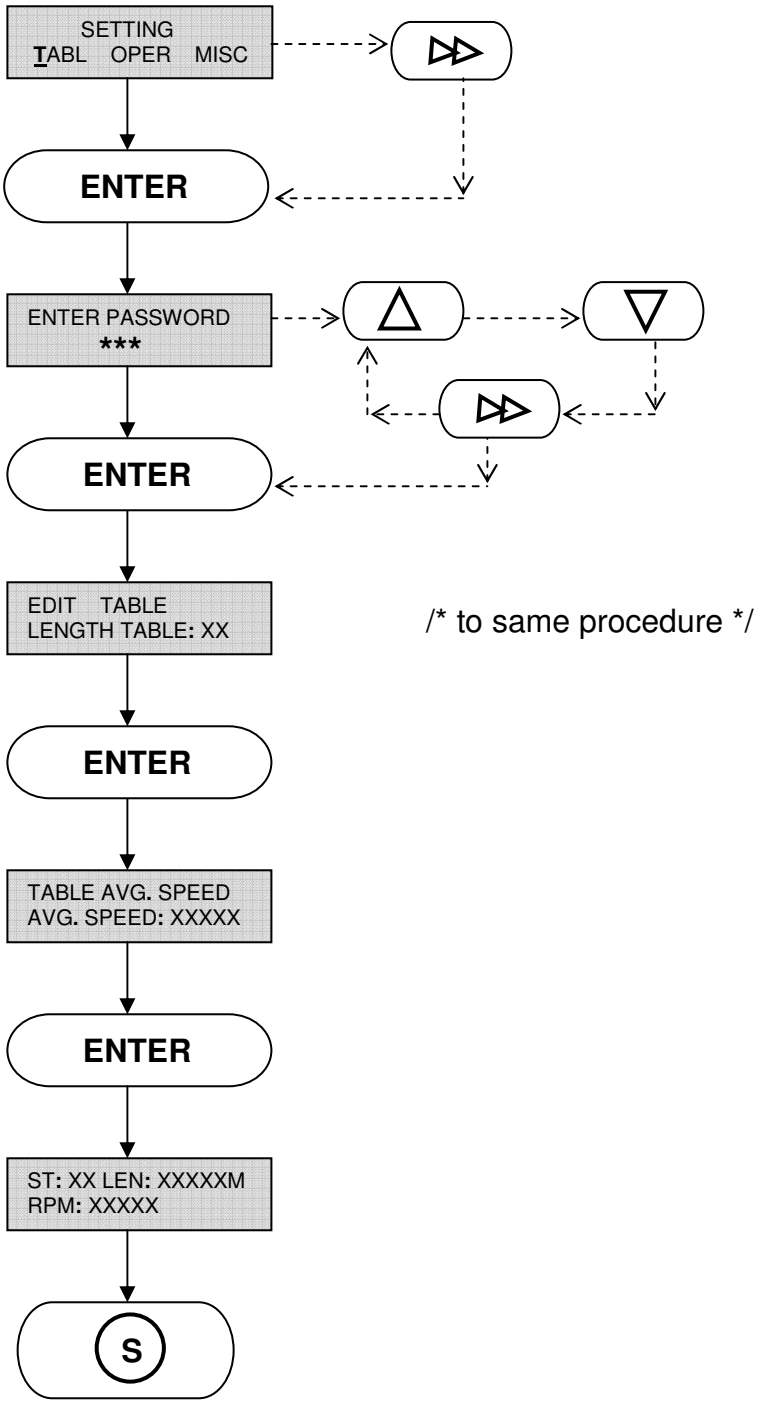


VIEW PRODUCTION					
S.NO	PARAMETER	MIN	MAX	UNIT / Formula	DESCRIPTION
1	VIEW CRT. TABLE	00	19	LENGTH TABLE	View Current Table
2	TABLE AVG.SPEED	00000	99999	AVG. Speed = (LEN diff *RPM) / Last steep LEN	Table Average Speed
3	TPI	0	9		Twist Per Inch
4	TPM	0	9		Twist Per Meter
5	DLY RATE	0	9		Delivery Rate
6	CRT SHIFT	1	3		Current Shift
7	TOT DOFFS	000	999		Total Doffs
8	DOFF AVG. SPD	00000	99999		Doff Average Speed
9	DOFF TIME	0:0	23:59	H — HOURS M — MINUTES	Doff Time
10	DOFF DURATION	0:0	59:59	M — MINUTES S — SECONDS	Doff Duration
11	DOFF LENGTH	0000	9999		Doff Length
12	CT. TI	00:00:00			Current Time
13	ONE DAY REPORT			HANK, ON TIME and OFF TIME	One Day Report
14	SHIFT 1 REPORT			HANK, ON TIME and OFF TIME	Shift 1 Report
15	SHIFT 2 REPORT			HANK, ON TIME and OFF TIME	Shift 2 Report
16	SHIFT 3 REPORT			HANK, ON TIME and OFF TIME	Shift 3 Report
17	TOTAL REPORT			HANK, ON TIME and OFF TIME	Total Report
18	PRODUCTION KG			TOTAL, SFT1, SFT2, SFT3 and DAY	Production KG

