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1-139	C	3-3	C
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1-141	C	3-5	A
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PREFACE

This manual contains information applicable to the logic cards used in the BK7B1-E/F (SMDs):

The manual has been prepared for customer engineers and other technical personnel directly involved with maintaining these drives.

This manual is divided into three sections. The content of each section is described below:

Section 1 -- Diagrams. Contains logic and wiring diagrams for the drive.

Section 2 -- Wire Lists. Contains logic wire wrap information for the drive.

Section 3 -- Card Component Layouts. Contains diagrams showing the location of all physical components on each card in the drive.

Other manuals applicable to the previously listed drives are:

<u>Publication No.</u>	<u>Title</u>
83323810	Hardware Reference Manual
83323820	Hardware Maintenance Manual, Volume 1

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FLT	Fault	PC PT	Piece Part
FREQ	Frequency	PLO	Phase Lock Oscillator
FTU	Field Test Unit	PN	Part Number
FWD	Forward	POS	Positive
GEN	Generator	PWR	Power
GND	Ground	RCVRS	Receivers
HD	Head	RD	Read
I/O	Input-Output	RDY	Ready
INTLK	Interlock	REC	Receiver
INTGRTR	Integrator	REF	Reference
LD	Load	REG	Register
MAINT	Maintenance	REV	Reverse
MAX	Maximum	RGTR	Register
MB	Megabyte	TRM	Reserve Timer
MFM	Modified Frequency Modulation	RTZ	Return to Zero
MK	Mark	S&IOBC	Sector and Index on B Cable
MULT	Multiple	S/C	Series Code
NC	No Connection	SEC	Second
NEG	Negative	SEL	Select
NOM	Nominal	SEQ	Sequence
NON-VDE	See Page 1-1	SER	Servo
NORM	Normal	SH	Sheet
NRM	Normal	SOI	Solenoid
NRZ	Nonreturn to Zero		

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SR	Servo	VCO	Voltage Controlled Oscillator
SW	Switch	W+R	Write or Read
T	Track	W-R	Write and Read
TBS	To Be Supplied	W/	With
TLA	Top Level Assembly	W/O	Without
TP	Test Point	WRT	Write
TRK	Track	WT	White
TTL	Transistor Transistor Logic	XDUCER	Transducer
UNREG	Unregulated	XMTR	Transmitter
VDE	See page 1-1		

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INTRODUCTION

This section contains diagrams representing all electrical circuitry and wiring contained in the drive. It also contains information concerning the interpretation of the electrical circuit and wiring diagrams. This results in the diagrams set actually containing two different types of diagrams: (1) key to logic, and (2) card cabling, and harnessing schematics.

The diagrams set begins with the key to logic. These sheets contain information concerning interpretation of the actual circuit diagrams.

The card, cabling and harnessing diagrams follow the key to diagrams and comprise the major portion of the diagram set. The card diagrams are schematics of the circuit cards used in the drive. The cabling and harnessing diagrams show the wiring that interconnects the cards and other circuitry contained in the drive.

Information concerning applicability may be contained on the schematics themselves in the form of notes. This makes it necessary to check carefully for notes (particularly on the cover sheet of the schematics) when using the diagrams to ensure that they are interpreted correctly.

Either of two different power supplies may be installed in the drive. One is VDE approved and the other is not. Notes on the diagrams and other references to VDE/NON-VDE applicability are interpreted as follows:

- No notes: Information applies to all units.
- VDE only: Information applies to 50 Hz units, series code 25 and above, and older units with 57453. It also applies to 60 Hz units, series code 26 and above, and older units with 57550.
- NON-VDE only: Information applies to 50 Hz units, series code 24 and below without 57453, and 60 Hz units, series code 25 and below without 57550.

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Each sheet in the diagrams has a title block containing the information shown in figure 1-1. This information is explained as follows:

- Title -- Description of the information contained on that sheet.
- Publication Number -- Indicates the publication number of this manual. This number is in lieu of the number usually found at the bottom of each page.
- Manual Revision Letter -- Indicates the revision level of this sheet and should correspond to the revision level indicated on the List of Effective Pages sheet in the front matter of this manual.
- Diagram Revision Letter -- Indicates revision level of this diagram and changes each time the diagram changes .
- Card Type -- Indicates the type of card containing the circuitry shown on this diagram. This is included only on the first sheet of each card type and will not be found on diagrams showing key to logic, cabling or harnessing information.
- Card Location -- Applicable only to cards located in the logic or read/write chassis, this number indicates the location of the card within the chassis.
- Cross Reference Number -- Each sheet (except those in key to logic) has a unique 3-digit cross reference number. The first two digits of this number pertain to the physical location of that circuitry within the drive. The last digit pertains to show this circuitry.
- Sheet Number -- Pertains to the number of sheets required to show this circuitry and should match the last digit of the cross reference number.
- Page Number -- Indicates the page number of this sheet within the manual. This number is in lieu of the number usually found at the bottom of each sheet.

Table 1-1 lists the contents of the diagrams set and includes the cross reference number, location and title of each sheet in the set. However, each title and cross reference number is listed only once. This is important to note where several sheets have the same title and cross reference number but contain different information because they apply to different units.

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TABLE 1-1. CONTENTS OF DIAGRAMS

Cross Reference Number	Module* Location	Diagrams Title
		Key to Diagrams - Chassis Map
		Key to Diagrams - Configuration
		Key to Diagrams - Intersheet Referencing
		Key to Diagrams - Wirewrap Panel
		Key to Diagrams - Miscellaneous
011	A2A01	Transmitter, Receivers, Head Address Register (_TVV)
012	A2A01	Transmitters
013	A2A01	Receivers and Hd Register
021	A2A02	Receivers Diagrams (_RVV)
022	A2A02	Receivers
023	A2A02	Receivers
024	A2A02	Reveiver and Transmitter
061	A2A06	Access Control and Index/Sector Decode (_LTV)
062	A2A06	Ac. ess Control and Index/Sector Decode
063	A2A06	Forward and Reverse EOT
064	A2A06	Max Address Fault
071	A2A07	Access Control No. 1 Diagrams (_LVV)
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TABLE 1-1. CONTENTS OF DIAGRAMS (Contd)

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072	A2A07	Direction Control, Fine Latch, On Cyl and Cyl Pulses
073	A2A07	Seek FF and Seek Error Detection
074	A2A07	Servo Fault, Load FF and RTZ FF
081	A2A08	Diff Bits, Head Reg, Speed Enable, Unit Select Diagrams (_QPV)
082	A2A08	Speed Relay and Motor Relay Control. Up to Speed
083	A2A08	Head Select Register, Unit Sel Xmtr/Rcvr, Seek End Xmtr
084	A2A08	Difference Bits
101	A2A10	Write Clock 806 Khz to 9.67 Mhz Diagrams (_LSV)
102	A2A10	Sector, Index, Ref and Write PLO Clocks
103	A2A10	Servo and Read Clocks
121	A2A12	Difference Generation and Control Diagrams (_LWV)
122	A2A12	Cylinder Address Register
123	A2A12	Cylinder Address Register
124	A2A12	Difference Counter Generation
125	A2A12	Difference Counter Output

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TABLE 1-1. CONTENTS OF DIAGRAMS (Contd)

Cross Reference Number	Module* Location	Diagrams Title
131	A2A13	NRZ to Compensated MFM Diagrams (_LXV)
132	A2A13	NRZ to MFM Data-Part I
133	A2A13	NRZ to MFM Data-Part II
141	A2A14	Data Latch Diagrams (_LRV)
142	A2A14	Analog Data to Read Data
143	A2A14	Lock to Data And Address Mark Detect
151	A2A15	Read PLO Diagrams (_LZV)
152	A2A15	Data Strobe Delay, Read Data Output
153	A2A15	VCO Output
154	A2A15	Clock Data Output
155	A2A15	Read PLO Timing Diagram
161	A2A16	FTU/Head Alignment Card Slot Wiring
162	A2A16	FTU/Head Alignment Card Slot
171	A2A17	Fault Card Diagrams (_KFV)
172	A2A17	Head Select, Write + Read and Cylinder Fault
173	A2A17	Voltage Fault
174	A2A17	Master Clear, Unit Ready and Fault

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TABLE 1-1. CONTENTS OF DIAGRAMS (Contd)

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175	A2A17	Receivers and Transmitters
181	A2A18	Fine Servo Decoder Diagrams (_FRV)
182	A2A18	Sensing Dibits and AGC'ed Servo Signal
183	A2A18	Track Servo Signal and Cyl Detect A and B
184	A2A18	Track Servo Signal
185	A2A18	Cyl Detect A and B
191	A2A19	Access Control No. 2 Diagrams (_KGV)
192	A2A19	Write Inhibit, Fwd/Rev EOT Enables. Coarse/Fine Position Signals
193	A2A19	Fine Enable, Slope Gate and Offset Command Generation
194	A2A19	Forward/Reserve Offset and Fine Position Signal
201	A2A20	Analog Servo Diagrams (_MSV)
202	A2A20	Cylinder Detect, Velocity, and Velocity Gain Adjust
203	A2A20	D/A Converter and Desired Velocity Generator.
204	A2A20	Summing Amplifier Output and Drive Current V/C PWR AMP
Table Continued on Next Page		

TABLE 1-1. CONTENTS OF DIAGRAMS (Contd)

Cross Reference Number	Module* Location	Diagrams Title
611	A3E01	R/W Control and Cabling Diagrams (_PKV)
612	A3E01	Input Power Wiring and Card Voltage Control
613	A3E01	Read/Write Control
621	A3E02	Write Driver Card Edge Connector and Cabling Diagrams (_PJV)
622	A3E02	Write Driver and Write Fault Detect
623	A3E02	Write Driver and Write Fault
631	A3E03	Read Amplifier and Address Mark Detection Diagrams (_PHV)
632	A3E03	Input Voltage Pins and Voltage Regulator
633	A3E03	Read Amplifier and Address Mark Detection
634	A3E03	Read Amplifier and Address Mark Detection
641	A3A04	Diode Matrix and Mother Board, Board Layout Diagrams (_XFN)
642	A3E04	Diode Matrix and Mother Board Schematic
651	A3E05	Head Select Board. Head Plug Connectors, Cabling and Card Layout Diagrams (_XGN)
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TABLE 1-1. CONTENTS OF DIAGRAMS (Contd)

Cross Reference Number	Module* Location	Diagrams Title
652	A3E05	Unused Logic Elements, Voltage Input Pins, Cabling Information.
653	A3E05	Head Select Decode and Head Bit Enable
654	A3E05	Head Enables and Multi Head Select
655	A3E05	Head Enables and Multi Head Select
761	A3	Track Servo Preamp Diagrams (_ZQN)
762	A3	Track Servo Preamp Cabling/Plug Connections
763	A3	Track Servo Preamp Schematic
771	A4	A4 - Operator Control Panel Diagrams (_ZYN)
772	A4	Fault Clear and LAP Switches, Fault and Ready Indicators
773	A4	Start Switch/Start Indicator, Start Interlock Reference Schematic
781	A3	A3 - I/O Cabling Diagrams
782	A3	I/O Harness Wiring and Tag/Bus Decode
791	A3	A3 - Misc Deck Wiring Diagrams
792	A3	A3 - Misc Deck Wiring Vel Xdcr, Speed Sensor, S1, S4, S6, L1 and Voice Coil
801	A1	A1 - Power Supply Diagrams

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TABLE 1-1. CONTENTS OF DIAGRAMS (Contd)

Cross Reference Number	Module* Location	Diagrams Title
802	A1	A1 - Power Supply, Power Supply External Cabling
803	A1	A1 - Power Supply, AC Power, DC Circuit Breakers and Relays K6, K7, K8
803**	A1	A1 - Power Supply, AC Power, Motor, Brake, and Local/Remote Switch.
804	A1	A1 - Power Supply, Drive Motor, Start Triacs and Local/Remote Switch
804**	A1	A1 - Power Supply, AC Power, DC Circuit breakers.
811	A1	Relay Board Power Wiring, Component Layout and Diagrams (_YFN)
812	A1	Relay Board Schematic-Part I
813	A1	Relay Board Schematic-Part II
811**	A1	A1 - Rectifier/Filter Board
812**	A1	A1 - Rectifier/Filter Board Schematic
821	A1	Rectifier and Capacitor Board Component Layout and Diagrams (_YEN)
822	A1	Rectifier and Capacitor Board
821**	A1	A1 - Control Board Diagrams (_CFN)
822**	A1	A1 - Control Board Schematic (Part 1)
823**	A1	A1 - Control Board Schematic (Part 2)
831	A1	Voice Coil Power Amp Diagrams (_ZCN)
832	A1	A1 - Power Supply Voice Coil Power Amp

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TABLE 1-1. CONTENTS OF DIAGRAMS (Contd)

Cross Reference Number	Module* Location	Diagrams Title
841/851**	A2	A2 5 Volt-Regulator Diagrams
842/852**	A2	A2 +5 Volt Regulator PC Board and ALP3
843/853**	A2	Schematic Diagram, -5 Volt Regulator
844/854**	A2	Schematic Diagram, +5 Volt Regulator
841**	A4	Relay board Diagrams (_FNN)
842**	A4	Relay board

*Location Code is as follows: A1 - Power Supply, A2 - Logic Chassis, A3 - Deck, A4 - Control Panel (refer to Diagrams - Key to Diagrams for configuration drawing).

**Applicable to VDE, units only.

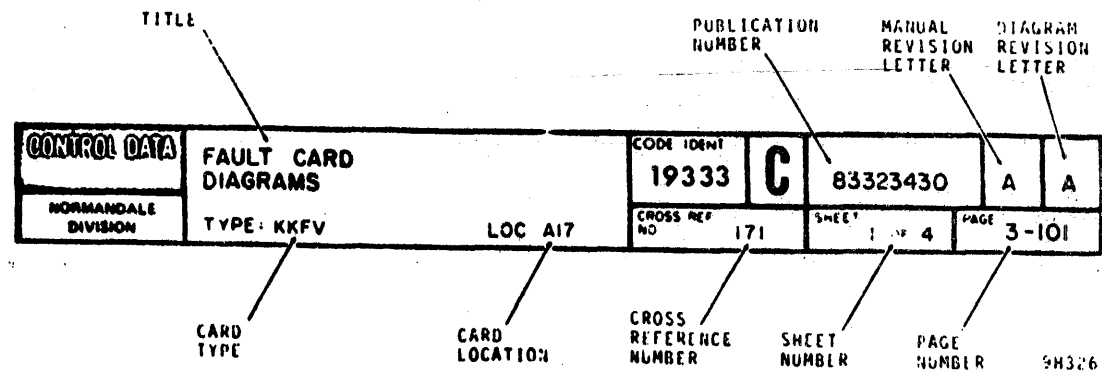


Figure 1-1. Diagram Title Block

CDC PRINT SET
B-SP-RM05-0-8K7B
SHEET 18 of 180

REV B

REVISION STATUS OF SHEETS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A	A	A														
B	B	B	A	A	A														

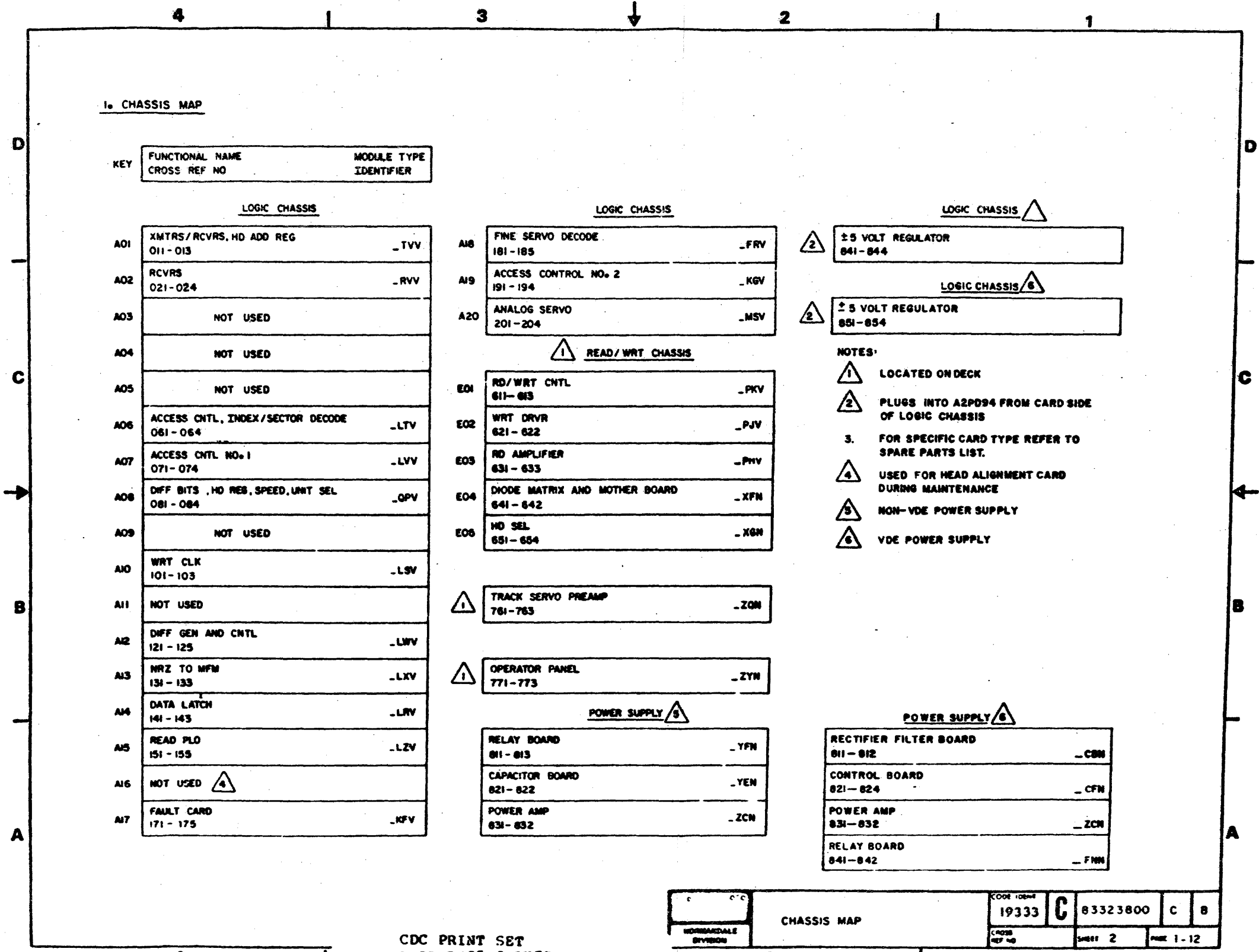
REVISIONS

REV	ECC	DESCRIPTION	DWY	DATE	CHK'D
A	PE23700	RELEASED			
B	57453	ADD VDE	PR6	8/2/57	

DESIGN		
CHECKED		
ENGINEER		
APPROVED		

STORAGE MODULE DRIVE KEY TO LOGIC DIAGRAM

CONF. NO.	C
19333	83323800
C	B
CROSS REF. NO.	SHEET 1 ~ 6
	PAGE 1-11



1. CHASSIS MAP

KEY	FUNCTIONAL NAME CROSS REF NO	MODULE TYPE IDENTIFIER
-----	---------------------------------	---------------------------

LOGIC CHASSIS		
A01	XMTRS/RCVRS, HD ADD REG 011-013	_TVV
A02	RCVRS 021-024	_RVV
A03	NOT USED	
A04	NOT USED	
A05	NOT USED	
A06	ACCESS CNTL, INDEX/SECTOR DECODE 061-064	_LTV
A07	ACCESS CNTL NO. 1 071-074	_LVV
A08	DIFF BITS, HD RES, SPEED, UNIT SEL 081-084	_OPV
A09	NOT USED	
A10	WRT CLK 101-103	_LSV
A11	NOT USED	
A12	DIFF GEN AND CNTL 121-125	_LWV
A13	NRZ TO MFM 131-133	_LXV
A14	DATA LATCH 141-143	_LWV
A15	READ PLO 151-155	_LZV
A16	NOT USED ⁴	
A17	FAULT CARD 171-175	_KPV