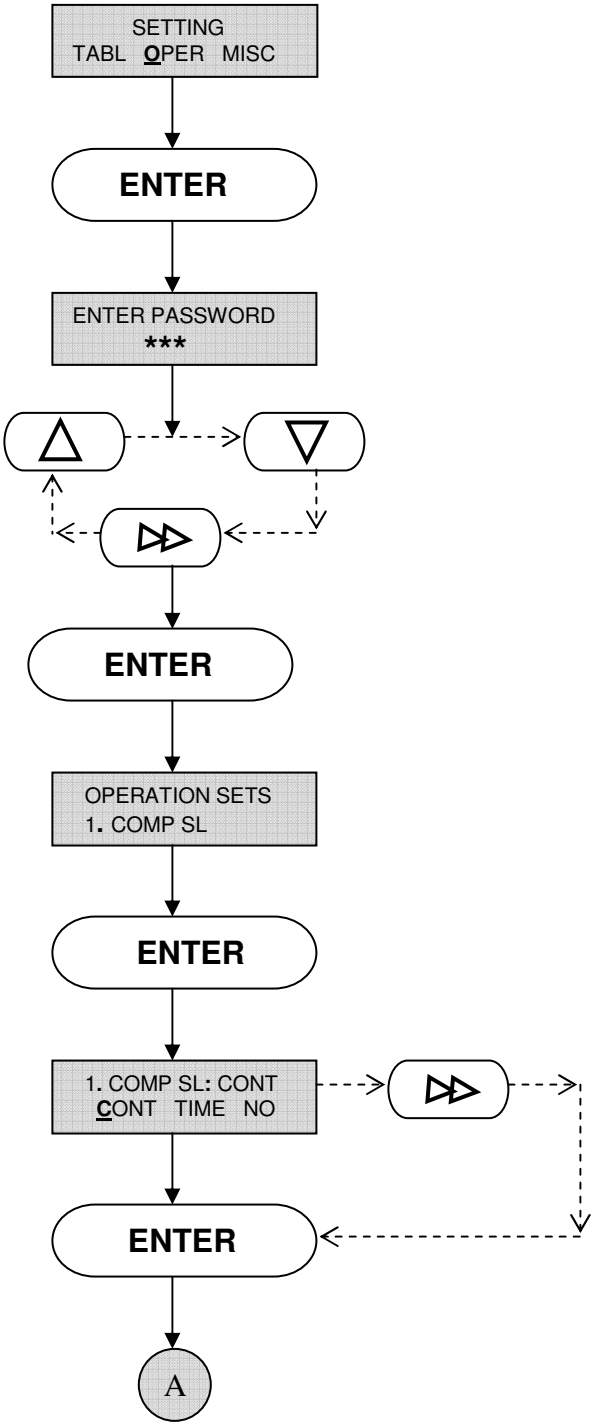
FLOW CHART

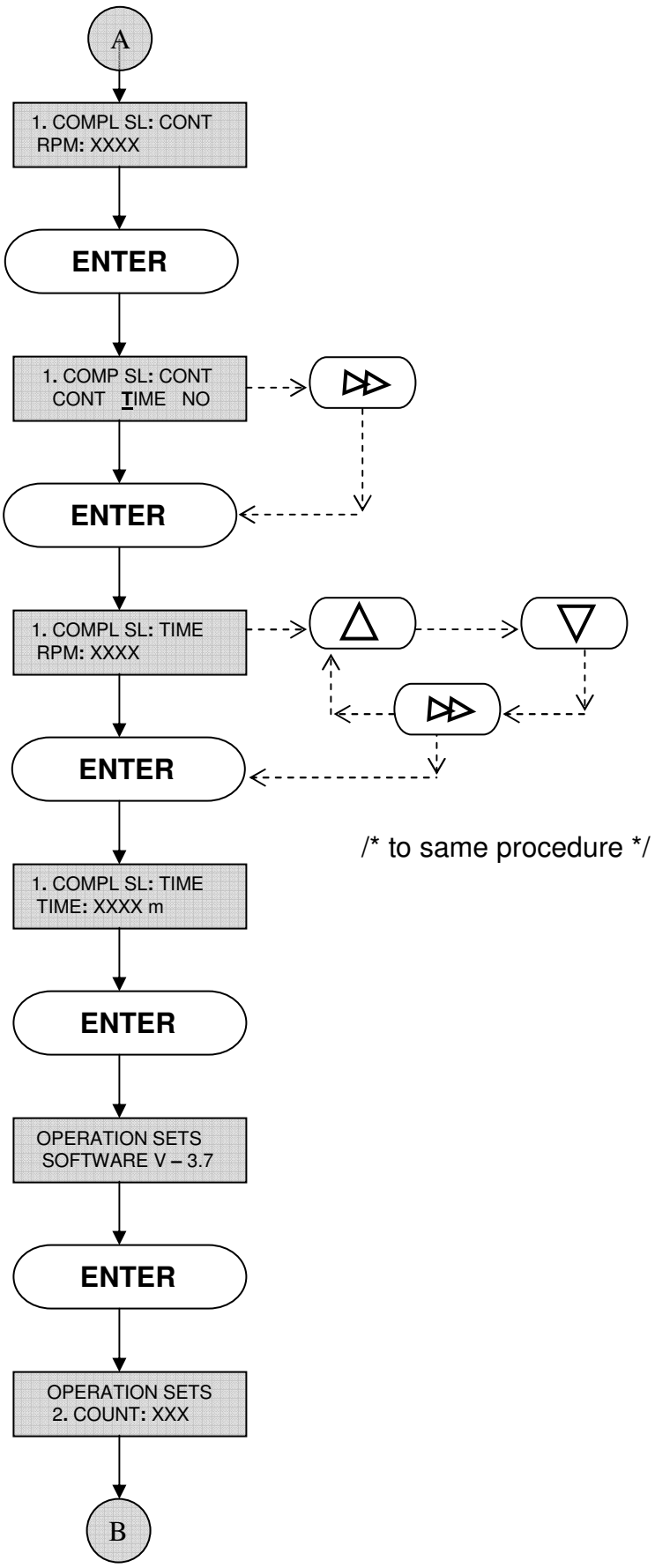
SETTING

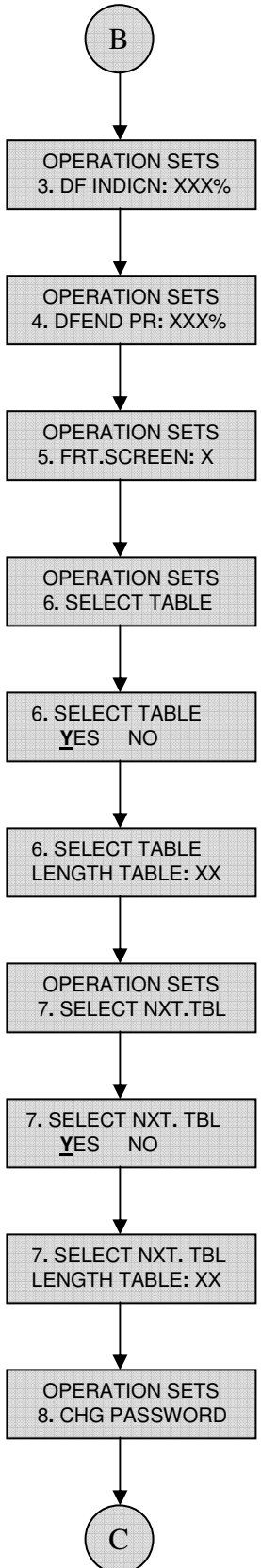
TABLE SETTING:

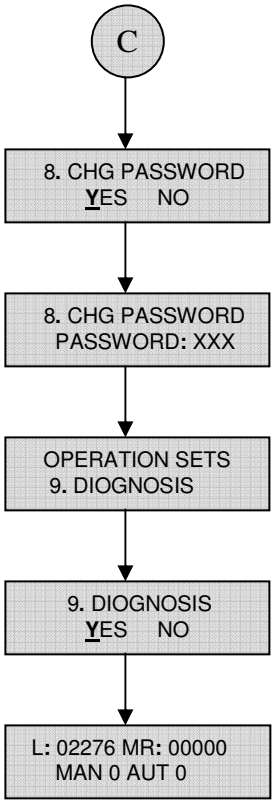


OPERATION SETTING:

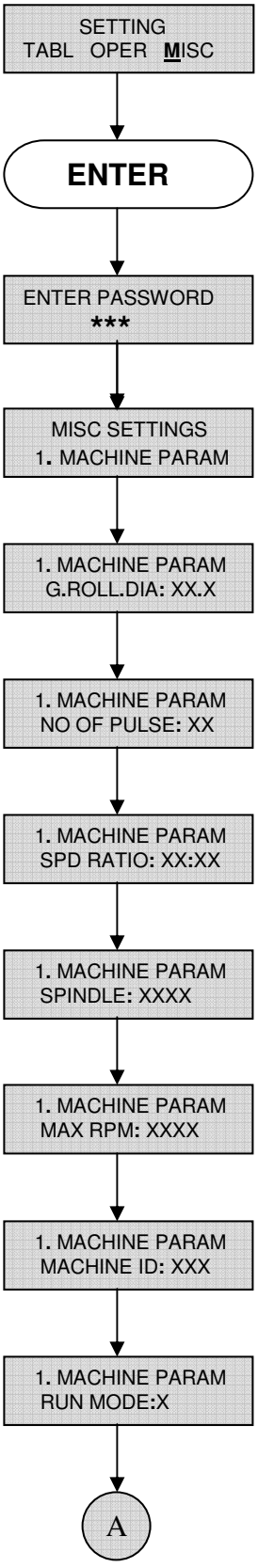


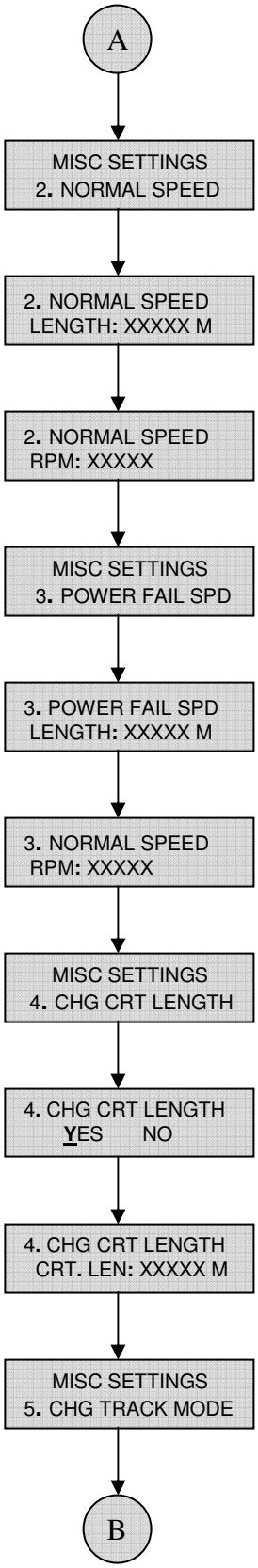

A
1. COMPL SL: CONT
RPM: XXXX
ENTER
1. COMP SL: CONT
CONT TIME NO
ENTER
1. COMPL SL: TIME
RPM: XXXX
ENTER
/* to same procedure */
1. COMPL SL: TIME
TIME: XXXX m
ENTER
OPERATION SETS
SOFTWARE V – 3.7
ENTER
OPERATION SETS
2. COUNT: XXX
B

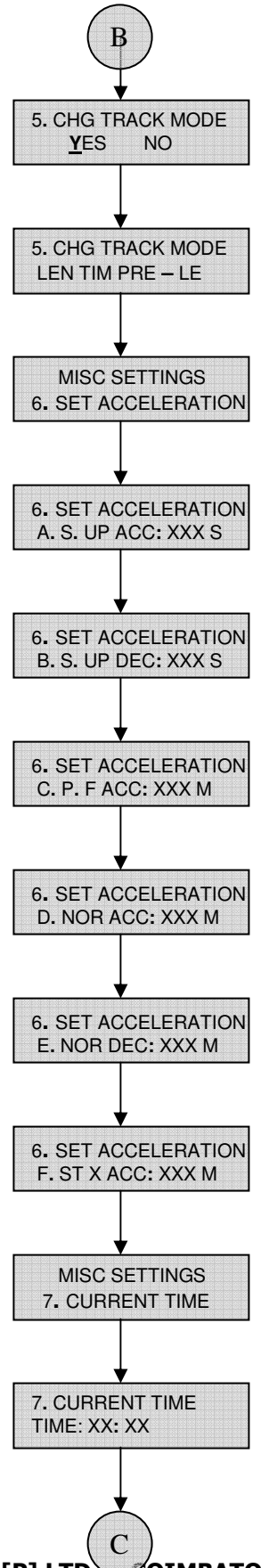

B
OPERATION SETS
3. DF INDICN: XXX%
OPERATION SETS
4. DFEND PR: XXX%
OPERATION SETS
5. FRT.SCREEN: X
OPERATION SETS
6. SELECT TABLE
6. SELECT TABLE
YES NO
6. SELECT TABLE
LENGTH TABLE: XX
OPERATION SETS
7. SELECT NXT.TBL
7. SELECT NXT. TBL
YES NO
7. SELECT NXT. TBL
LENGTH TABLE: XX
OPERATION SETS
8. CHG PASSWORD
C

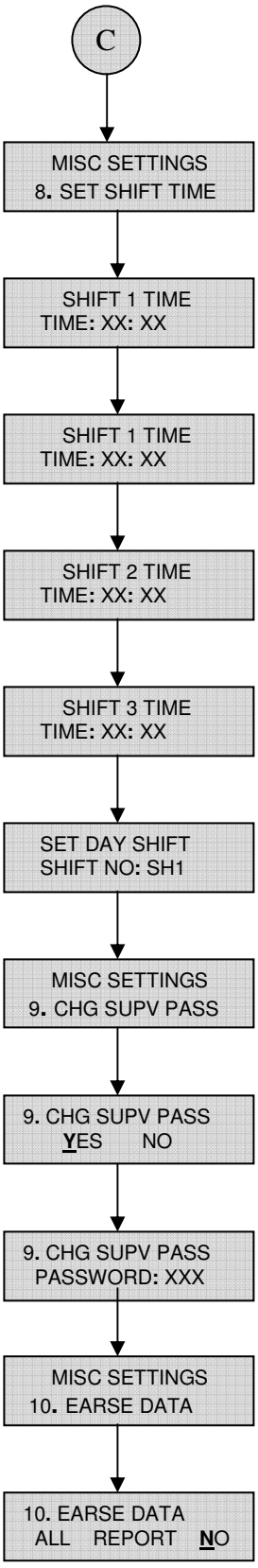

C
8. CHG PASSWORD
YES NO
8. CHG PASSWORD
PASSWORD: XXX
OPERATION SETS
9. DIOGNOSIS
9. DIOGNOSIS
YES NO
L: 02276 MR: 00000
MAN 0 AUT 0

MISC SETTING:



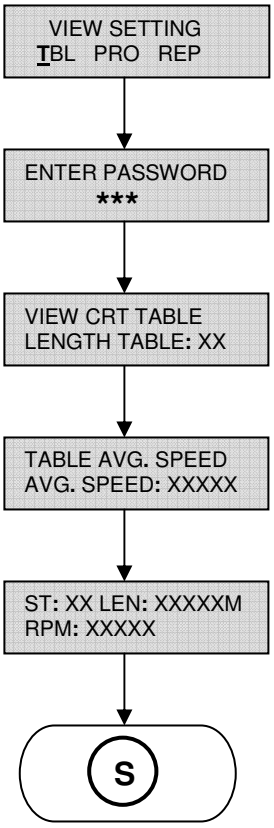

A
MISC SETTINGS
2. NORMAL SPEED
2. NORMAL SPEED
LENGTH: XXXXX M
2. NORMAL SPEED
RPM: XXXXX
MISC SETTINGS
3. POWER FAIL SPD
3. POWER FAIL SPD
LENGTH: XXXXX M
3. NORMAL SPEED
RPM: XXXXX
MISC SETTINGS
4. CHG CRT LENGTH
4. CHG CRT LENGTH
YES NO
4. CHG CRT LENGTH
CRT. LEN: XXXXX M
MISC SETTINGS
5. CHG TRACK MODE
B