LOGIC CHASSIS		
A18	FINE SERVO DECODE 181-185	_FRV
A19	ACCESS CONTROL NO. 2 191-194	_KGV
A20	ANALOG SERVO 201-204	_MSV
¹ READ/WRT CHASSIS		
E01	RD/WRT CNTL 611-613	_PKV
E02	WRT DRVR 621-622	_PJV
E03	RD AMPLIFIER 631-633	_PHV
E04	DIODE MATRIX AND MOTHER BOARD 641-642	_XFN
E05	HD SEL 651-654	_XGN
¹ TRACK SERVO PREAMP		
¹ OPERATOR PANEL		
POWER SUPPLY ³		
RELAY BOARD 811-813 - YFN		
CAPACITOR BOARD 821-822 - YEN		
POWER AMP 831-832 - ZCN		

LOGIC CHASSIS ²		
±5 VOLT REGULATOR 841-844		
LOGIC CHASSIS ⁶		
±5 VOLT REGULATOR 851-854		
NOTES:		
¹	LOCATED ON DECK	
²	PLUGS INTO A2PD94 FROM CARD SIDE OF LOGIC CHASSIS	
³	FOR SPECIFIC CARD TYPE REFER TO SPARE PARTS LIST.	
⁴	USED FOR HEAD ALIGNMENT CARD DURING MAINTENANCE	
⁵	NON-VDE POWER SUPPLY	
⁶	VDE POWER SUPPLY	
POWER SUPPLY ⁵		
RECTIFIER FILTER BOARD 911-912 - CBN		
CONTROL BOARD 921-924 - CFN		
POWER AMP 931-932 - ZCN		
RELAY BOARD 941-942 - FNN		

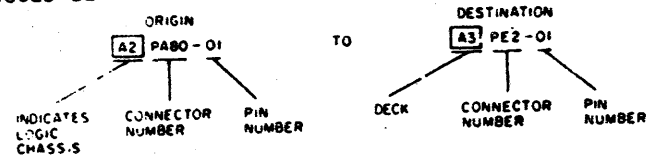
NORRISDALE DIVISION	CHASSIS MAP	CODE IDENT	C	83323800	C	B
		19333				
CROSS REF NO		SHEET 2		PAGE 1-12		

2. CONFIGURATION

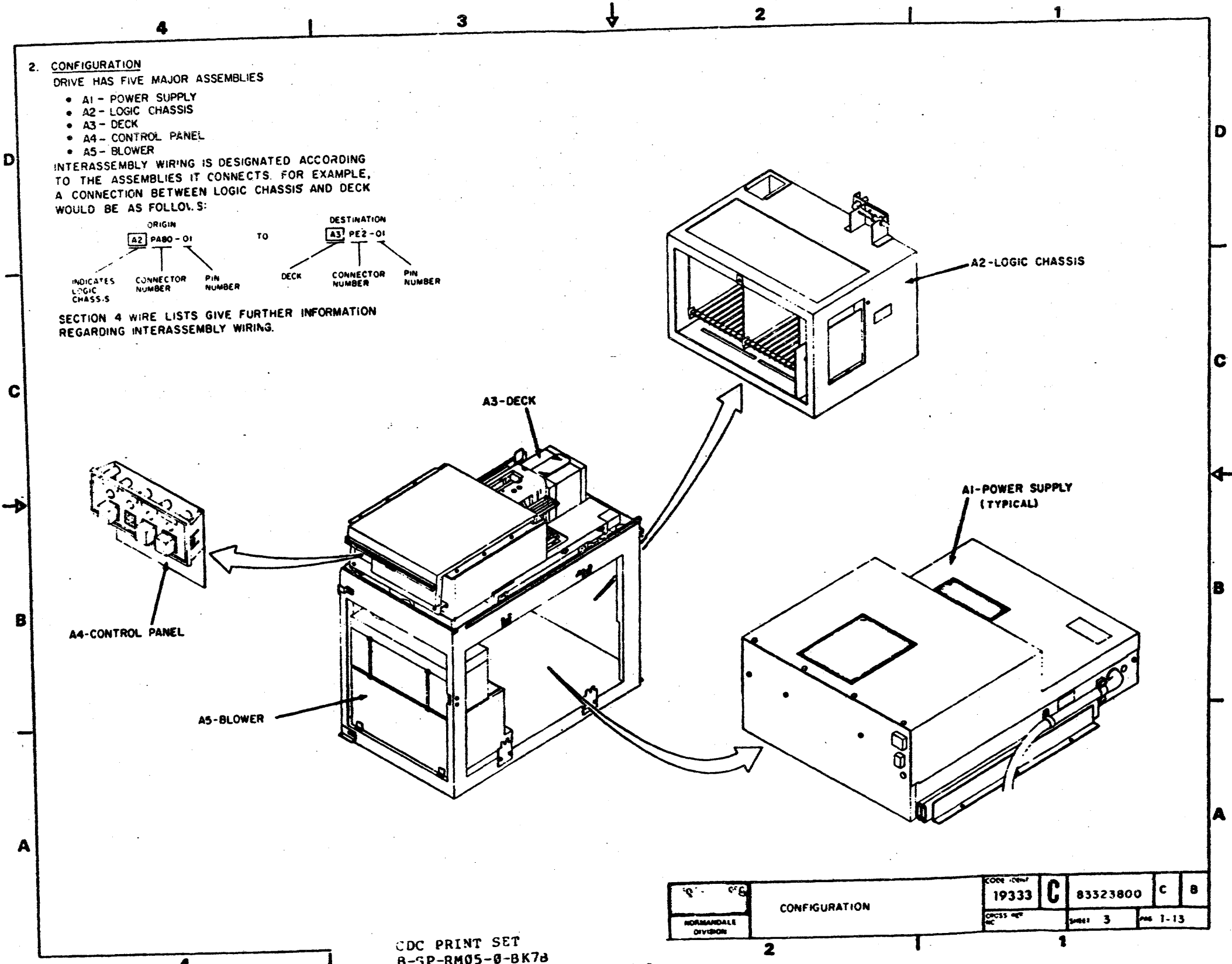
DRIVE HAS FIVE MAJOR ASSEMBLIES

- A1 - POWER SUPPLY
- A2 - LOGIC CHASSIS
- A3 - DECK
- A4 - CONTROL PANEL
- A5 - BLOWER

INTERASSEMBLY WIRING IS DESIGNATED ACCORDING TO THE ASSEMBLIES IT CONNECTS. FOR EXAMPLE, A CONNECTION BETWEEN LOGIC CHASSIS AND DECK WOULD BE AS FOLLOWS:



SECTION 4 WIRE LISTS GIVE FURTHER INFORMATION REGARDING INTERASSEMBLY WIRING.



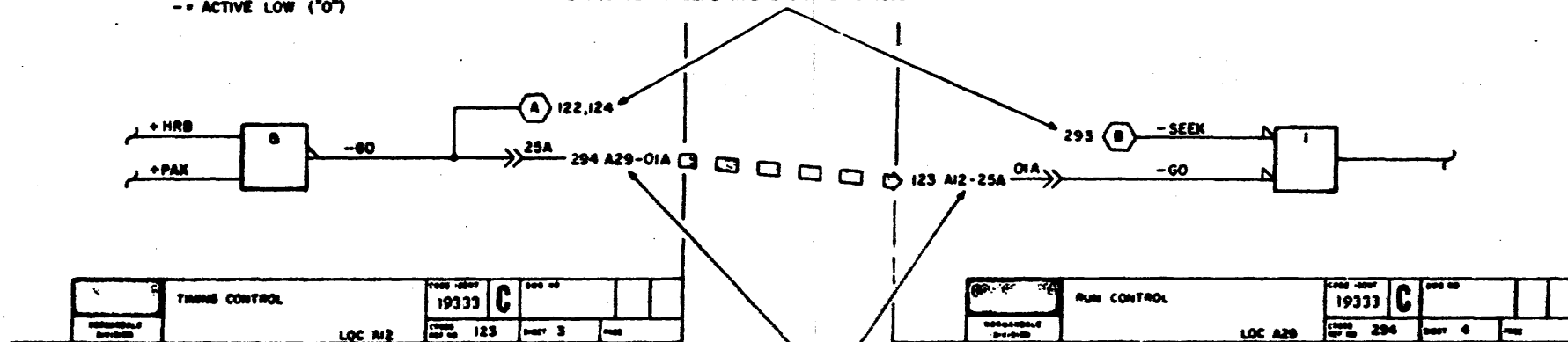
NORMANVILLE DIVISION	CONFIGURATION	19333	C	83323800	C	B
		CROSS REF NO.		SHEET 3	PAGE 1-13	

3. INTERSHEET REFERENCING

THE FOLLOWING EXPLAINS THE BASIC METHOD OF INTER-SHEET REFERENCING.
FOR MORE INFORMATION REFER TO CDC-STD 1.41.108

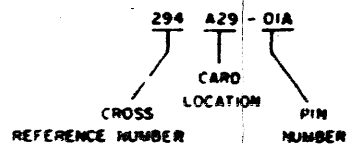
SIGNAL NAME WHEN ACTIVE
 += ACTIVE HIGH ("1")
 -= ACTIVE LOW ("0")

HEXAGON IDENTIFIES SIGNALS LEAVING OR ENTERING THIS SHEET BUT NOT THE CARD ADJACENT NUMBERS IDENTIFY OTHER CROSS REFERENCE NUMBERS WHERE SIGNAL IS USED

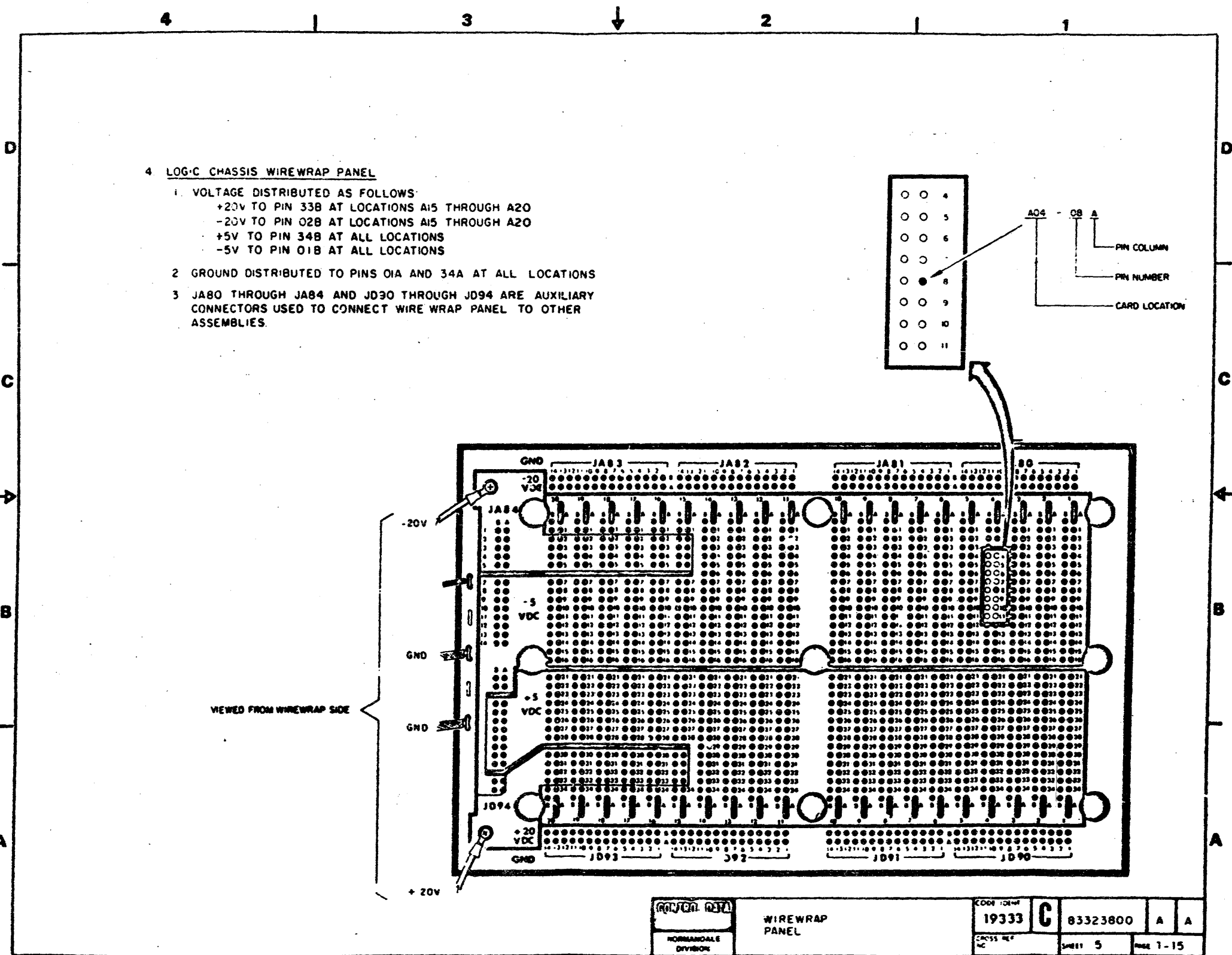


SOURCE SHOWS WHERE SIGNAL ORIGINATES

DESTINATIONS SHOW ALL LOCATIONS WHERE OUTPUT SIGNALS GO WITHOUT REGARD TO ACTUAL BACKPANEL WIRE ROUTING, IN THE EXAMPLE SHOWN IT IS AS FOLLOWS

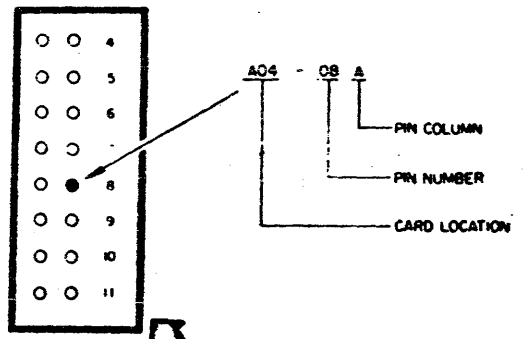


HOWARD DIVISION	INTERSHEET REFERENCING		COORD IDENT 19333	C	83323800	A	A
	CROSS REF NO	SHEET 4	PAGE 1 - 14				



4 LOG-C CHASSIS WIREWRAP PANEL

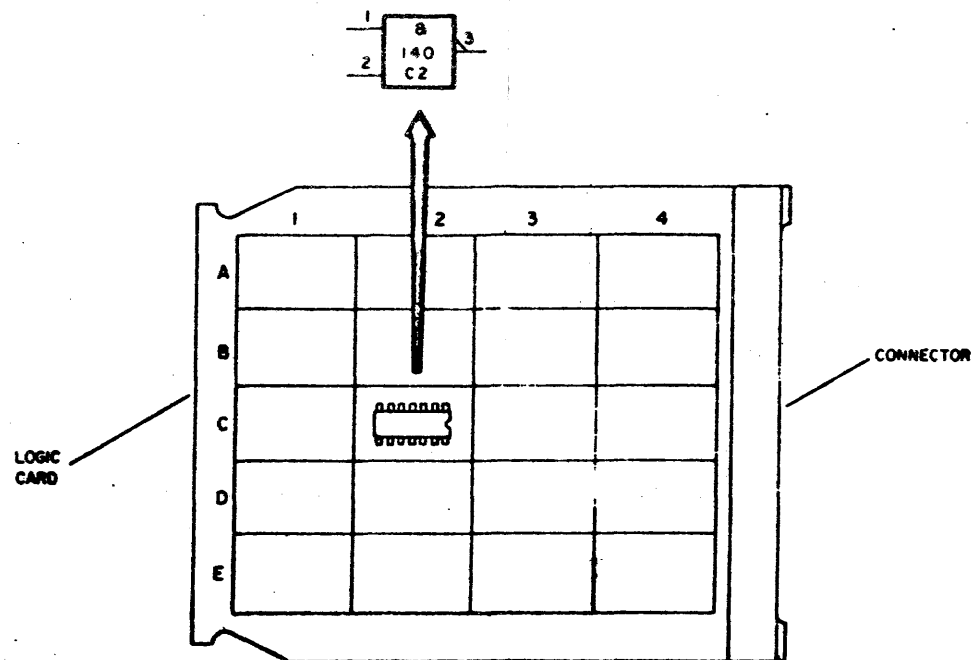
1. VOLTAGE DISTRIBUTED AS FOLLOWS:
 - +20V TO PIN 33B AT LOCATIONS A15 THROUGH A20
 - 20V TO PIN 02B AT LOCATIONS A15 THROUGH A20
 - +5V TO PIN 34B AT ALL LOCATIONS
 - 5V TO PIN 01B AT ALL LOCATIONS
2. GROUND DISTRIBUTED TO PINS 01A AND 34A AT ALL LOCATIONS
3. JAB0 THROUGH JAB4 AND JD90 THROUGH JD94 ARE AUXILIARY CONNECTORS USED TO CONNECT WIRE WRAP PANEL TO OTHER ASSEMBLIES.