B
5. CHG TRACK MODE
YES NO
5. CHG TRACK MODE
LEN TIM PRE – LE
MISC SETTINGS
6. SET ACCELERATION
6. SET ACCELERATION
A. S. UP ACC: XXX S
6. SET ACCELERATION
B. S. UP DEC: XXX S
6. SET ACCELERATION
C. P. F ACC: XXX M
6. SET ACCELERATION
D. NOR ACC: XXX M
6. SET ACCELERATION
E. NOR DEC: XXX M
6. SET ACCELERATION
F. ST X ACC: XXX M
MISC SETTINGS
7. CURRENT TIME
7. CURRENT TIME
TIME: XX: XX
C

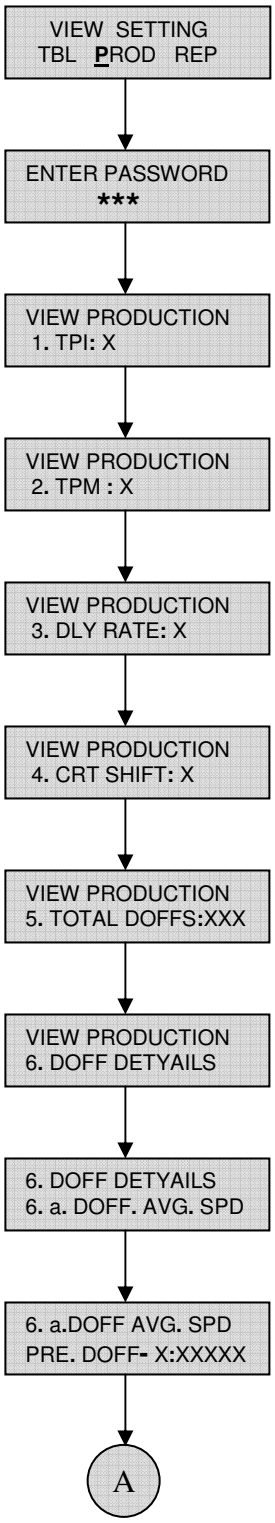

C
MISC SETTINGS
8. SET SHIFT TIME
SHIFT 1 TIME
TIME: XX: XX
SHIFT 1 TIME
TIME: XX: XX
SHIFT 2 TIME
TIME: XX: XX
SHIFT 3 TIME
TIME: XX: XX
SET DAY SHIFT
SHIFT NO: SH1
MISC SETTINGS
9. CHG SUPV PASS
9. CHG SUPV PASS
YES NO
9. CHG SUPV PASS
PASSWORD: XXX
MISC SETTINGS
10. EARSE DATA
10. EARSE DATA
ALL REPORT NO

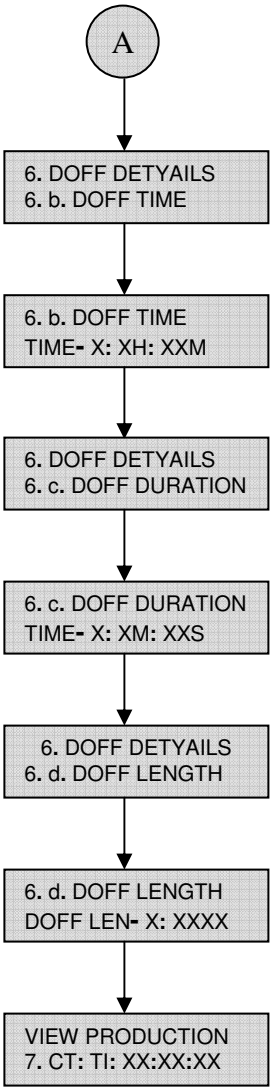
REPORT

TABLE:

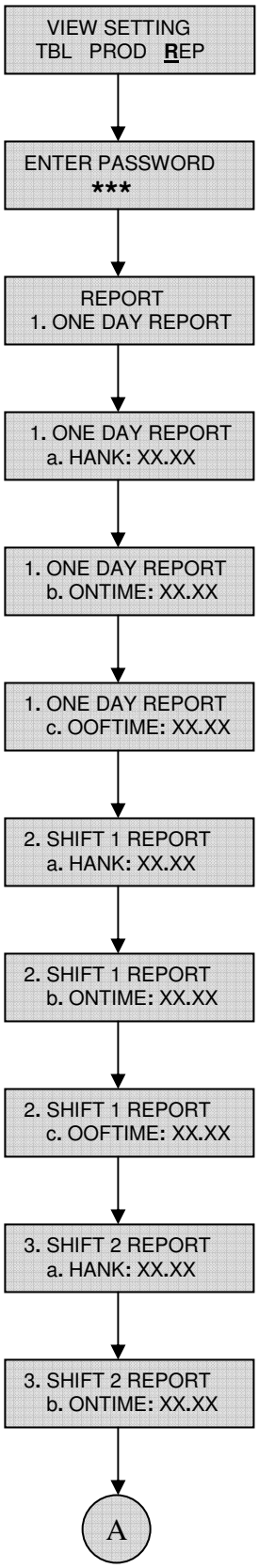


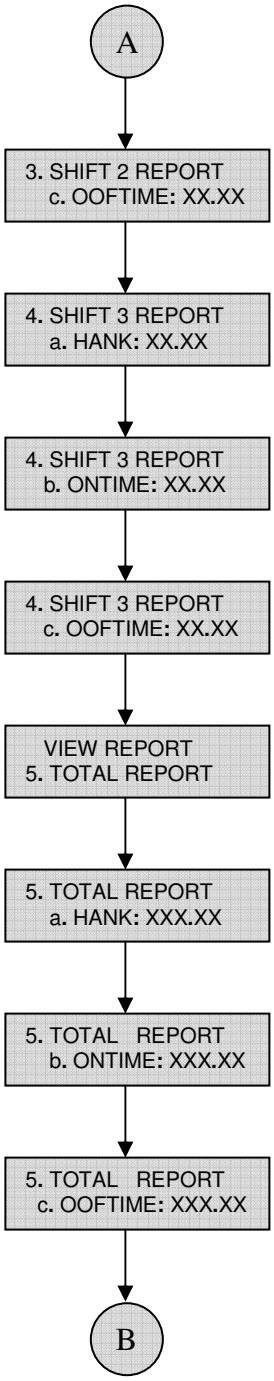
PRODUCTION:

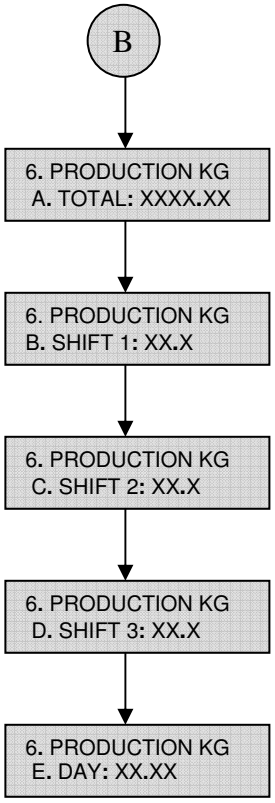

VIEW SETTING
TBL PROD REP
ENTER PASSWORD
***
VIEW PRODUCTION
1. TPI: X
VIEW PRODUCTION
2. TPM : X
VIEW PRODUCTION
3. DLY RATE: X
VIEW PRODUCTION
4. CRT SHIFT: X
VIEW PRODUCTION
5. TOTAL DOFFS:XXX
VIEW PRODUCTION
6. DOFF DETYAILS
6. DOFF DETYAILS
6. a. DOFF. AVG. SPD
6. a.DOFF AVG. SPD
PRE. DOFF- X:XXXXX
A