VIEWED FROM WIREWRAP SIDE

WIREWRAP PANEL	CODE 19333	83323800	A	A
NORMANVILLE DIVISION	SHEET 5	PAGE 1-15		

5. CARD COORDINATES



6. POWER SUPPLY CONNECTIONS

1. POWER CONNECTIONS FOR ALL INTEGRATED CIRCUITS ARE FOUND IN THE KEY TO LOGIC SECTION OF THE HARDWARE REFERENCE MANUAL
2. POWER CONNECTIONS TO EACH LOGIC CARD ARE SHOWN ON THE COVER SHEET FOR THAT CARD
3. INTERASSEMBLY POWER CONNECTIONS ARE FOUND IN THE WIRE LISTS SECTION OF THIS MANUAL

7. GROUND CONNECTIONS

1. GROUND CONNECTIONS TO EACH LOGIC CARD ARE SHOWN ON THE COVER SHEET FOR THAT CARD
2. INTERASSEMBLY GROUND CONNECTIONS ARE FOUND IN THE WIRE LISTS SECTION OF THIS MANUAL

8. LOGIC LEVELS

- TTL "1" = +3.6 (±1.6)V
 "0" = +0.4 (±0.4)V
- ECL "1" = +0.79 (±0.18)V
 "0" = +1.95 (±0.43)V

9. SPECIAL NOMENCLATURE

ALL ABBREVIATIONS ARE DEFINED IN THE LIST OF ABBREVIATIONS WHICH IS FOUND IN THE FRONT MATTER OF THE HARDWARE REFERENCE MANUAL

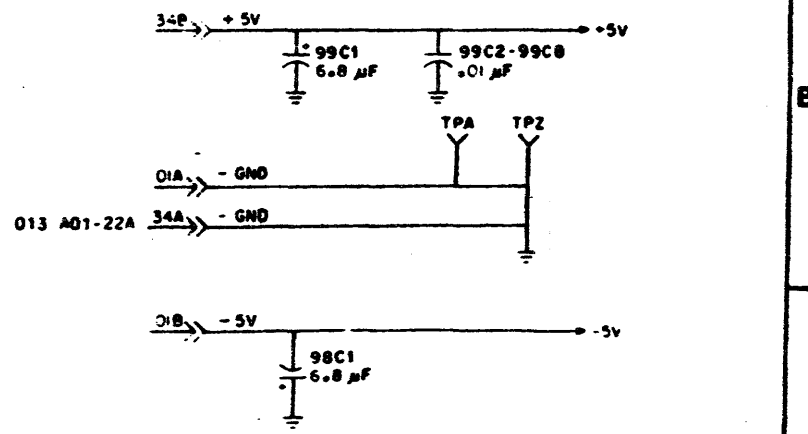
10. CIRCUIT DESCRIPTIONS

DESCRIPTIONS OF ALL DISCRETE AND INTEGRATED CIRCUITS ARE FOUND IN THE KEY TO LOGIC SECTION OF THE HARDWARE REFERENCE MANUAL

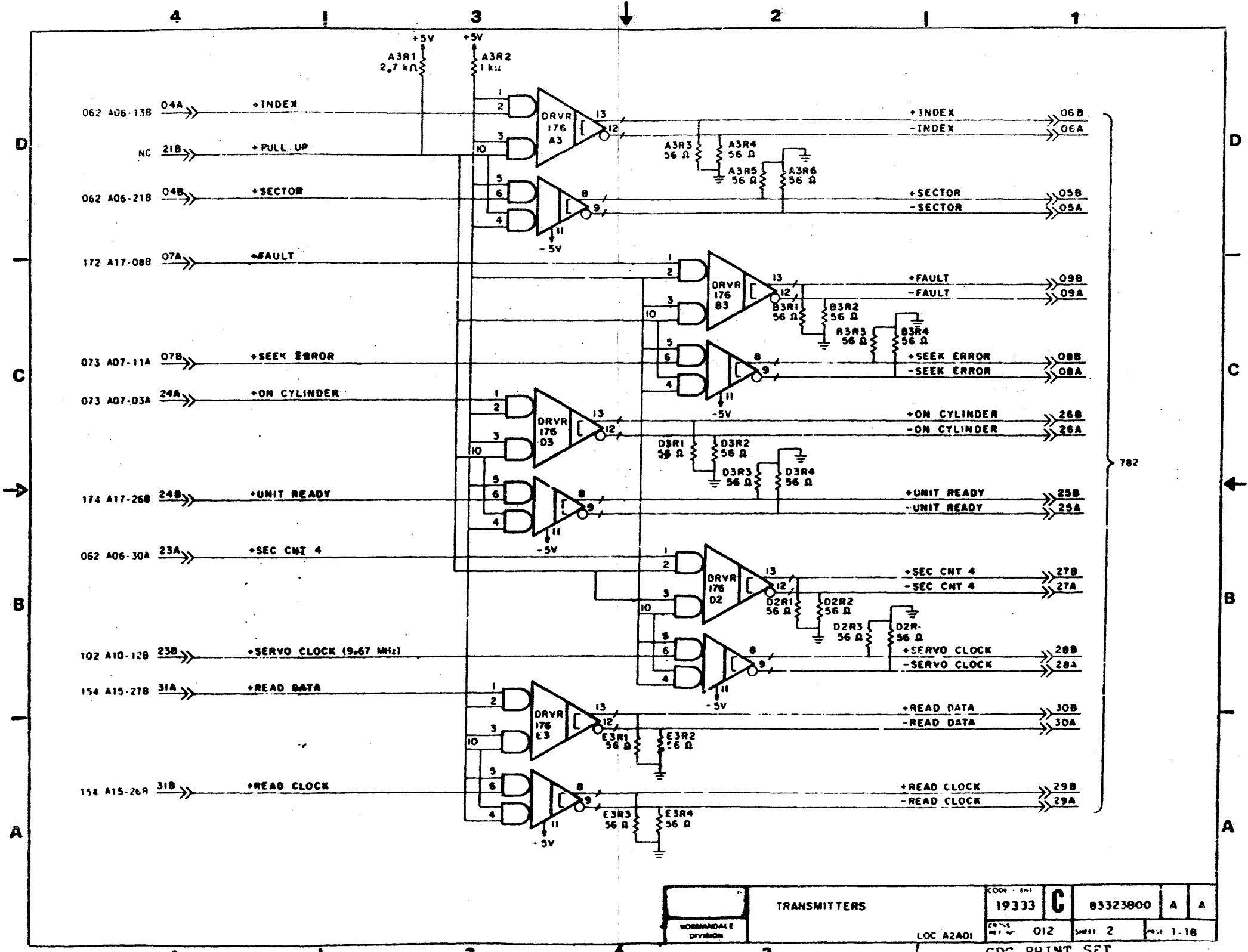
	MISCELLANEOUS	19333	C	83323800	A	A
				6	1-16	

REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A																	

REVISIONS					
REV	ECO	DESCRIPTION	DRY	DATE	CHK D
A	PE2574	RELEASE			

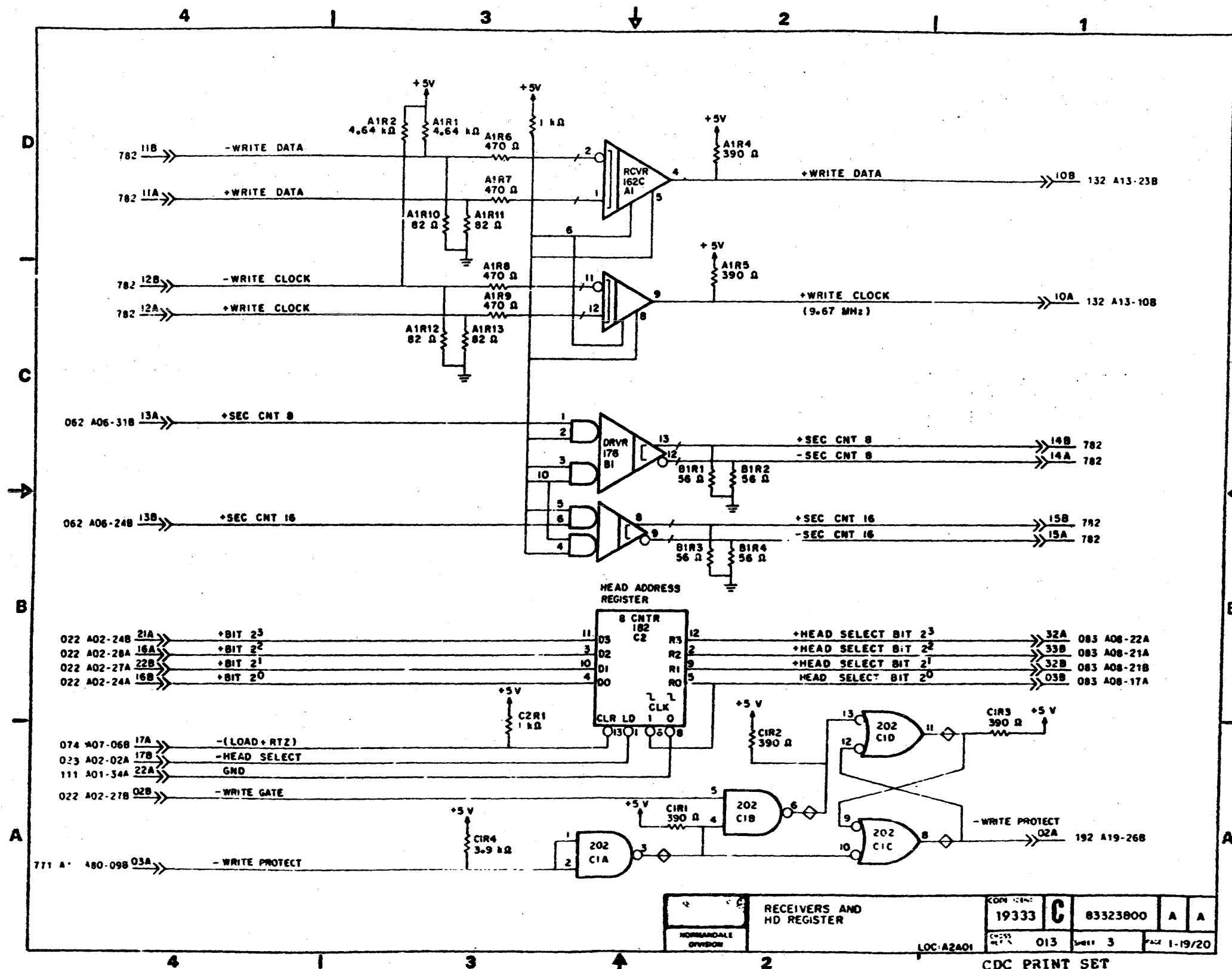


DRAWN: <i>[Signature]</i> 3/10/77	TRANSMITTERS AND RECEIVERS - HEAD ADDRESS REGISTER DIAGRAMS TYPE JTVV LOC A2A01	COORD. NO: 19333	C	83323800	A	A
CHECKED:		CROSS REF. NO: 011	SHEET: 1 of 3	PAGE: 1-17		
ENGINEER: <i>[Signature]</i>						
APPROVED:						



NORANDALE DIVISION	TRANSMITTERS		CODE - INT 19333	C	83323800	A	A
	LOC A2A01	012	SHEET 2				

CDC PRINT SET
 B-SP-R405-0-3K7B
 SHEET 26 of 180
 REV B

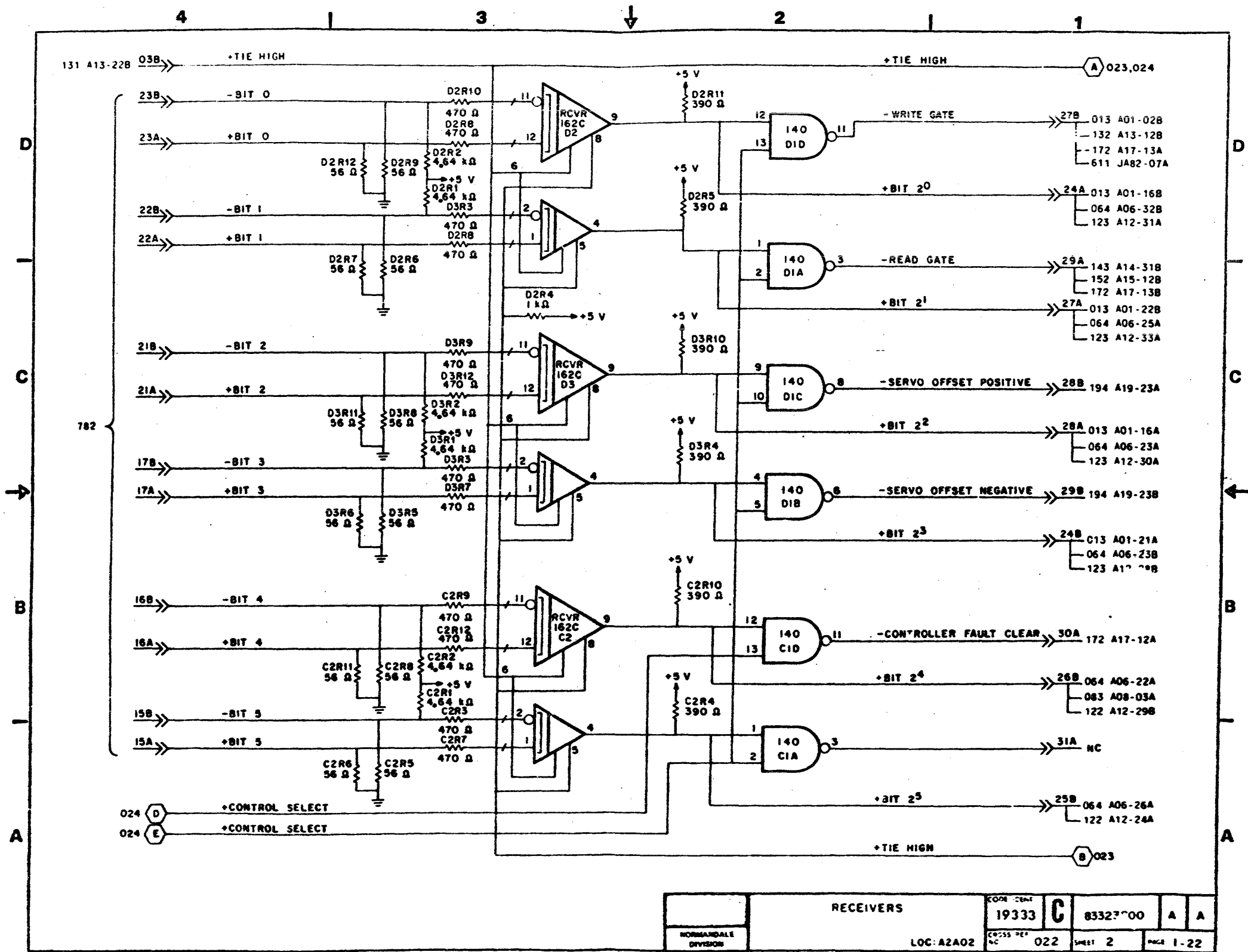


NORANDALE DIVISION	RECEIVERS AND HD REGISTER		CON. NO. 19333	C	83323800	A	A
	LOC: A2401		REV. 013				

REVISION STATUS OF SHEETS																			
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A	A	A	A																

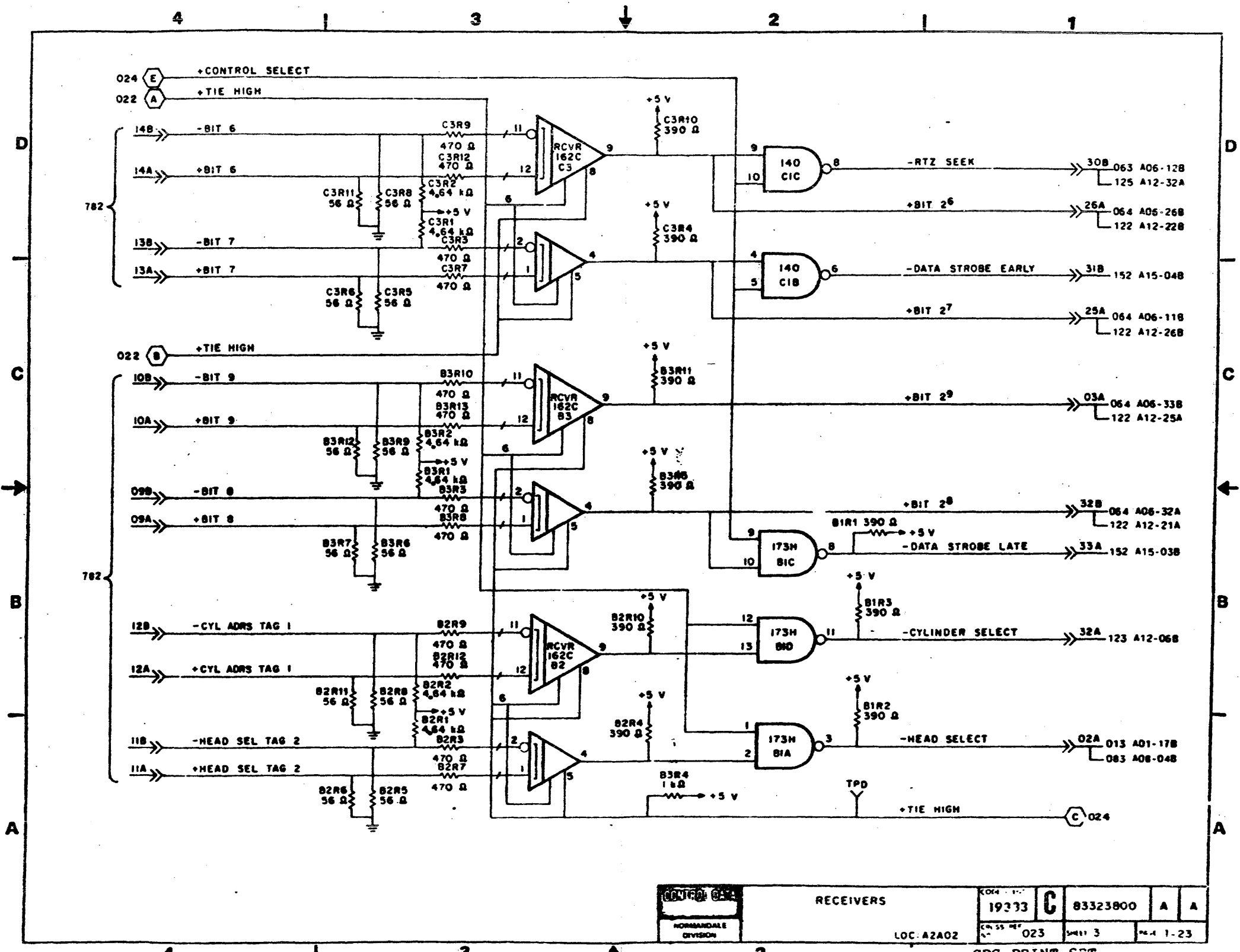
ELEMENT TYPE	LOCATION	OUTPUT PIN(S)
173H	B18	6
230LS	A1A	12

REV	ECO	DESCRIPTION	DRFT	DATE	CHK'D
A	PEZS	RELEASED			



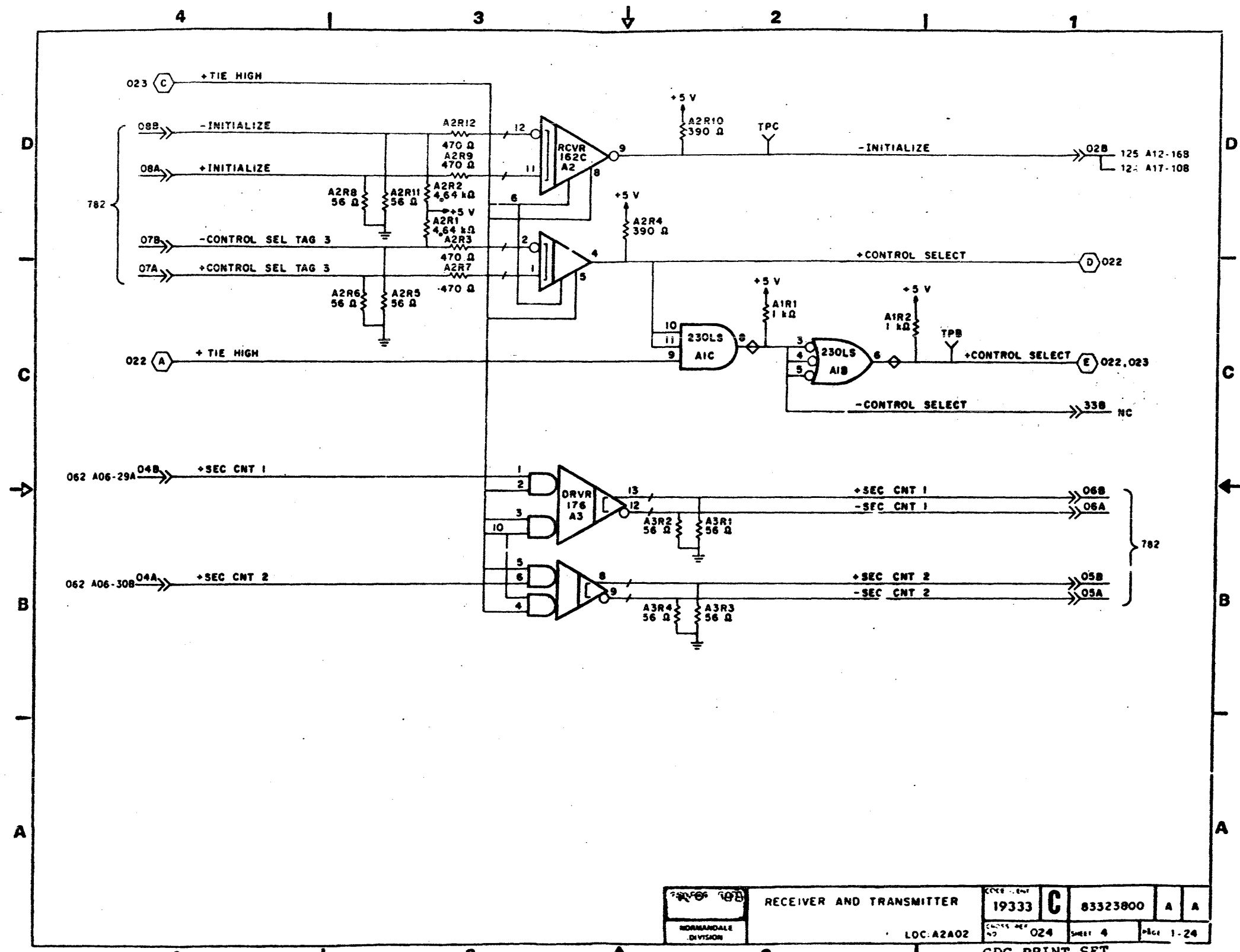
NORMANVILLE DIVISION	RECEIVERS	EGOR CONT 19333	C	8332700	A	A
	LOC: A2A02	CROSS REF 022				

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 29 OF 180
 REV B



CONTROL BOARD	RECEIVERS	19333	C	83323800	A	A
		LOC. A2A02				

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 30 of 180
 REV B



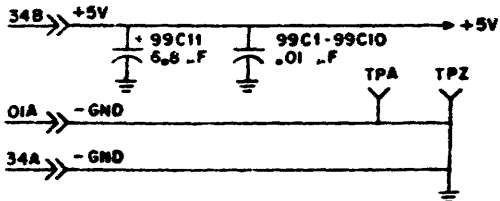
RECEIVER AND TRANSMITTER	19333	C	83323800	A	A
	LOC: A2A02				

REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A																

REVISIONS					
REV	ECO	DESCRIPTION	DRFT	DATE	CHK'D

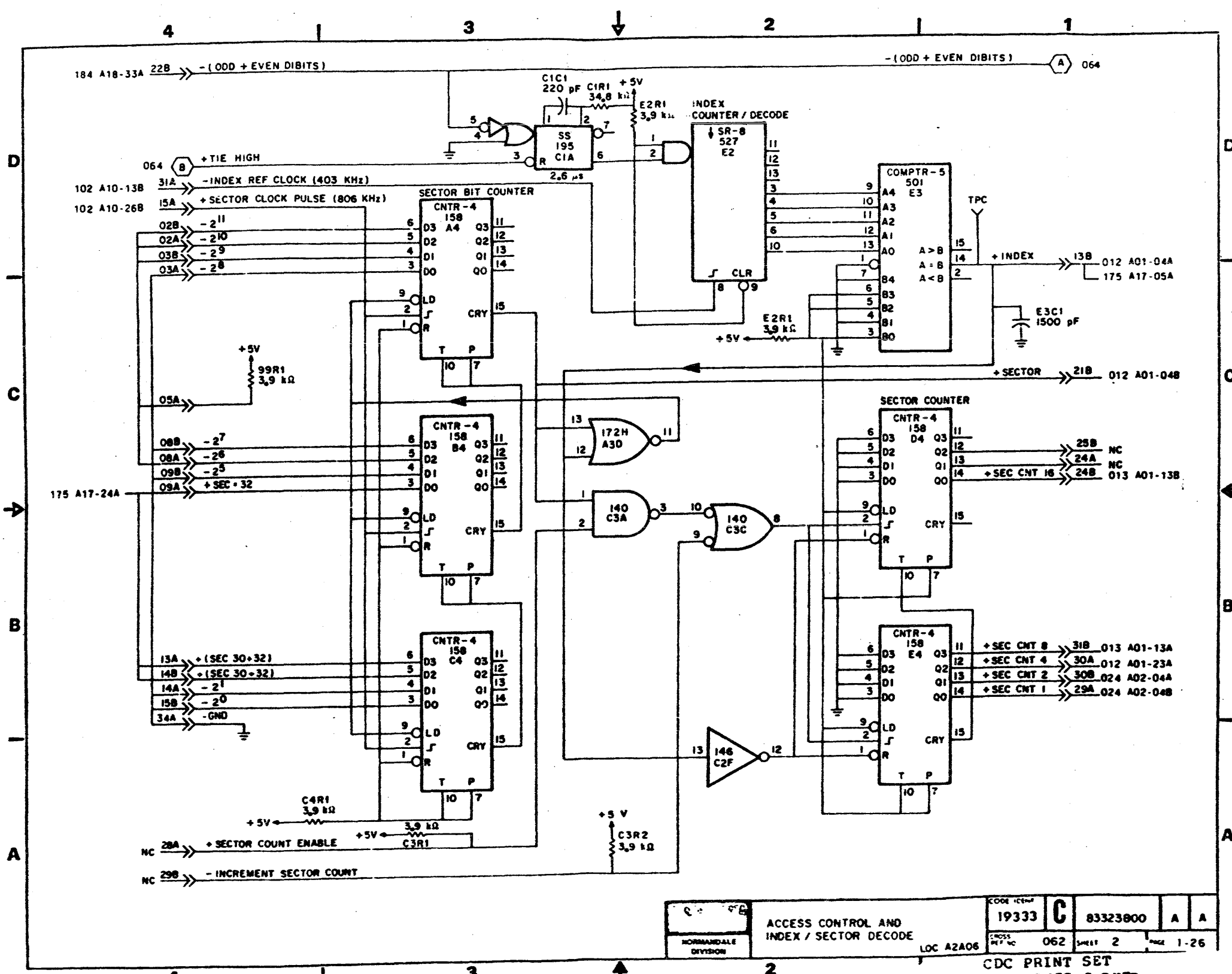
UNUSED LOGIC ELEMENTS

TYPE	LOCATION	OUTPUT PIN(S)
146	C2C	6
140	DIC	8
140	EI	6,8



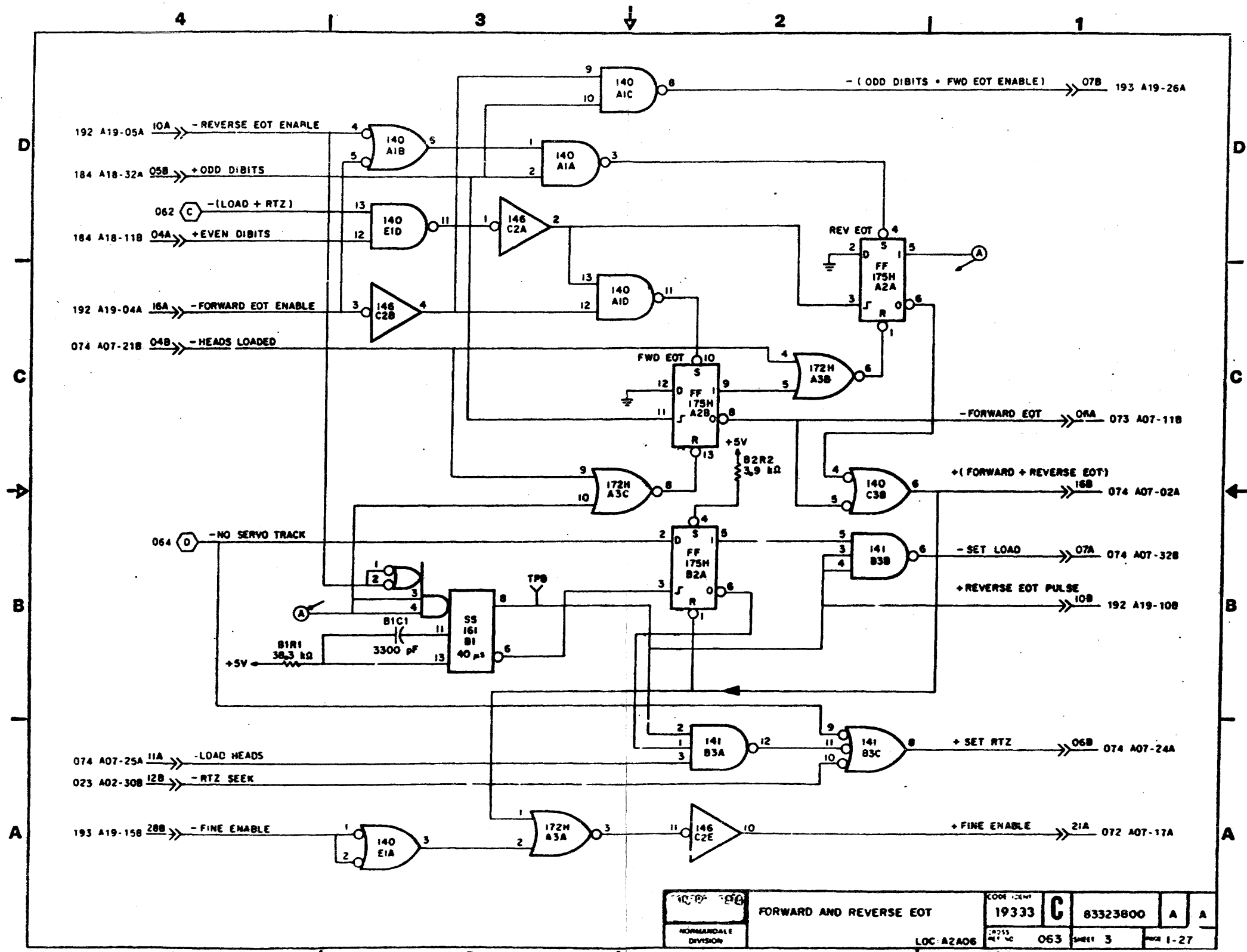
DESIGN	J. LAJANE 3377	DATE	10/15/68	ACCESS CONTROL AND INDEX / SECTOR DECODE DIAGRAMS	COMP. NO.	19333	PROJECT	C	83323800	REV.	A	A
CHECKED		DRAWN										
ENGINEER		APPROVED										
				NONRADDALE DIVISION			LOC A2A06	061	SHEET	1	4	1-25

CDC PRINT SET
B-SP-RM05-2-BK7B
SHEET 32 of 180 REV 9



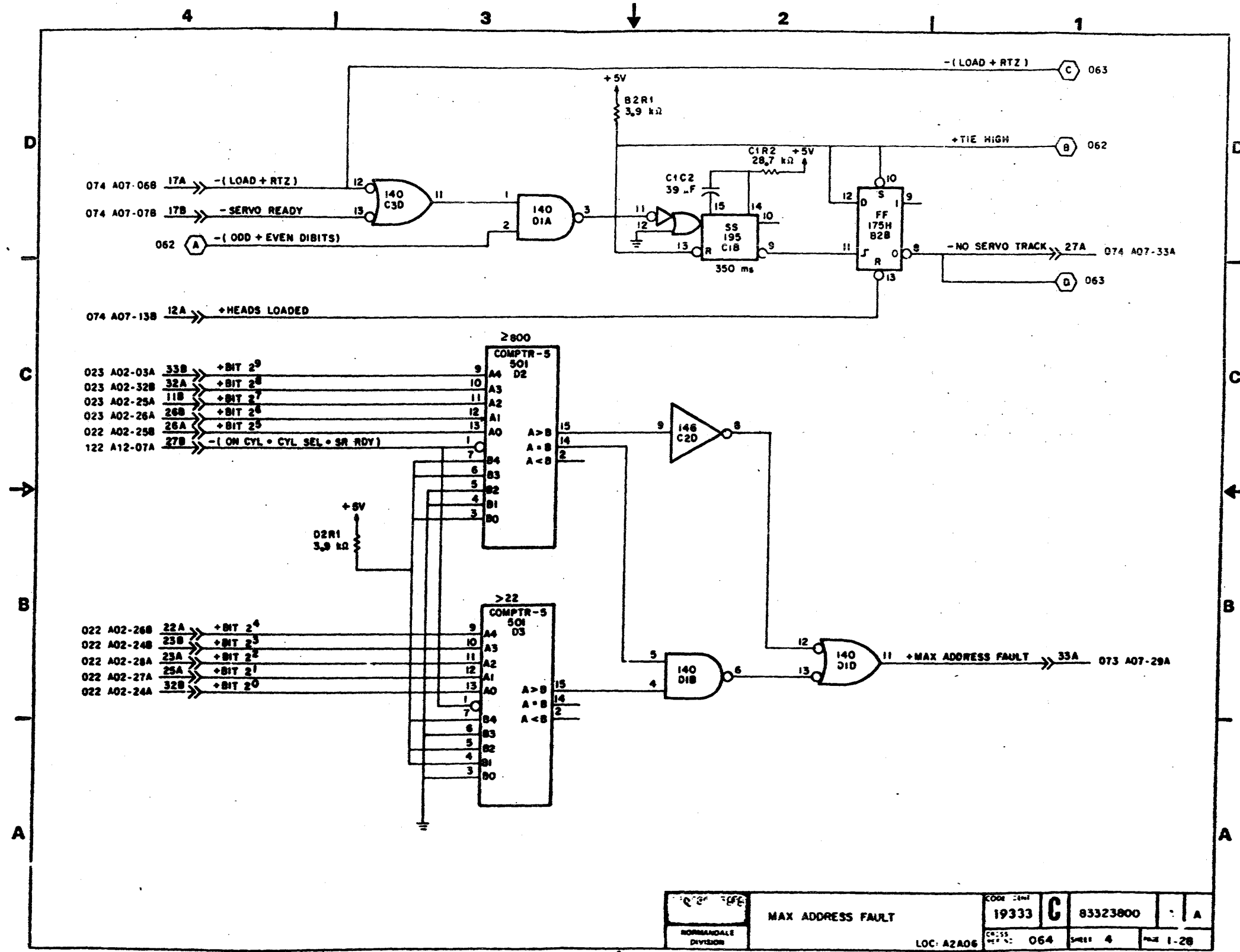
NORMANDALE DIVISION	ACCESS CONTROL AND INDEX / SECTOR DECODE		CODE IDENT 19333	C	83323800	A	A
	LOC A2A06		CROSS REF NO 062				

CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 33 of 180
REV B



NORMANDEALE DIVISION	FORWARD AND REVERSE EOT	CODE IDENT 19333	G	83323800	A	A
	LOC: A2A06	REV: 063				

CDC PRINT SET
 B-SP-RM05-0-8K7B
 SHEET 34 of 180 REV B



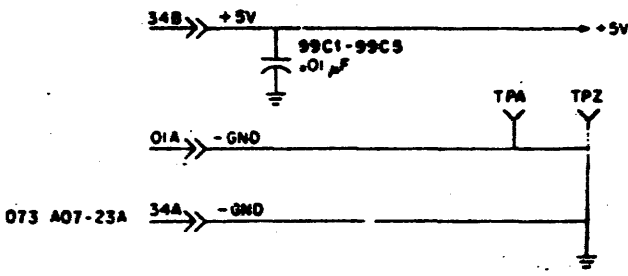
19333	C	83323000	A
MAX ADDRESS FAULT		LOC: A2A06	CLASS: 064 SHEET: 4 PAGE: 1-28

4 3 2 1

REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A																

REVIS-JNS					
REV	ECO	DESCRIPTION	DWY	DATE	CMB'S
A	RE 333	RELEASE			

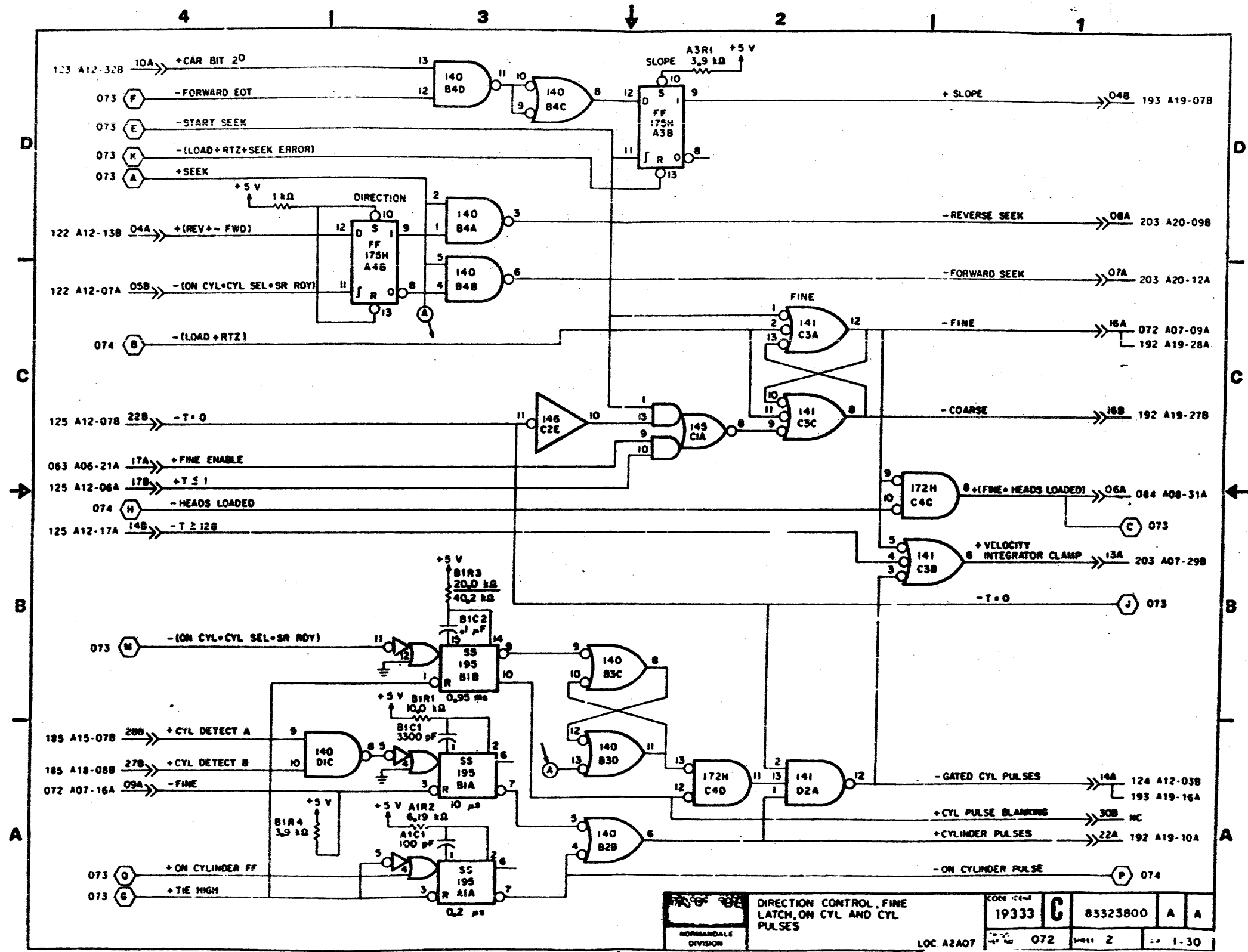
UNUSED LOGIC ELEMENT		
ELEMENT TYPE	LOCATION	OUTPUT PIN(S)
172H	D3C	8



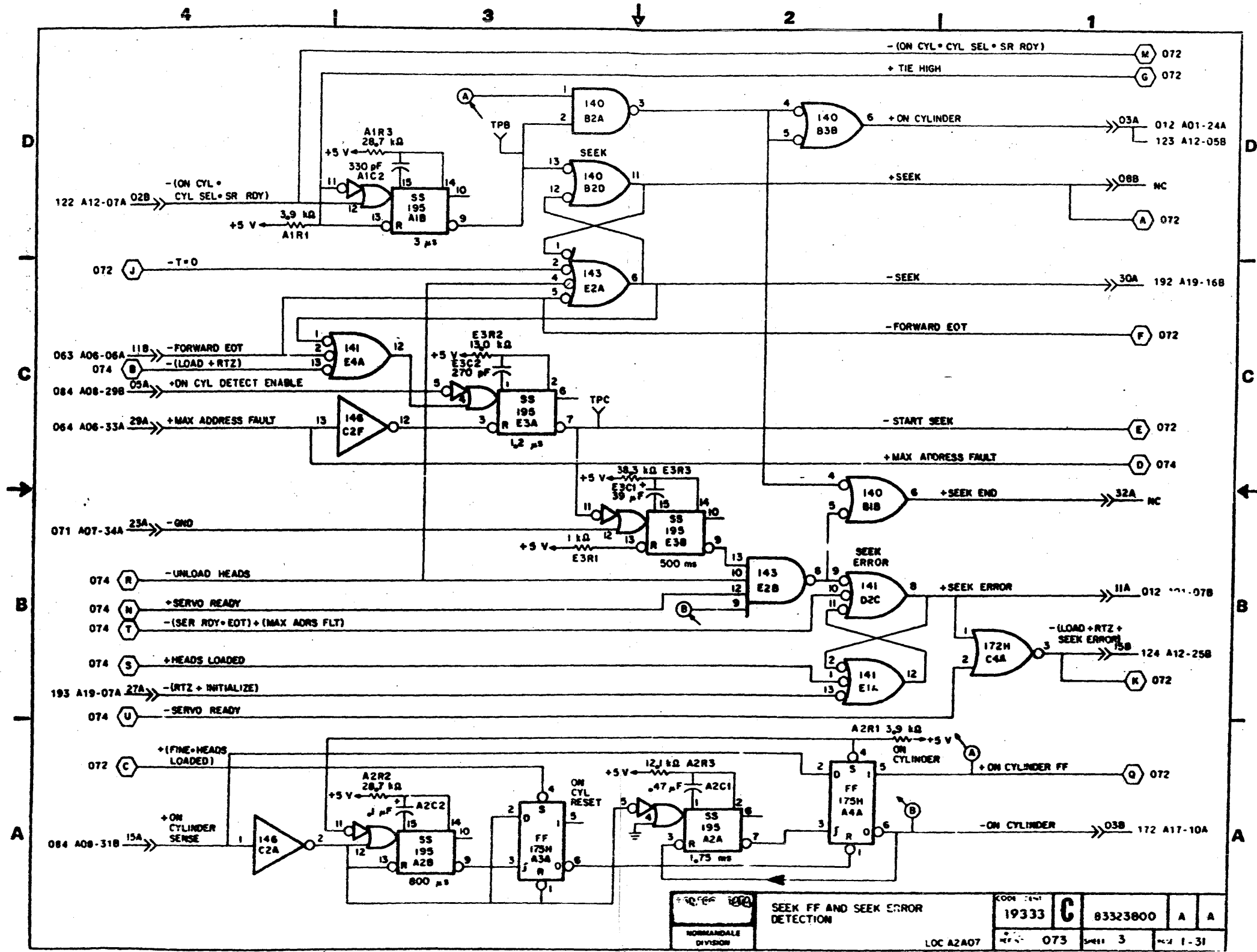
D
C
B
A

D
C
B
A

Drawn	G. Radine	Checked	J. J. [Signature]	Access Control No 1	19333	C	83323800	A	A
App'd		Norman Dale Division		TYPE RLVV	LOC A2A07	071	1-4	1-29	