A
6. DOFF DETYAILS
6. b. DOFF TIME
6. b. DOFF TIME
TIME- X: XH: XXM
6. DOFF DETYAILS
6. c. DOFF DURATION
6. c. DOFF DURATION
TIME- X: XM: XXS
6. DOFF DETYAILS
6. d. DOFF LENGTH
6. d. DOFF LENGTH
DOFF LEN- X: XXXX
VIEW PRODUCTION
7. CT: TI: XX:XX:XX

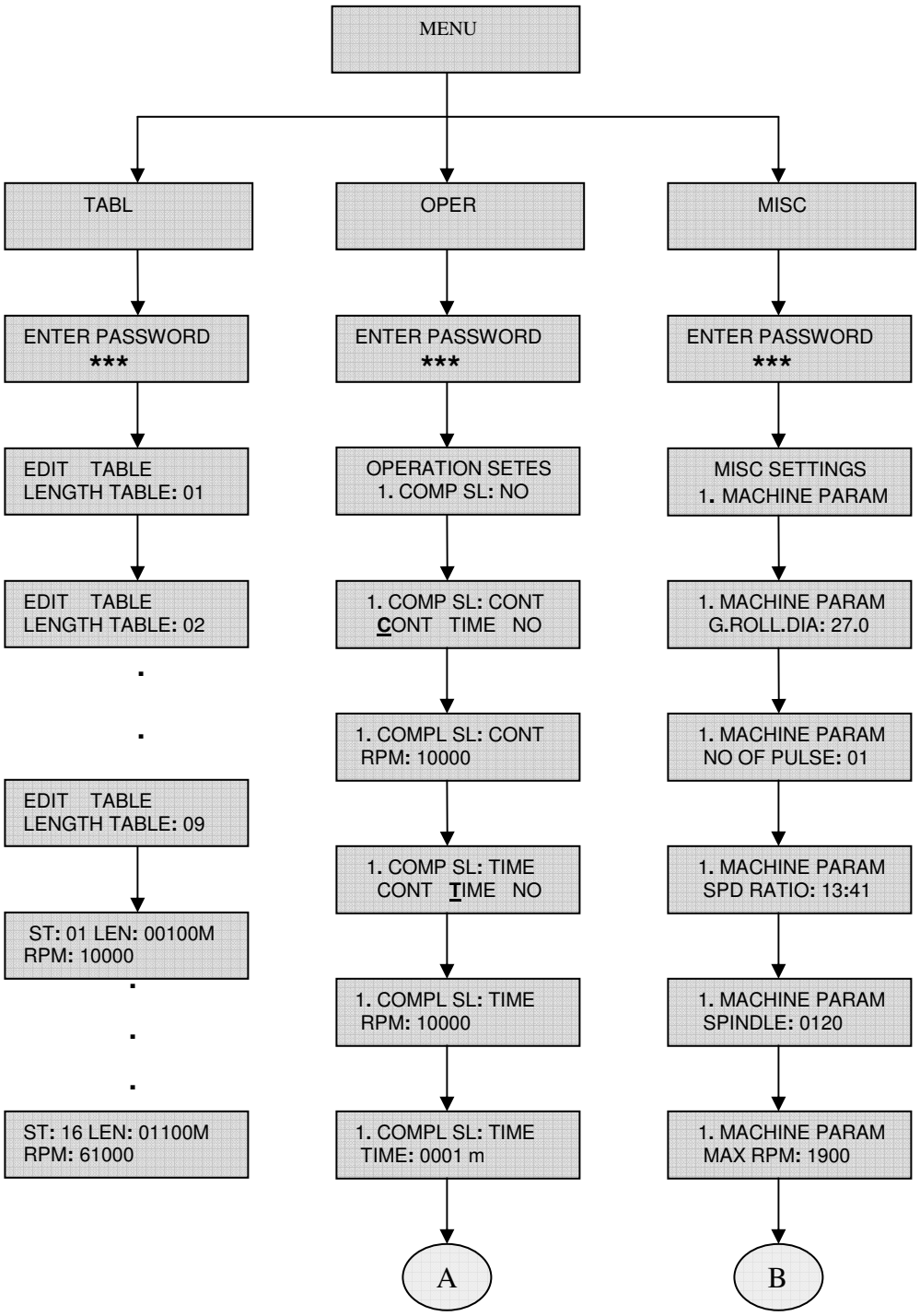
REPORT:

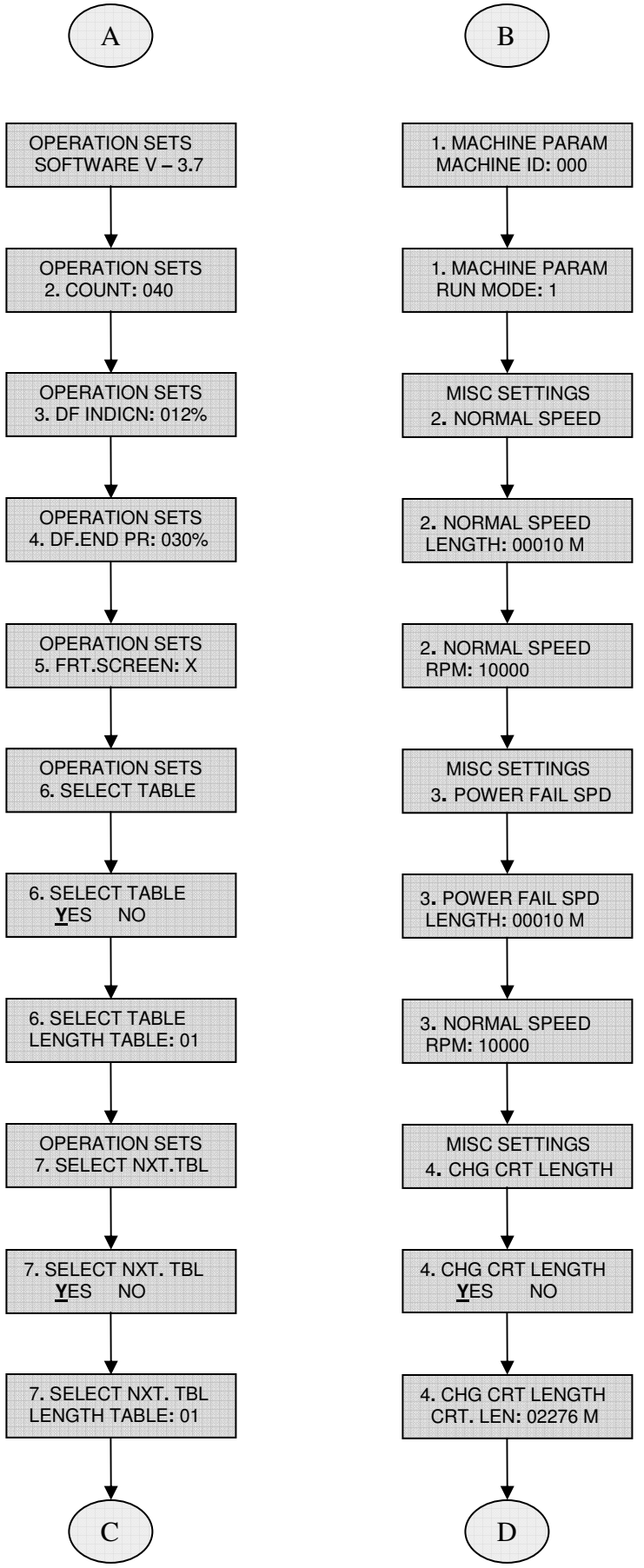

VIEW SETTING
TBL PROD REP
ENTER PASSWORD
***
REPORT
1. ONE DAY REPORT
1. ONE DAY REPORT
a. HANK: XX.XX
1. ONE DAY REPORT
b. ONTIME: XX.XX
1. ONE DAY REPORT
c. OOFTIME: XX.XX
2. SHIFT 1 REPORT
a. HANK: XX.XX
2. SHIFT 1 REPORT
b. ONTIME: XX.XX
2. SHIFT 1 REPORT
c. OOFTIME: XX.XX
3. SHIFT 2 REPORT
a. HANK: XX.XX
3. SHIFT 2 REPORT
b. ONTIME: XX.XX
A

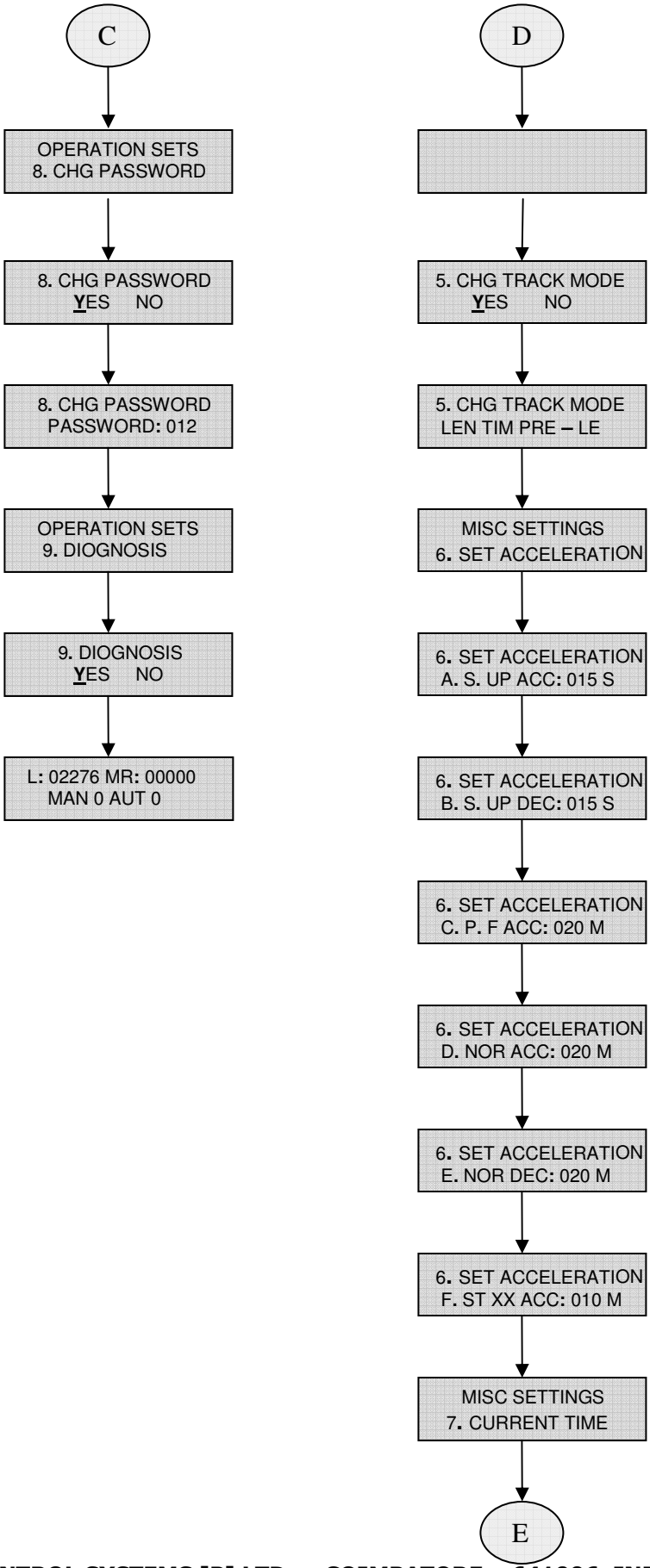

A
3. SHIFT 2 REPORT
c. OOFTIME: XX.XX
4. SHIFT 3 REPORT
a. HANK: XX.XX
4. SHIFT 3 REPORT
b. ONTIME: XX.XX
4. SHIFT 3 REPORT
c. OOFTIME: XX.XX
VIEW REPORT
5. TOTAL REPORT
5. TOTAL REPORT
a. HANK: XXX.XX
5. TOTAL REPORT
b. ONTIME: XXX.XX
5. TOTAL REPORT
c. OOFTIME: XXX.XX
B

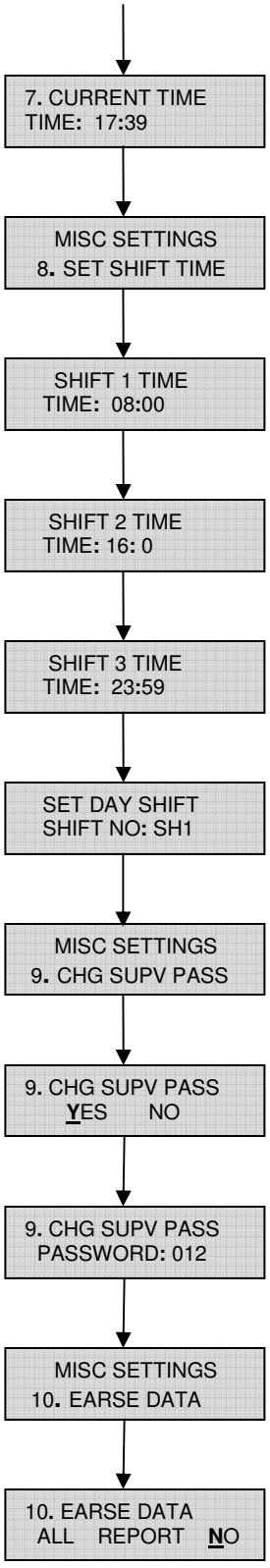

B
6. PRODUCTION KG
A. TOTAL: XXXX.XX
6. PRODUCTION KG
B. SHIFT 1: XX.X
6. PRODUCTION KG
C. SHIFT 2: XX.X
6. PRODUCTION KG
D. SHIFT 3: XX.X
6. PRODUCTION KG
E. DAY: XX.XX