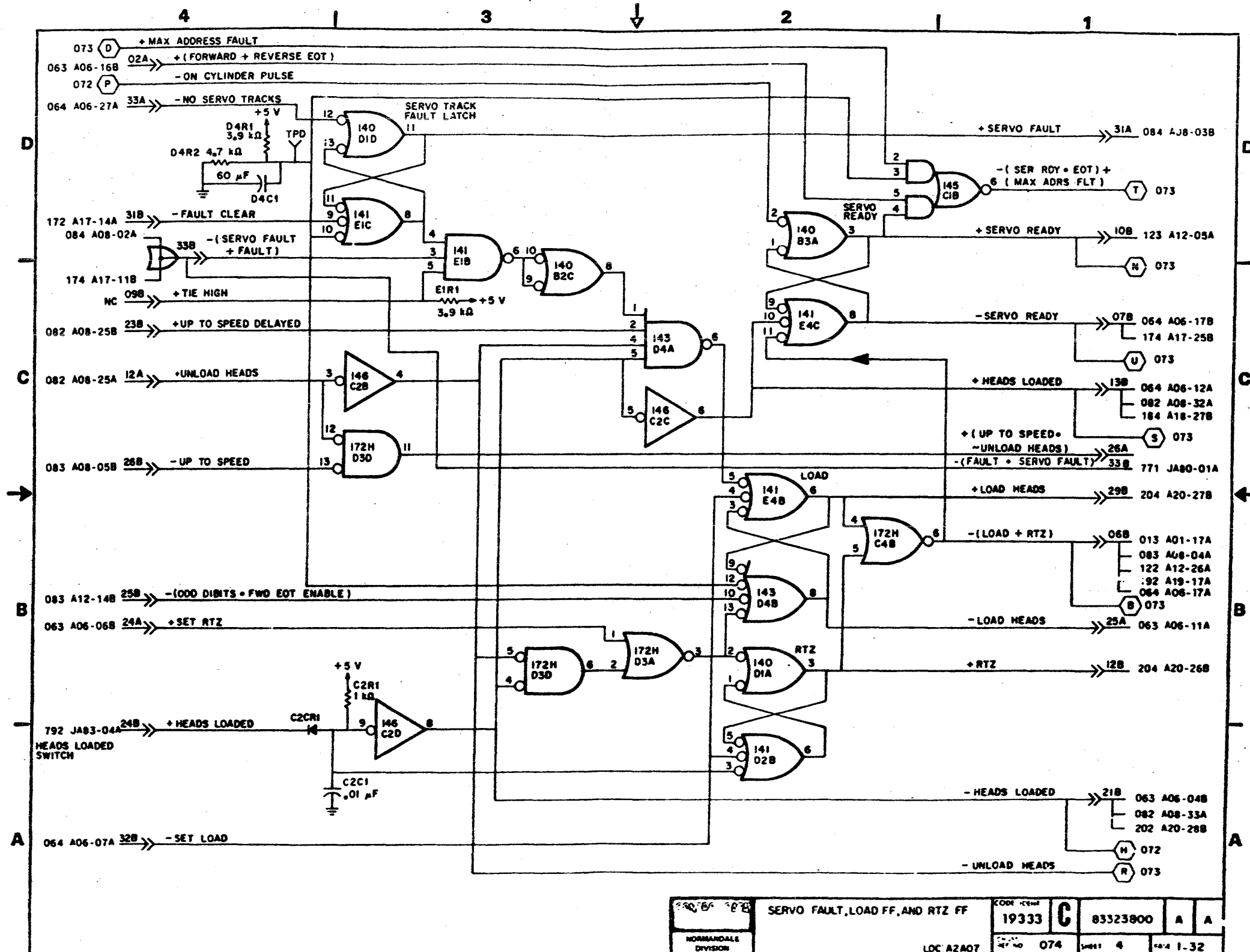


19333 C 83323800 A A
 072 SHEET 2 1-30
 CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 37 of 180
 REV B



SEEK FF AND SEEK ERROR DETECTION
 NORMANDALE DIVISION

CODE	19333	83323800	A	A
REV	073	3	1-31	

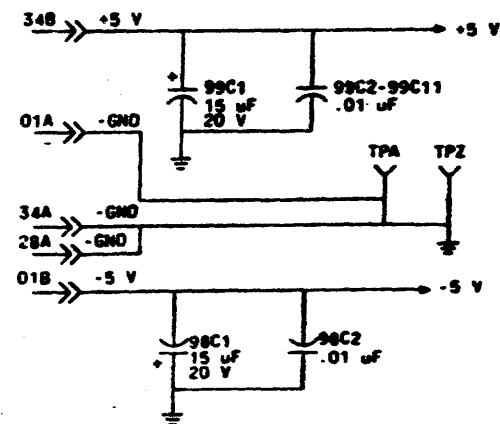
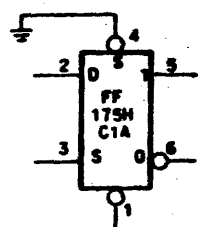


REVISION STATUS OF SHEETS

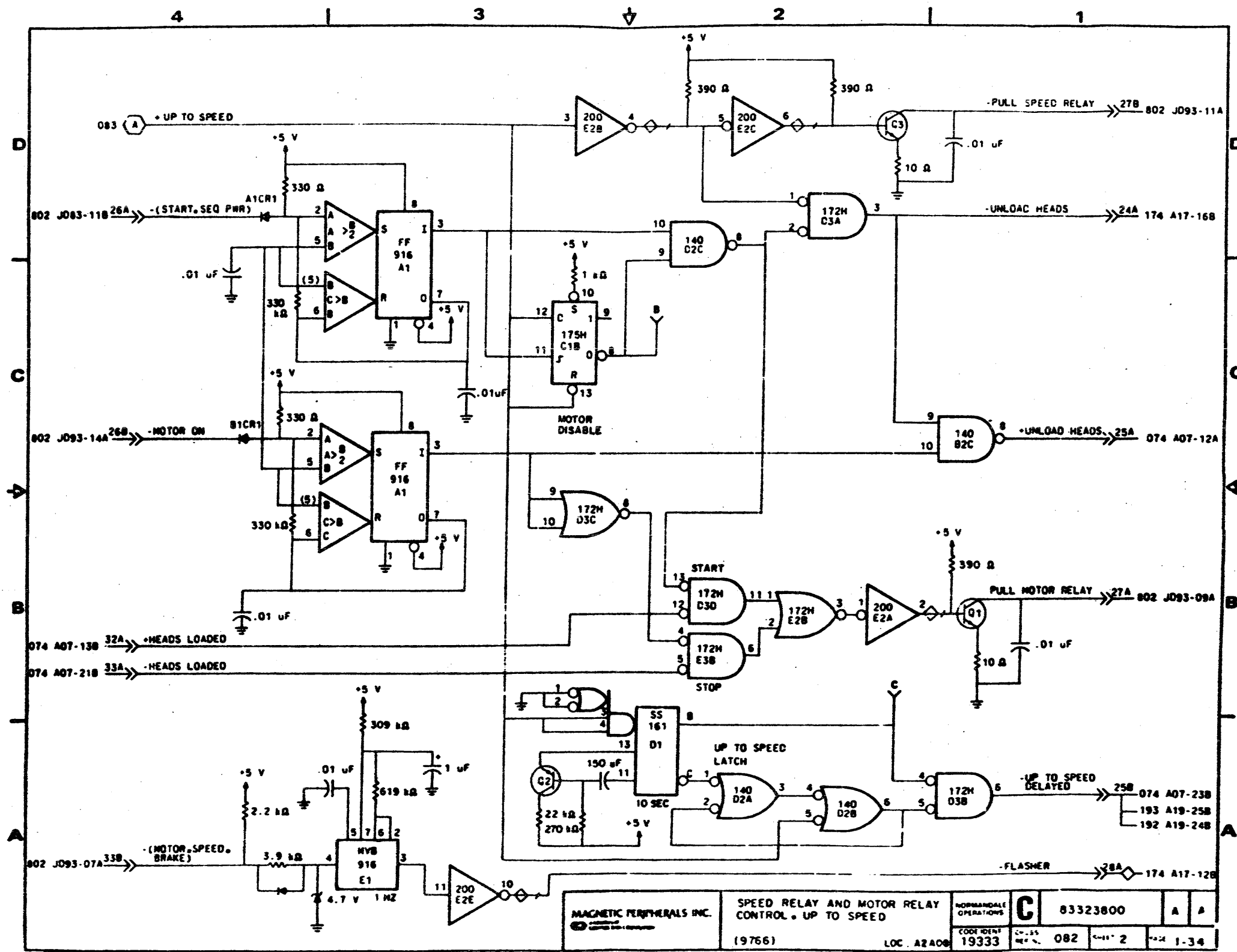
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
A	A	A	A																	
B	A	B	A																	

REV	ECO	DESCRIPTION	DATE	BY
D	57500	RELEASED		
B	57453	ADD VDE	2/8	2-21/81

UNUSED LOGIC ELEMENTS

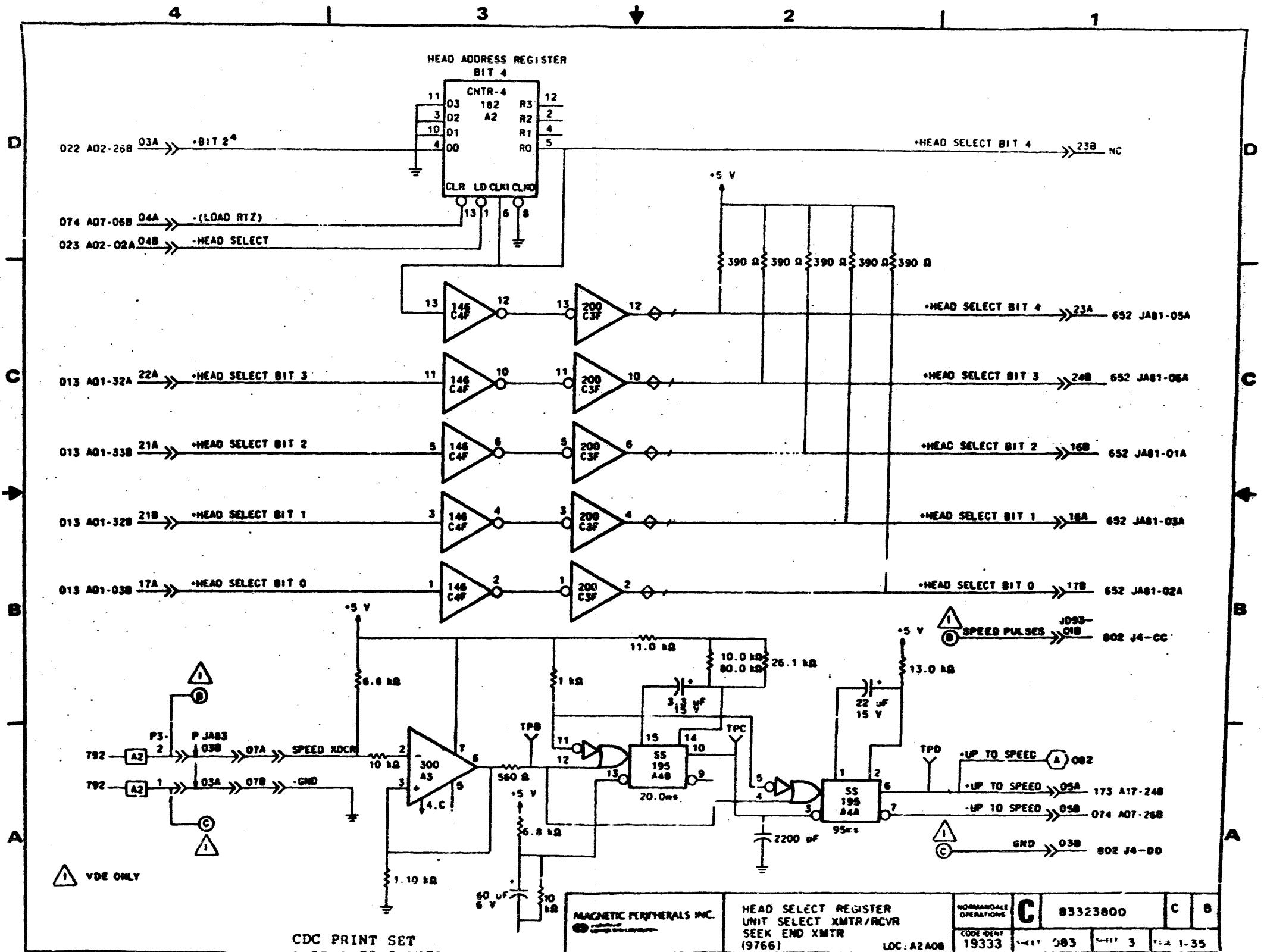


DESIGN		MAGNETIC PERIPHERALS INC.	DIFF BITS, HEAD REG	NORMAN/DALE OPERATIONS	C	83323800	C	B
CHECKED			SPEED ENABLE, UNIT SELECT	CODE IDENT	19333	SHEETS	1 of 4	1-33
ENGINEER			DIAGRAMS	LOC	A2A08	REV	081	
APPROVED			TYPE: EOPY					



MAGNETIC PERIPHERALS INC.		SPEED RELAY AND MOTOR RELAY CONTROL - UP TO SPEED		NORMANDALE OPERATIONS		C 83323800		A A	
(19766)		LOC. A2A08		CODE IDENT 19333		REV. 082		1-11-72	