SETTING

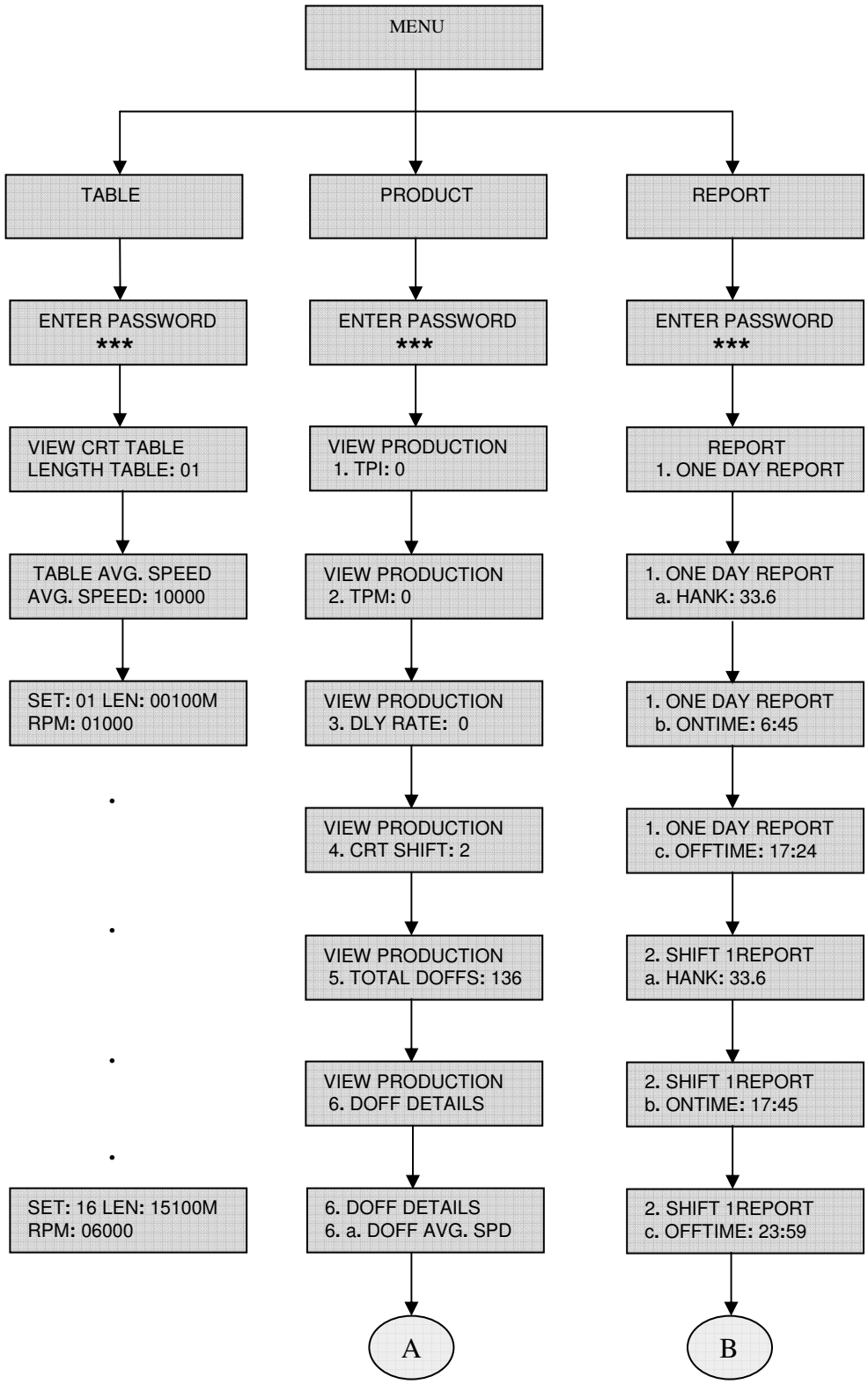

MENU
TABL
OPER
MISC
ENTER PASSWORD
***
ENTER PASSWORD
***
ENTER PASSWORD
***
EDIT TABLE
LENGTH TABLE: 01
OPERATION SETES
1. COMP SL: NO
MISC SETTINGS
1. MACHINE PARAM
EDIT TABLE
LENGTH TABLE: 02
1. COMP SL: CONT
CONT TIME NO
1. MACHINE PARAM
G.ROLL.DIA: 27.0
1. COMPL SL: CONT
RPM: 10000
1. MACHINE PARAM
NO OF PULSE: 01
EDIT TABLE
LENGTH TABLE: 09
1. COMP SL: TIME
CONT TIME NO
1. MACHINE PARAM
SPD RATIO: 13:41
ST: 01 LEN: 00100M
RPM: 10000
1. COMPL SL: TIME
RPM: 10000
1. MACHINE PARAM
SPINDLE: 0120
ST: 16 LEN: 01100M
RPM: 61000
1. COMPL SL: TIME
TIME: 0001 m
1. MACHINE PARAM
MAX RPM: 1900
A
B