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 41 of 180
 REV B

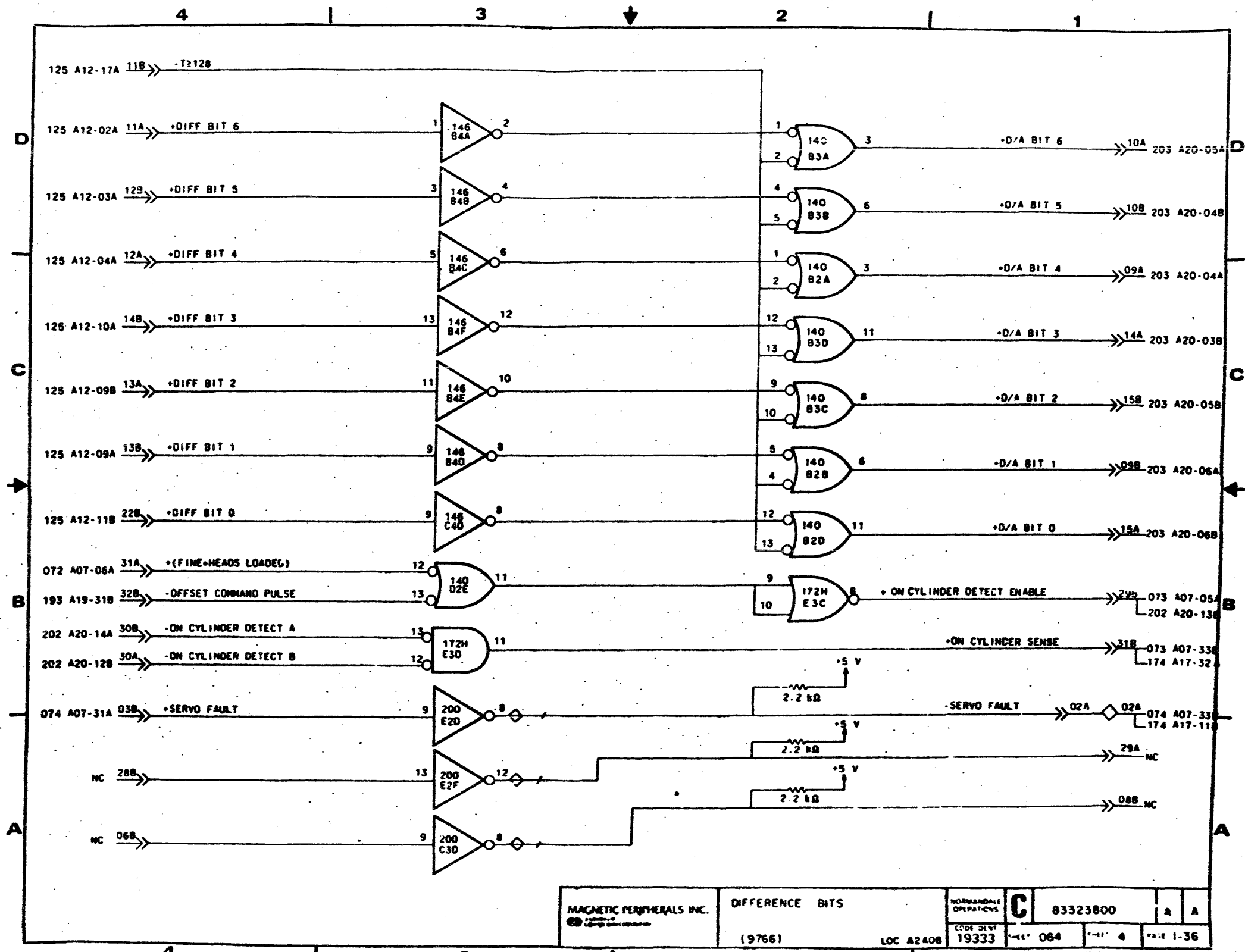


VDE ONLY

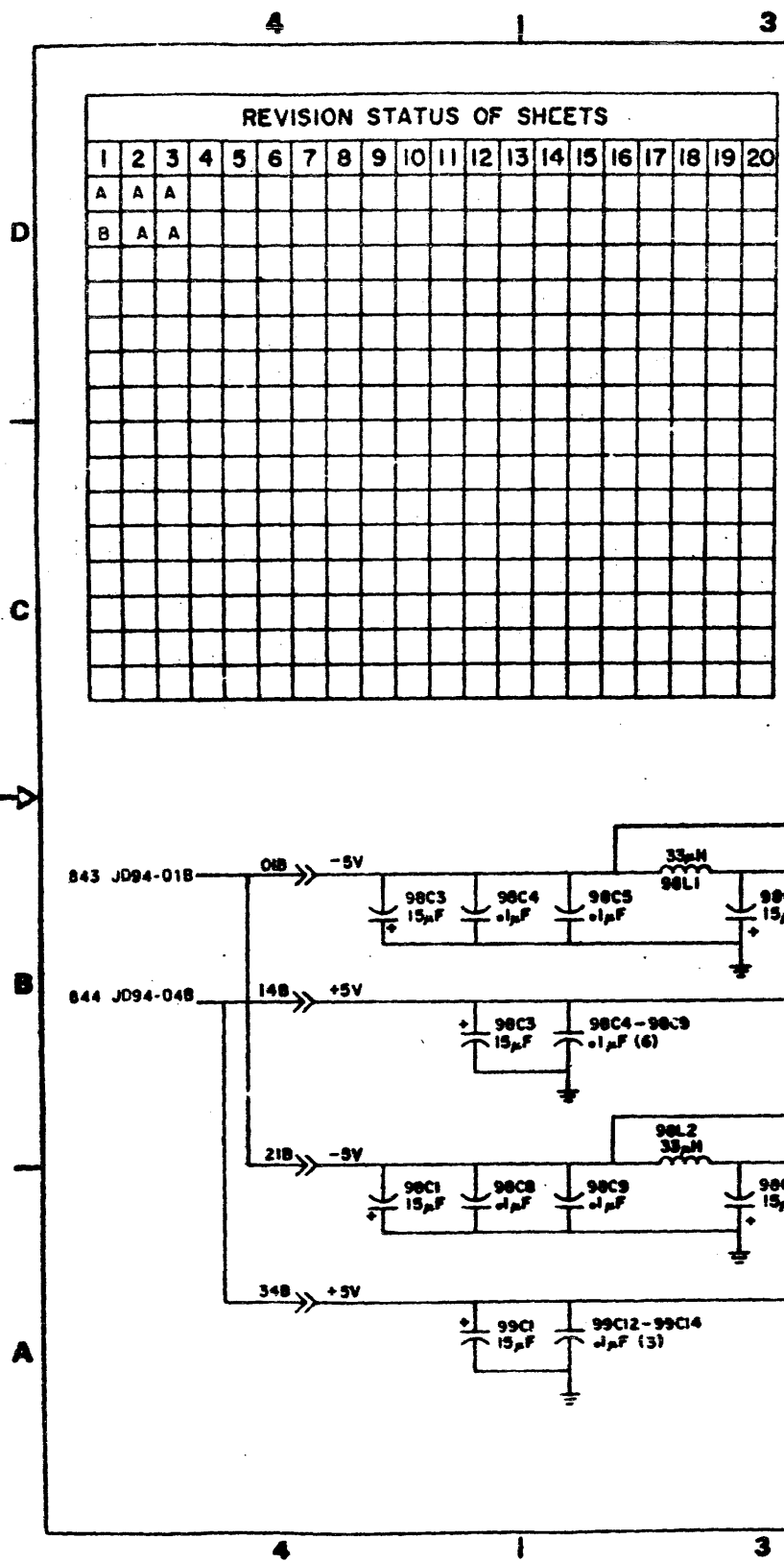
CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 42 of 180

REV B

MAGNETIC PERIPHERALS INC.		HEAD SELECT REGISTER UNIT SELECT XMTR/RCVR SEEK END XMTR (9766)		NORMANVILLE OPERATIONS	C	83323800	C	B
LOC: A2A08		CODE IDENT 19333	REV: 083	SHEET 3	FIG 1-35			



MAGNETIC PERIPHERALS INC. A DIVISION OF SPRAGUE	DIFFERENCE BITS	NORMANDALE OPERATIONS	C	83323800	A	A
	(9766)					

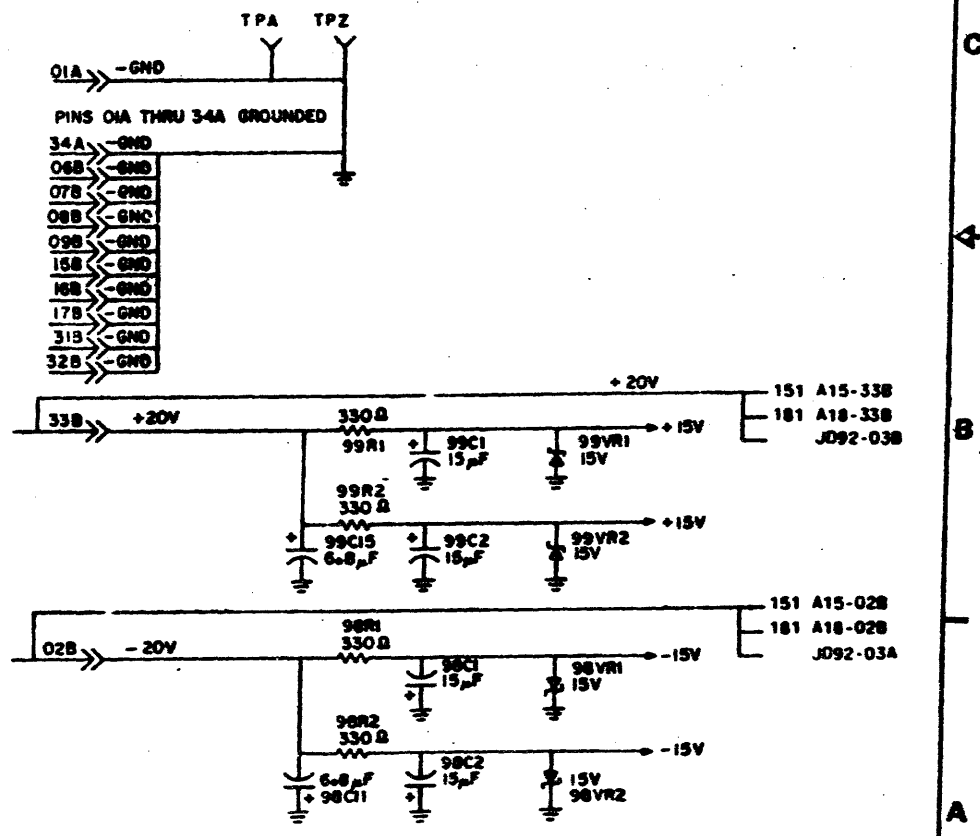


UNUSED LOGIC ELEMENTS

TYPE	LOCATION	OUTPUT PIN (S)
10131	C2	14, 15
10131	D2	14, 15
10116	B1	6, 7, 14, 15
10116	D1	2, 3, 6, 7
10125	D3	4, 13
10125	B2	4
140H	D4	6

REVISIONS

REV	ECO	DESCRIPTION	DRFT	DATE	CHK'D
A	PE27922	RELEASED			
B	57453	ADD VDE	SPB	L.L.S.	



DESIGN	ALS	5-1-77
CHECKED		
ENGINEER		
APPROVED		

WRITE CLOCK 806 KHZ
TO 9.67 MHZ
DIAGRAMS

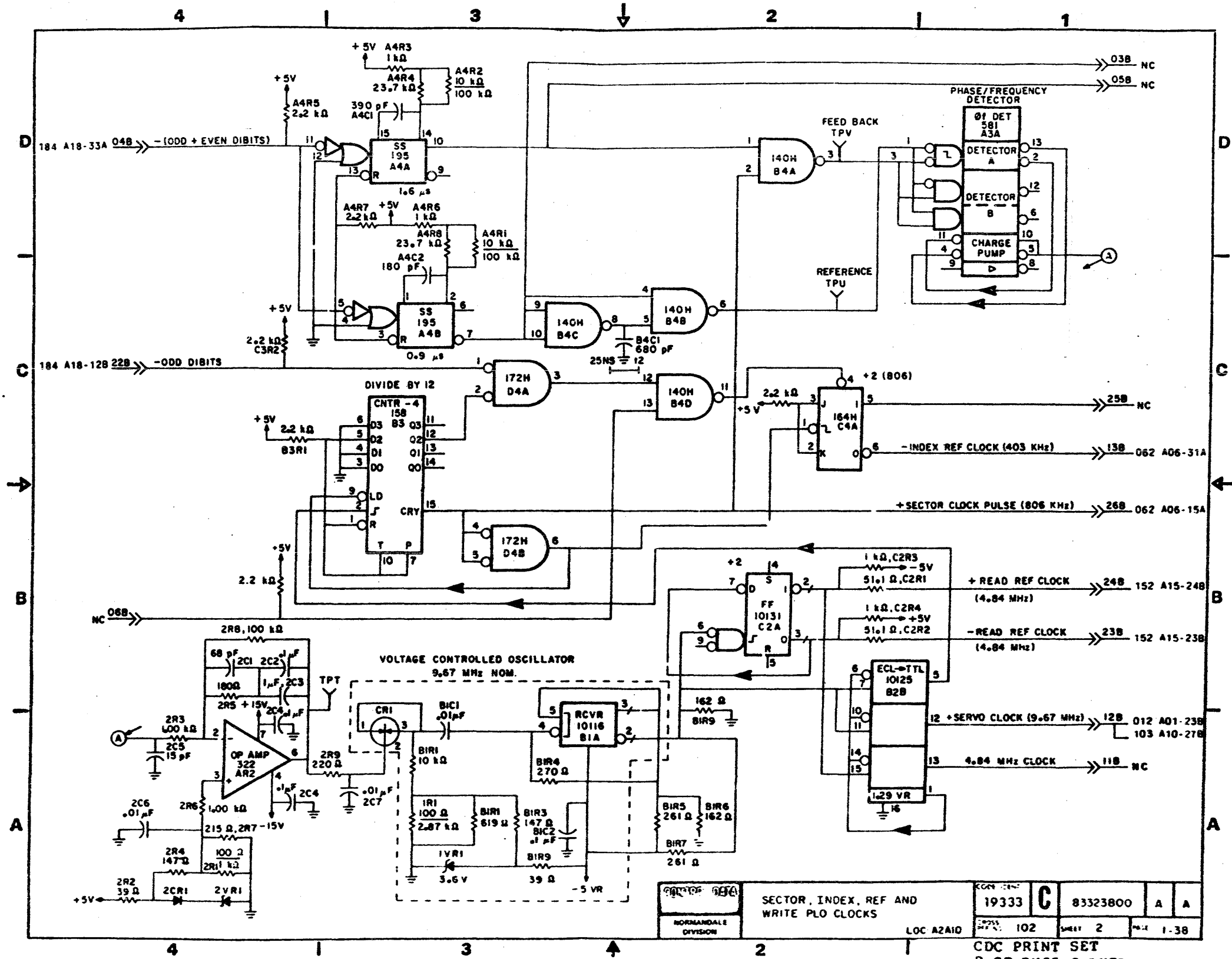
TYPE CLSV LOC A2A10

CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 44 of 180

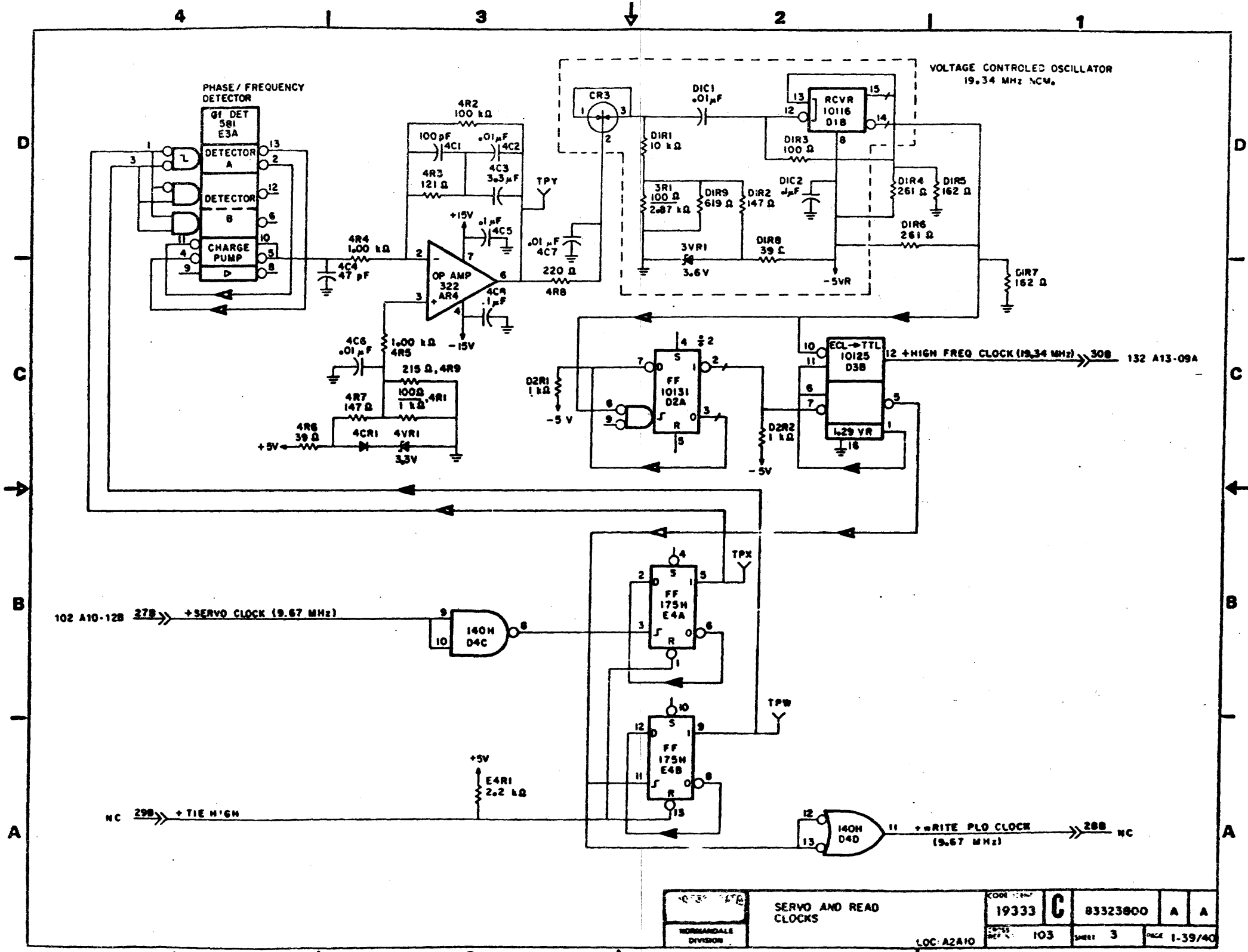
REV B

COO. IDENT	19333	C	83323800	C	B
CROSS REF	IOI		1-3		1-37

REF 8200010
REF 81200028



NORMANDALE DIVISION	SECTOR, INDEX, REF AND WRITE PLO CLOCKS		19333	C	83323800	A	A
	LOC A2A10		102		SHEET 2	1-38	



19333	C	83323800	A	A

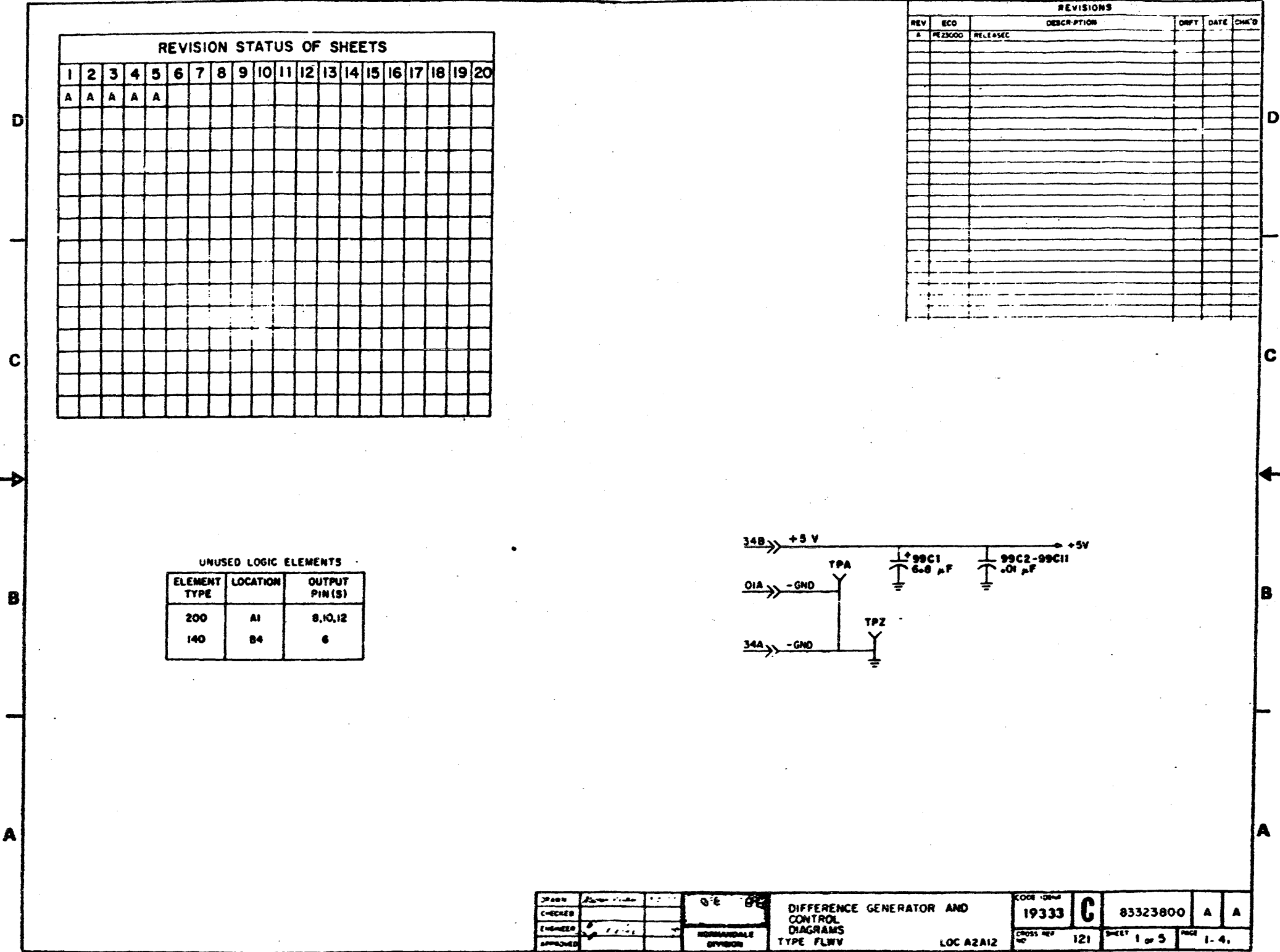
SERVO AND READ CLOCKS

LOC: A2A10

CDC PRINT SET
3-SP-RM05-0-BK7B
SHEET 46 of 180

REV B

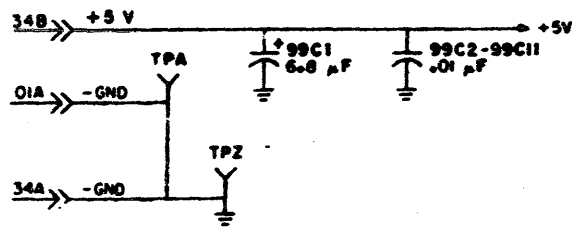
4 1 3 2 1 1



REVISION STATUS OF SHEETS																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
A	A	A	A	A																

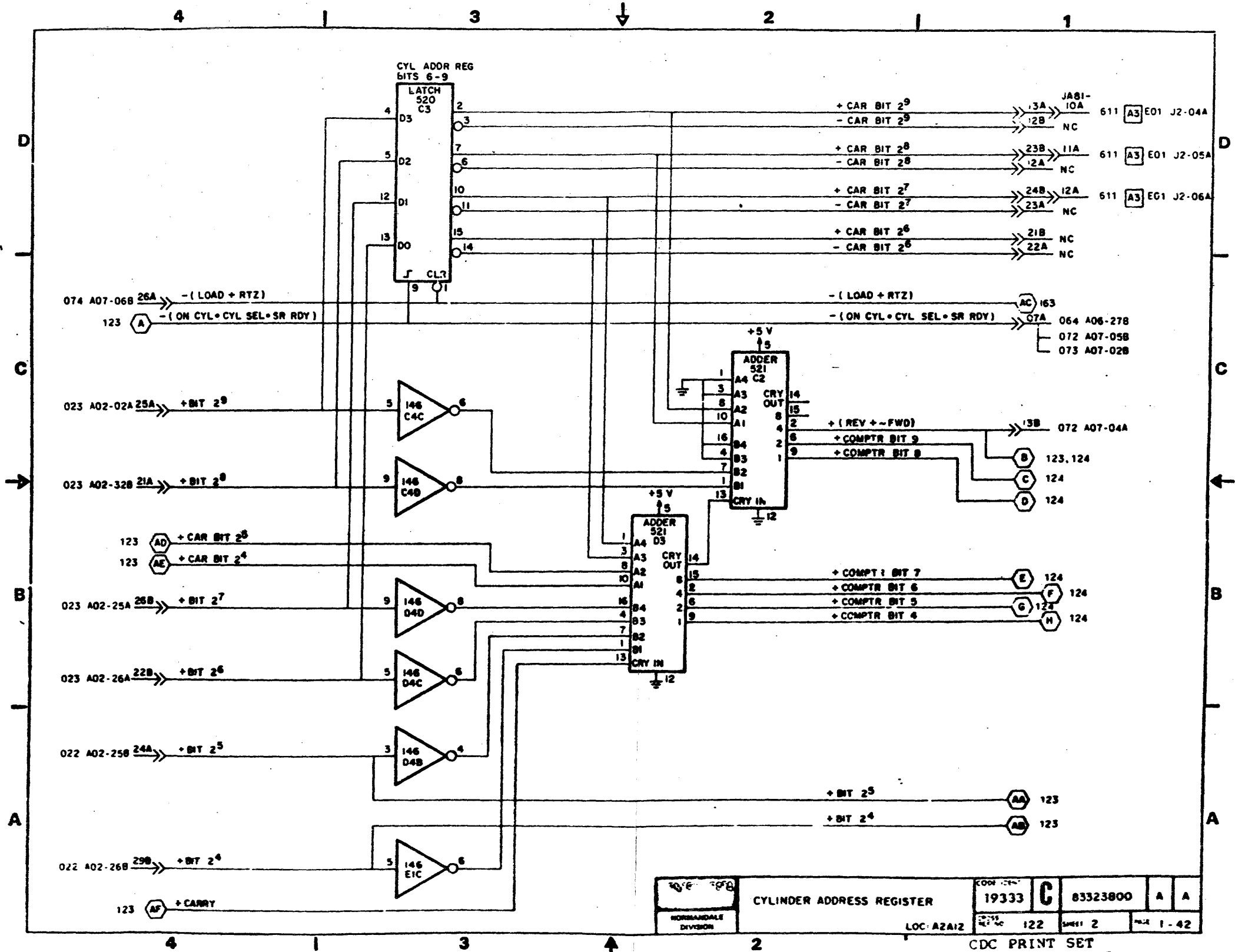
REVISIONS					
REV	ECO	DESCRIPTION	DRFT	DATE	CHK'D
A	RE23000	RELEASE			

UNUSED LOGIC ELEMENTS		
ELEMENT TYPE	LOCATION	OUTPUT PIN(S)
200	A1	8,10,12
140	B4	6



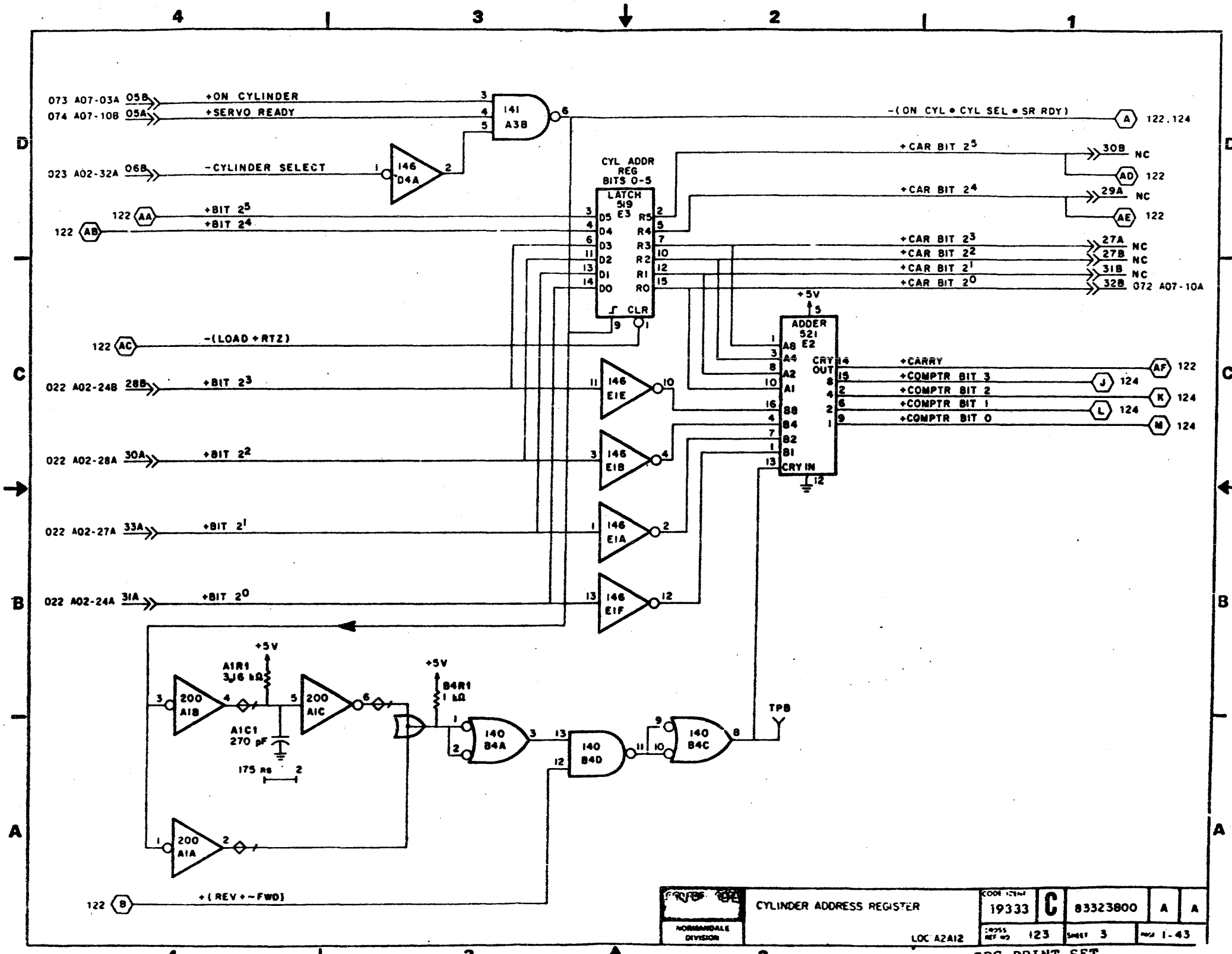
DESIGN	DATE	BY	Q'E	DIFFERENCE GENERATOR AND CONTROL DIAGRAMS TYPE FLV	CODE 1004	19333	C	83323800	A	A
CHECKED					CROSS REF	121	SHEET 1 of 5	PAGE 1-4.		
ENGINEER			RESEARCH DIVISION		LOC A2A12					
APPROVED										

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 47 of 180
 REV B



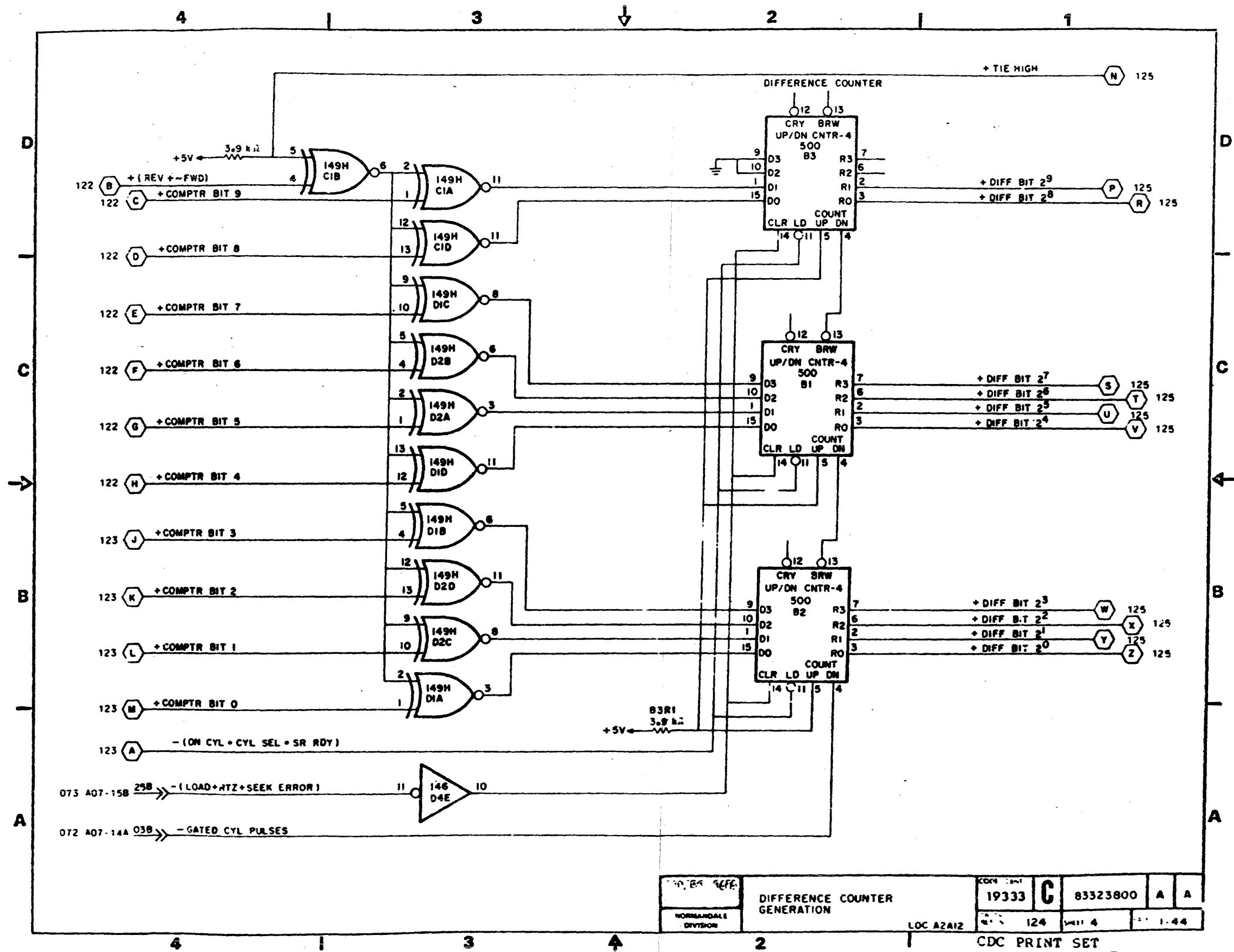
 ROCKWELL CORPORATION MILWAUKEE DIVISION	CYLINDER ADDRESS REGISTER LOC: A2A12	19333	C	83323800	A	A
		122	SHEET 2	1-42		

CDC PRINT SET
 B-SP-RM05-0-9K79
 SHEET 48 OF 180
 REV B



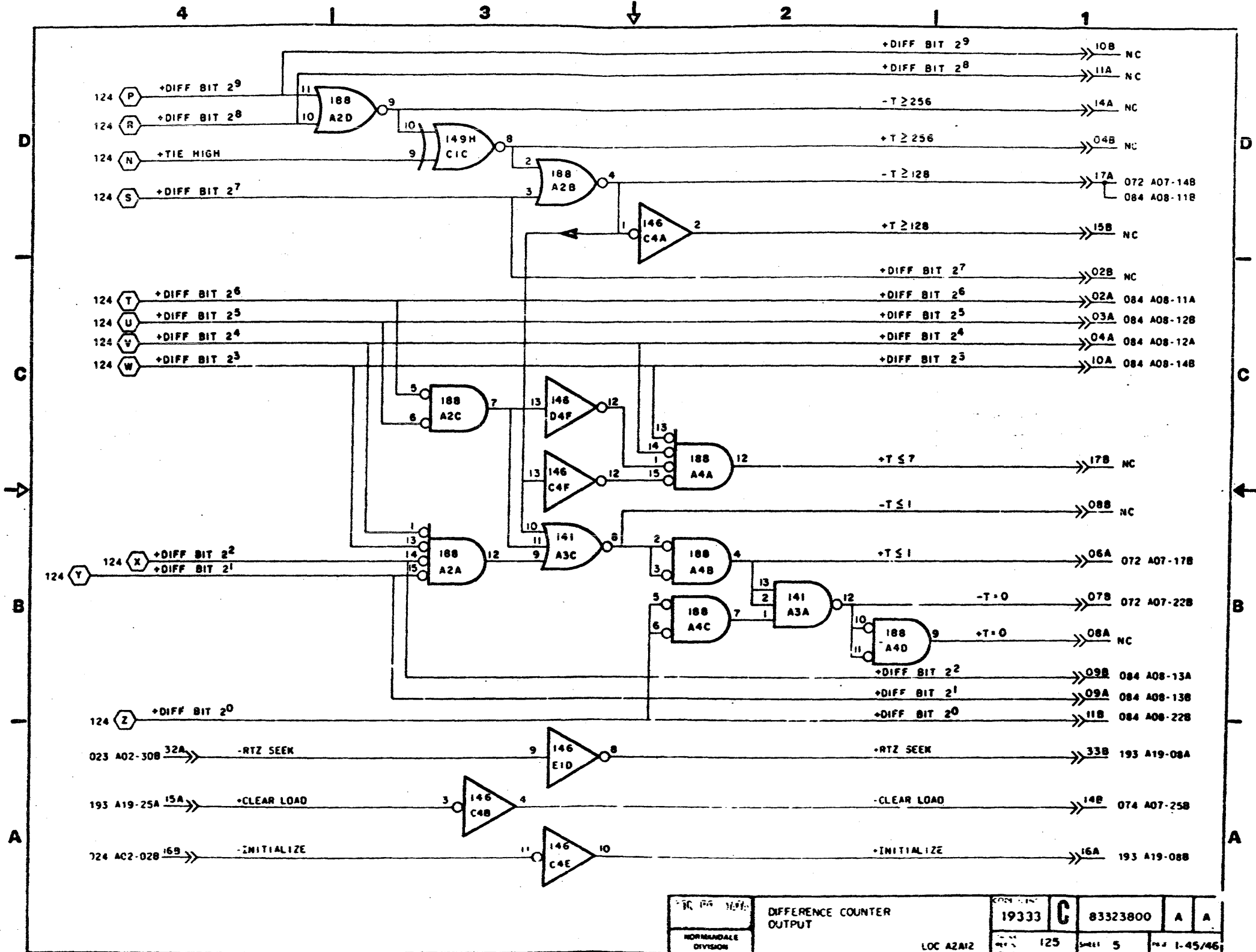
NORANDA DIVISION	CYLINDER ADDRESS REGISTER		CODE 19333	C	83323800	A	A
	LOC A2A12	REV NO 123	SHEET 3	REV 1-43			