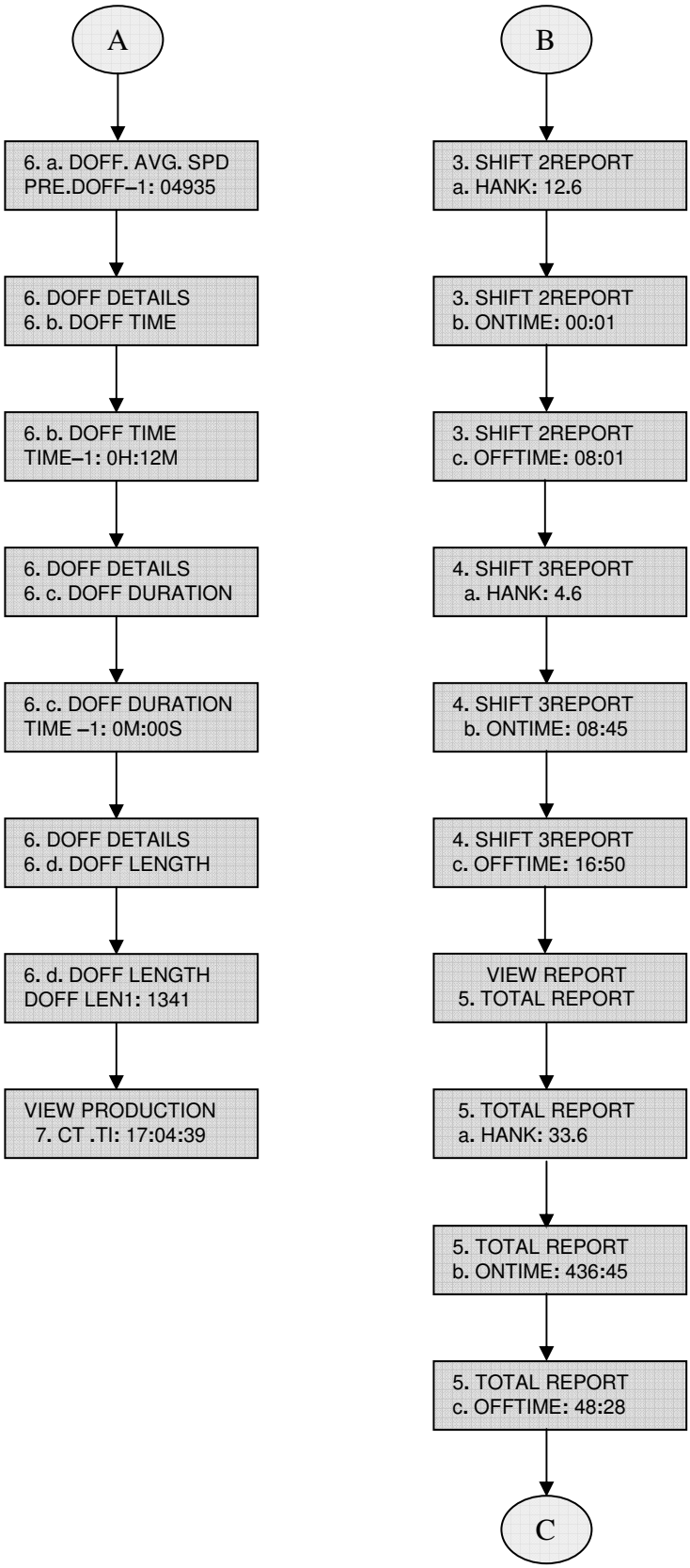

A
B
OPERATION SETS
SOFTWARE V – 3.7
OPERATION SETS
2. COUNT: 040
OPERATION SETS
3. DF INDICN: 012%
OPERATION SETS
4. DF.END PR: 030%
OPERATION SETS
5. FRT.SCREEN: X
OPERATION SETS
6. SELECT TABLE
6. SELECT TABLE
YES NO
6. SELECT TABLE
LENGTH TABLE: 01
OPERATION SETS
7. SELECT NXT.TBL
7. SELECT NXT. TBL
YES NO
7. SELECT NXT. TBL
LENGTH TABLE: 01
C
1. MACHINE PARAM
MACHINE ID: 000
1. MACHINE PARAM
RUN MODE: 1
MISC SETTINGS
2. NORMAL SPEED
2. NORMAL SPEED
LENGTH: 00010 M
2. NORMAL SPEED
RPM: 10000
MISC SETTINGS
3. POWER FAIL SPD
3. POWER FAIL SPD
LENGTH: 00010 M
3. NORMAL SPEED
RPM: 10000
MISC SETTINGS
4. CHG CRT LENGTH
4. CHG CRT LENGTH
YES NO
4. CHG CRT LENGTH
CRT. LEN: 02276 M
D

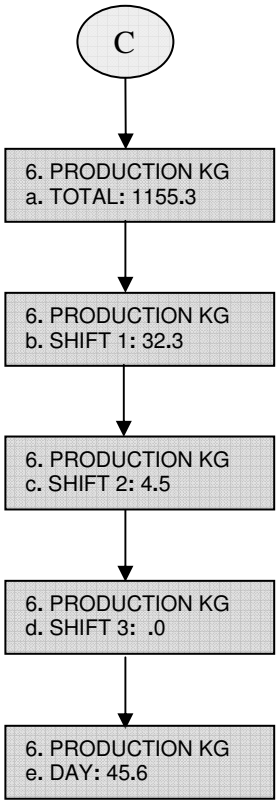

C
OPERATION SETS
8. CHG PASSWORD
8. CHG PASSWORD
YES NO
8. CHG PASSWORD
PASSWORD: 012
OPERATION SETS
9. DIOGNOSIS
9. DIOGNOSIS
YES NO
L: 02276 MR: 00000
MAN 0 AUT 0
D
5. CHG TRACK MODE
YES NO
5. CHG TRACK MODE
LEN TIM PRE – LE
MISC SETTINGS
6. SET ACCELERATION
6. SET ACCELERATION
A. S. UP ACC: 015 S
6. SET ACCELERATION
B. S. UP DEC: 015 S
6. SET ACCELERATION
C. P. F ACC: 020 M
6. SET ACCELERATION
D. NOR ACC: 020 M
6. SET ACCELERATION
E. NOR DEC: 020 M
6. SET ACCELERATION
F. ST XX ACC: 010 M
MISC SETTINGS
7. CURRENT TIME
E


7. CURRENT TIME
TIME: 17:39
MISC SETTINGS
8. SET SHIFT TIME
SHIFT 1 TIME
TIME: 08:00
SHIFT 2 TIME
TIME: 16: 0
SHIFT 3 TIME
TIME: 23:59
SET DAY SHIFT
SHIFT NO: SH1
MISC SETTINGS
9. CHG SUPV PASS
9. CHG SUPV PASS
YES NO
9. CHG SUPV PASS
PASSWORD: 012
MISC SETTINGS
10. EARSE DATA
10. EARSE DATA
ALL REPORT NO

REPORT


MENU
TABLE
PRODUCT
REPORT
ENTER PASSWORD ***
ENTER PASSWORD ***
ENTER PASSWORD ***
VIEW CRT TABLE LENGTH TABLE: 01
VIEW PRODUCTION 1. TPI: 0
REPORT 1. ONE DAY REPORT
TABLE AVG. SPEED AVG. SPEED: 10000
VIEW PRODUCTION 2. TPM: 0
1. ONE DAY REPORT a. HANK: 33.6
SET: 01 LEN: 00100M RPM: 01000
VIEW PRODUCTION 3. DLY RATE: 0
1. ONE DAY REPORT b. ONTIME: 6:45
VIEW PRODUCTION 4. CRT SHIFT: 2
1. ONE DAY REPORT c. OFFTIME: 17:24
VIEW PRODUCTION 5. TOTAL DOFFS: 136
2. SHIFT 1REPORT a. HANK: 33.6
VIEW PRODUCTION 6. DOFF DETAILS
2. SHIFT 1REPORT b. ONTIME: 17:45
SET: 16 LEN: 15100M RPM: 06000
6. DOFF DETAILS 6. a. DOFF AVG. SPD
2. SHIFT 1REPORT c. OFFTIME: 23:59
A
B


A
6. a. DOFF. AVG. SPD
PRE.DOFF–1: 04935
6. DOFF DETAILS
6. b. DOFF TIME
6. b. DOFF TIME
TIME–1: 0H:12M
6. DOFF DETAILS
6. c. DOFF DURATION
6. c. DOFF DURATION
TIME –1: 0M:00S
6. DOFF DETAILS
6. d. DOFF LENGTH
6. d. DOFF LENGTH
DOFF LEN1: 1341
VIEW PRODUCTION
7. CT .TI: 17:04:39
B
3. SHIFT 2REPORT
a. HANK: 12.6
3. SHIFT 2REPORT
b. ONTIME: 00:01
3. SHIFT 2REPORT
c. OFFTIME: 08:01
4. SHIFT 3REPORT
a. HANK: 4.6
4. SHIFT 3REPORT
b. ONTIME: 08:45
4. SHIFT 3REPORT
c. OFFTIME: 16:50
VIEW REPORT
5. TOTAL REPORT
5. TOTAL REPORT
a. HANK: 33.6
5. TOTAL REPORT
b. ONTIME: 436:45
5. TOTAL REPORT
c. OFFTIME: 48:28
C



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