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 49 OF 130
 REV B



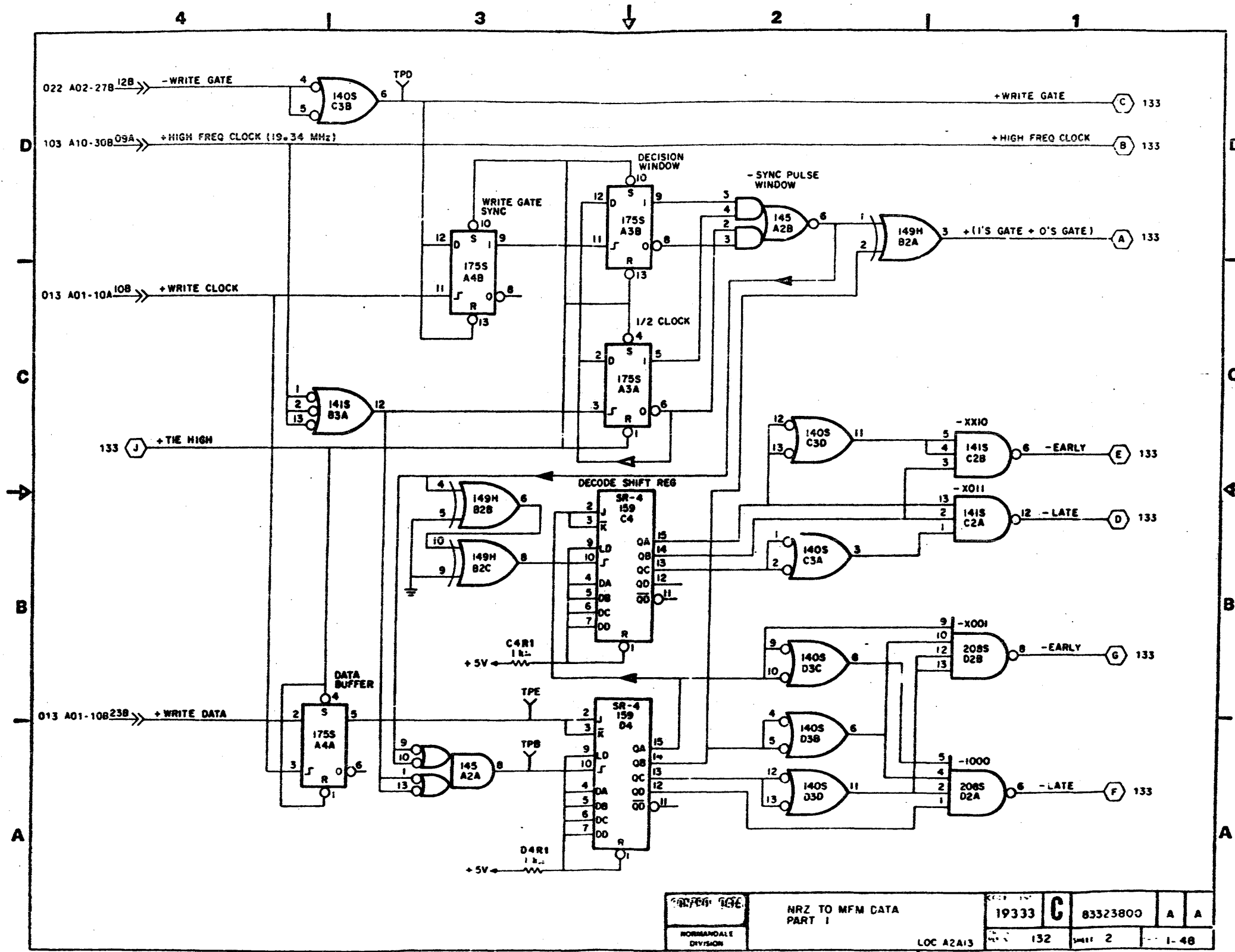
19333	C	83323800	A	A
124	SHEET 4	1-44		

CDC PRINT SET
 B-SP-RM05-0-9K7B
 SHEET 50 of 180
 REV B



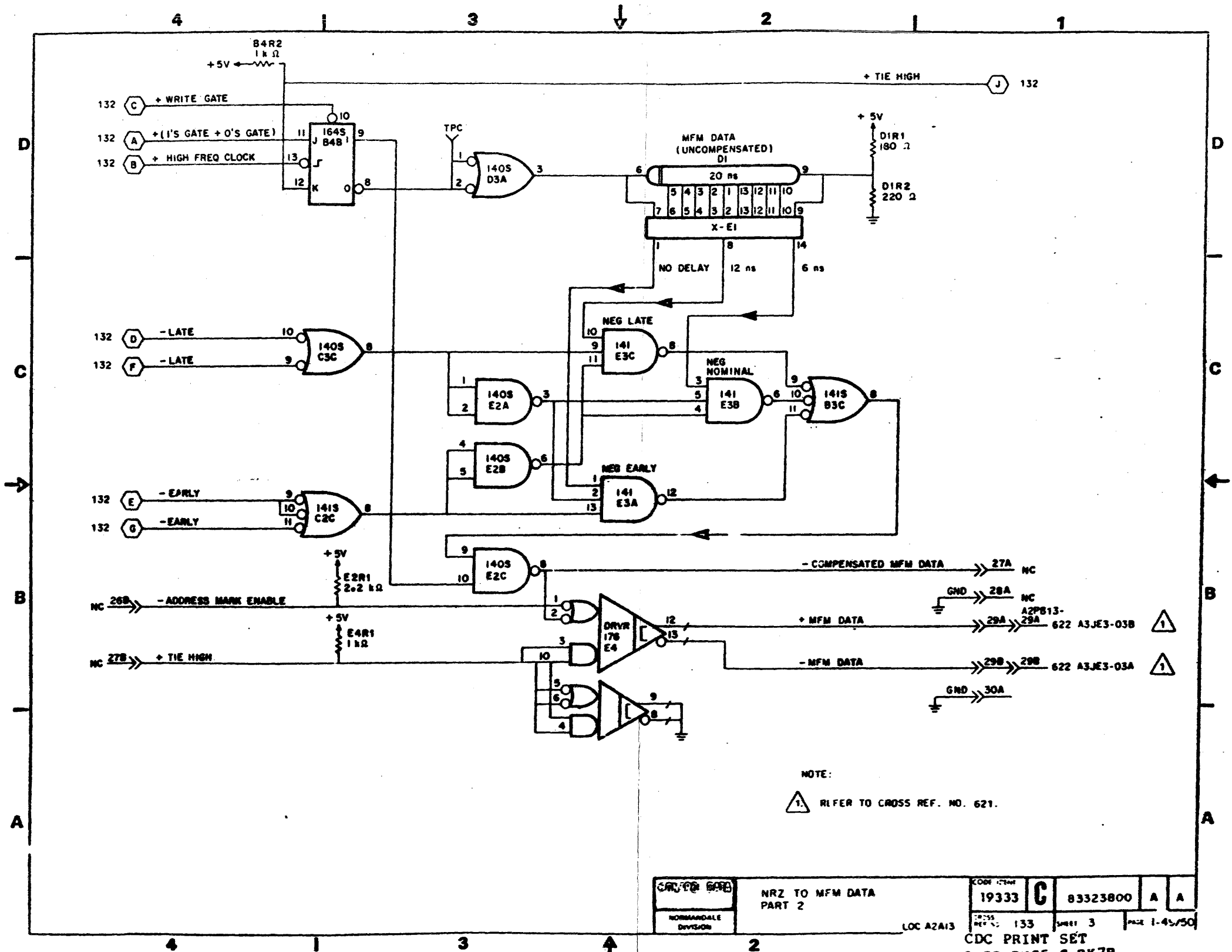
19333	C	83323800	A	A
125	SHEET 5	REV 1-45/46		

DIFFERENCE COUNTER OUTPUT
 WORMHOLE DIVISION
 LOC A2A12



 NORMANDALE DIVISION	NRZ TO MFM DATA PART 1	19333	C	83323800	A	A
		132	SHEET 2	1-48		

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 53 of 180
 REV B



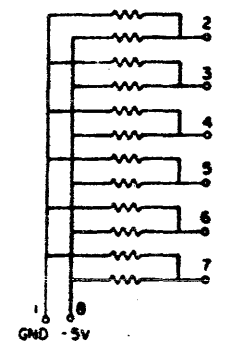
NOTE:
 1. REFER TO CROSS REF. NO. 621.

621-0000 NORMANDALE DIVISION	NRZ TO MFM DATA PART 2	CODE 19333 REF. 133	C 83323800	A A
	LOC A2A13	SHEET 3 CDC PRINT SET B-SP-RM05-0-BK7B SHEET 54 of 180	PAGE 1-45/50	REV B

REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A																	

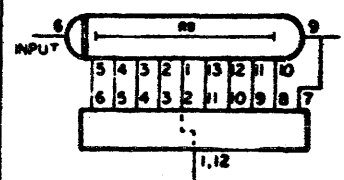
REVISIONS					
REV	ECO	DESCRIPTION	DEPT	DATE	CHK'D
1	PE23000	PT. EASY			

NOTES
 ▲ TYPICAL CONFIGURATION FOR TERMINATORS AT-C2A, AT-C2B AND AT-B4A AS FOLLOWS

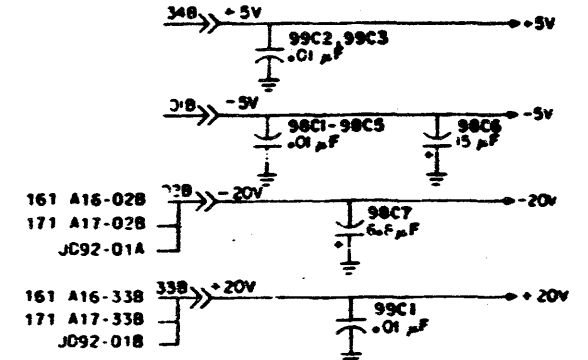
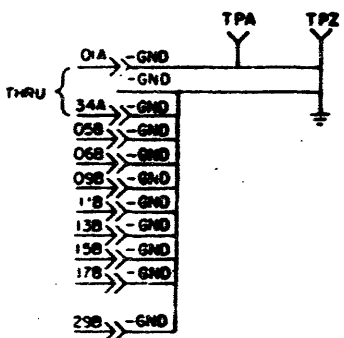


2 DELAY LINES ARE CONNECTED TO JUMPER BLOCK AS SHOWN IN DIAGRAM BELOW. ACTUAL DELAYS ARE SELECTED DURING MANUFACTURING. THIS DIAGRAM SHOWS TYPICAL CONNECTIONS. DELAY TIME FOR EACH DELAY LINE PIN RELATIVE TO PIN. 6 INPUT IS SHOWN IN CHART BELOW.

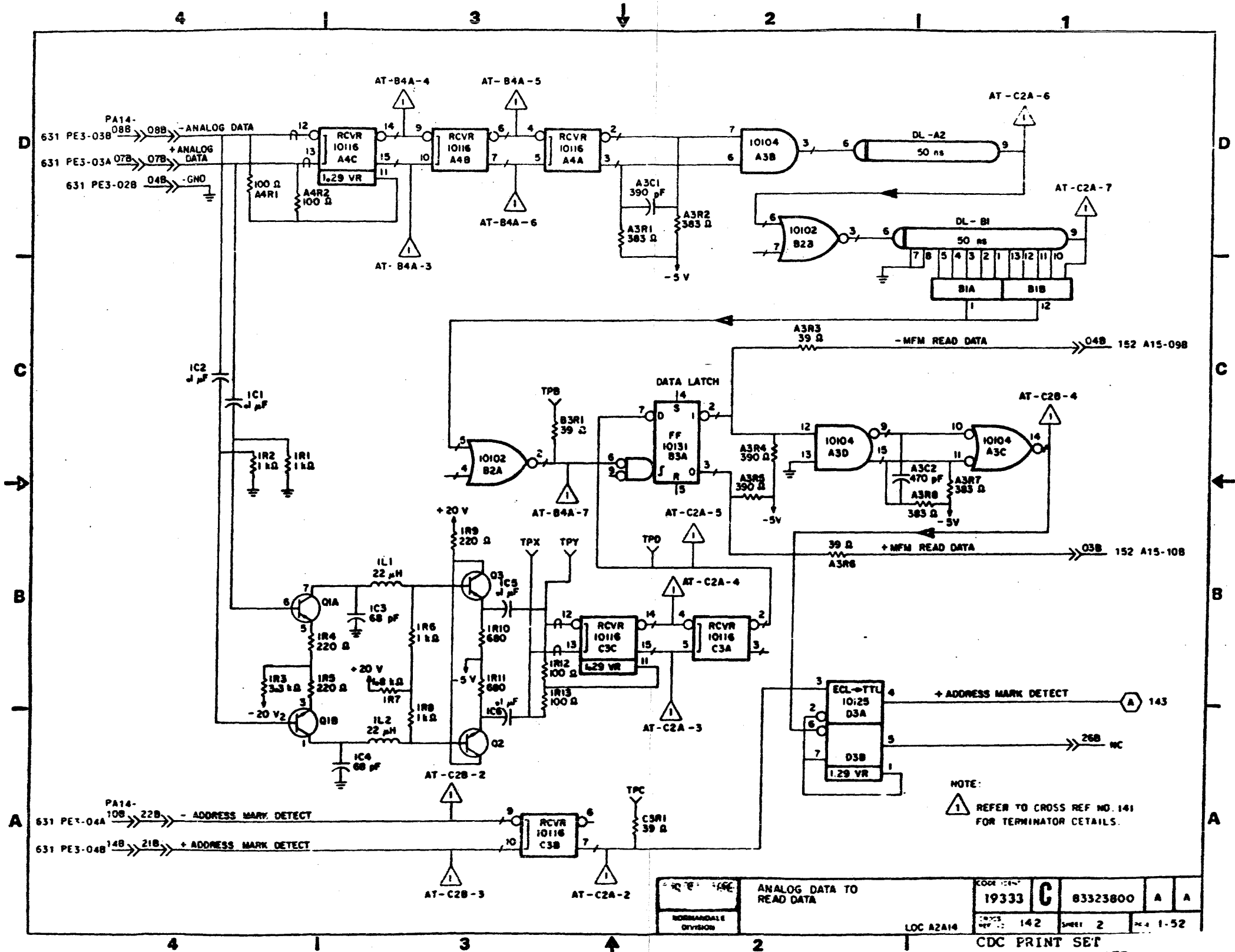
PIN	DELAY - NSES (NS)	
	B1	A2
5	5	10
4	10	20
3	15	30
2	20	40
1	25	50
13	30	60
12	35	70
11	40	80
3	45	90
9	50	100



UNUSED LOGIC ELEMENTS		
TYPE	LOCATION	OUTPUT PIN(S)
145	A1	9, 10
1648	D2	8, 9
10404	A3	2
10402	B2	9, 15, 14
10125	D3	12, 13
10131	B3	14, 15
200	E2	2, 4, 6, 8

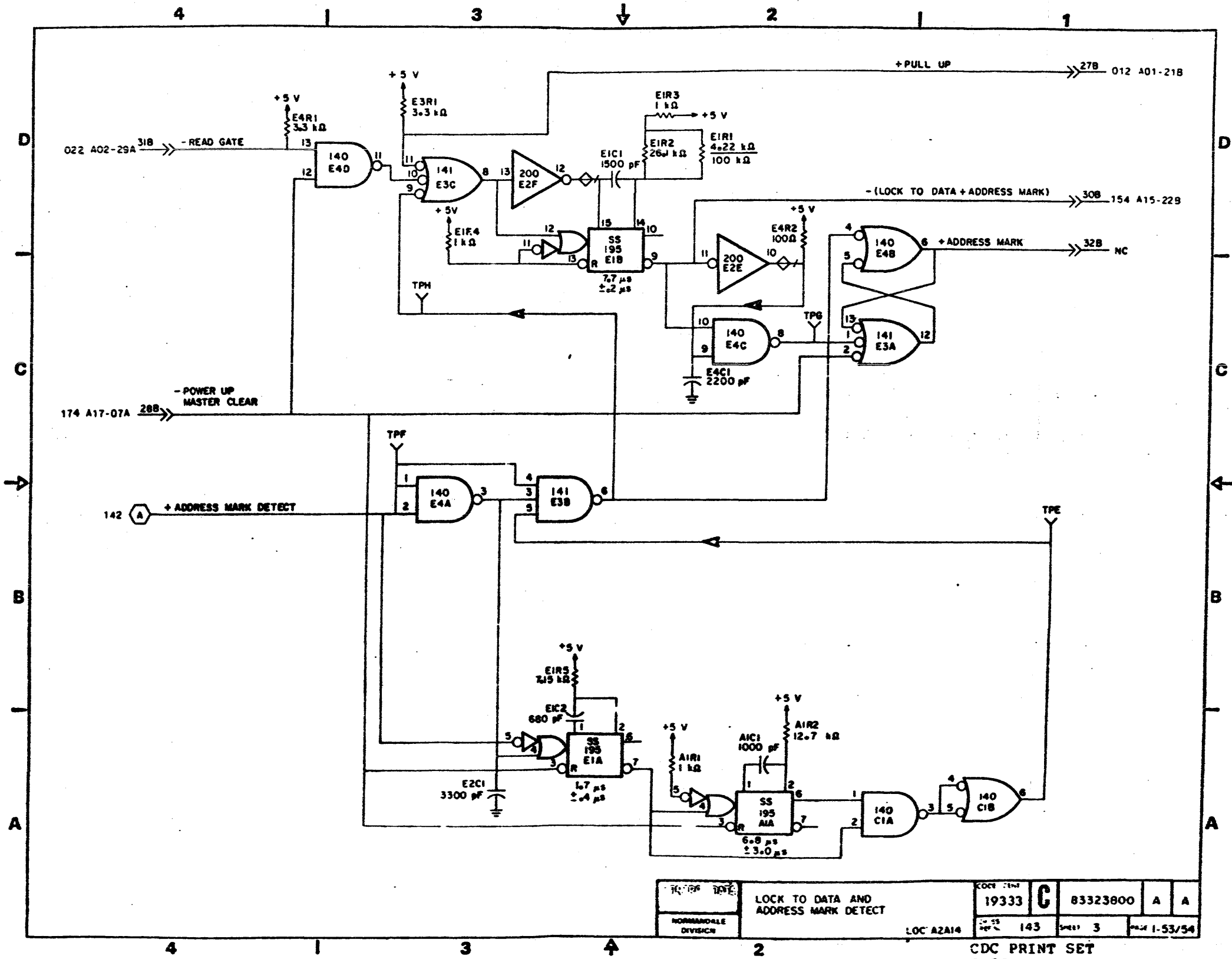


DRAWN: MANDERSON 4/77 CHECKED: ENGINEER: <i>[Signature]</i> APPROVED:	DATA LATCH DIAGRAMS TYPE HLIV LOC A2A14	CODE: 19333 C 83323800 A A CROSS REF: 141 SHEET: 1 of 3 PAGE: 1-51
--	---	--



ANALOG DATA TO READ DATA	19333	C	83323800	A	A
LOC A2A16	142	SHEET 2	1-52		

CDC PRINT SET
 B-SP-R405-0-BK78
 SHEET 56 OF 180
 REV B



19333	C	83323800	A	A
143	SHEET 3	PAGE 1-53/54		

LOCK TO DATA AND ADDRESS MARK DETECT

LOC A2A14

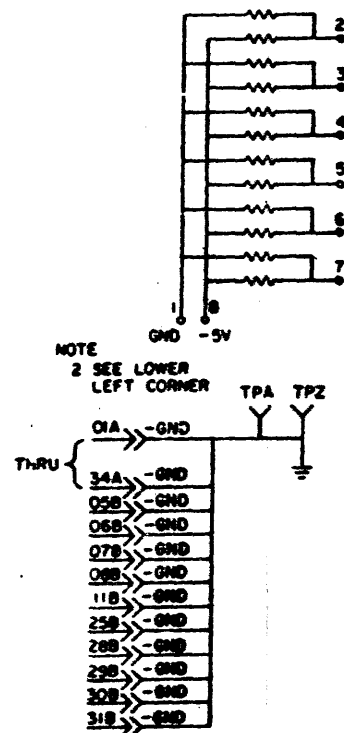
CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 57 OF 180

REV B

REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A	A															
B	A	A	A	A															

REVISIONS						
REV	ECO	DESCRIPTION	DATE	CHK'D	DATE	CHK'D
A	RE357	RELEASED				
B	37453	ADD VDE	1/28/55	LEE		

NOTES
 1 TYPICAL CONFIGURATION FOR TERMINATORS AT A3, ATB2, ATB3, ATB4, ATC3, ATD4, ATE2 AS FOLLOWS



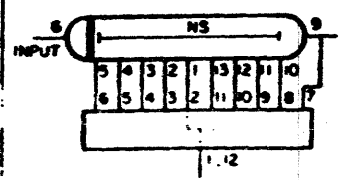
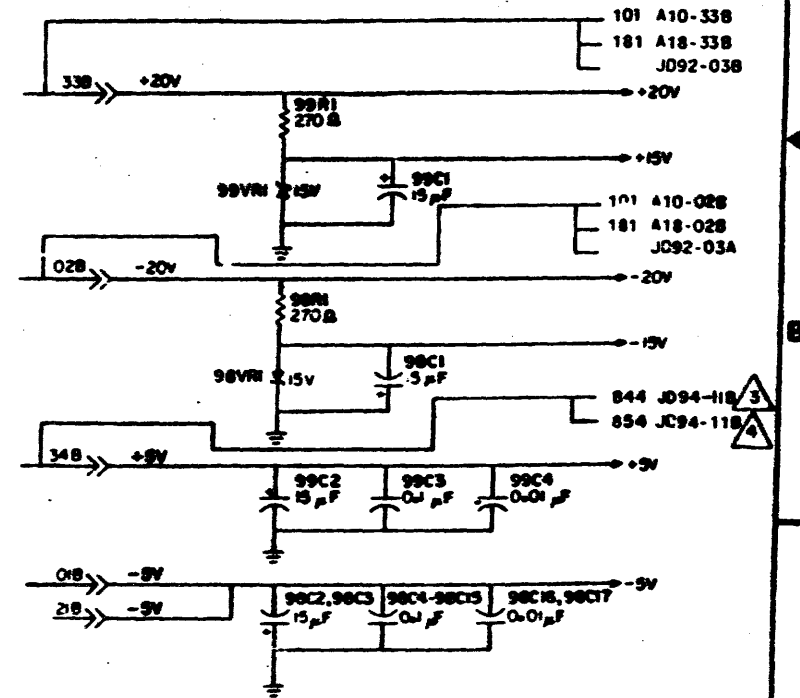
UNUSED LOGIC ELEMENTS

TYPE	LOCATION	OUTPUT PIN (S)
10131	E4	2,3
10116	E1	14,15
10118	C5	2,3,14,15
10125	D4	4,5

PIN	DELAY TIMES (NS)	
	B1	A2
5	5	10
4	10	20
3	15	30
2	20	40
1	25	50
13	30	60
12	35	70
11	40	80
10	45	90
9	50	100

2 DELAY LINES ARE CONNECTED TO JUMPER BLOCK AS SHOWN IN DIAGRAM BELOW. ACTUAL DELAYS ARE SELECTED DURING MANUFACTURING. THIS DIAGRAM SHOWS TYPICAL CONNECTIONS. DELAY TIME FOR EACH DELAY LINE PIN RELATIVE TO PIN 6 INPUT IS SHOWN IN CHART BELOW.

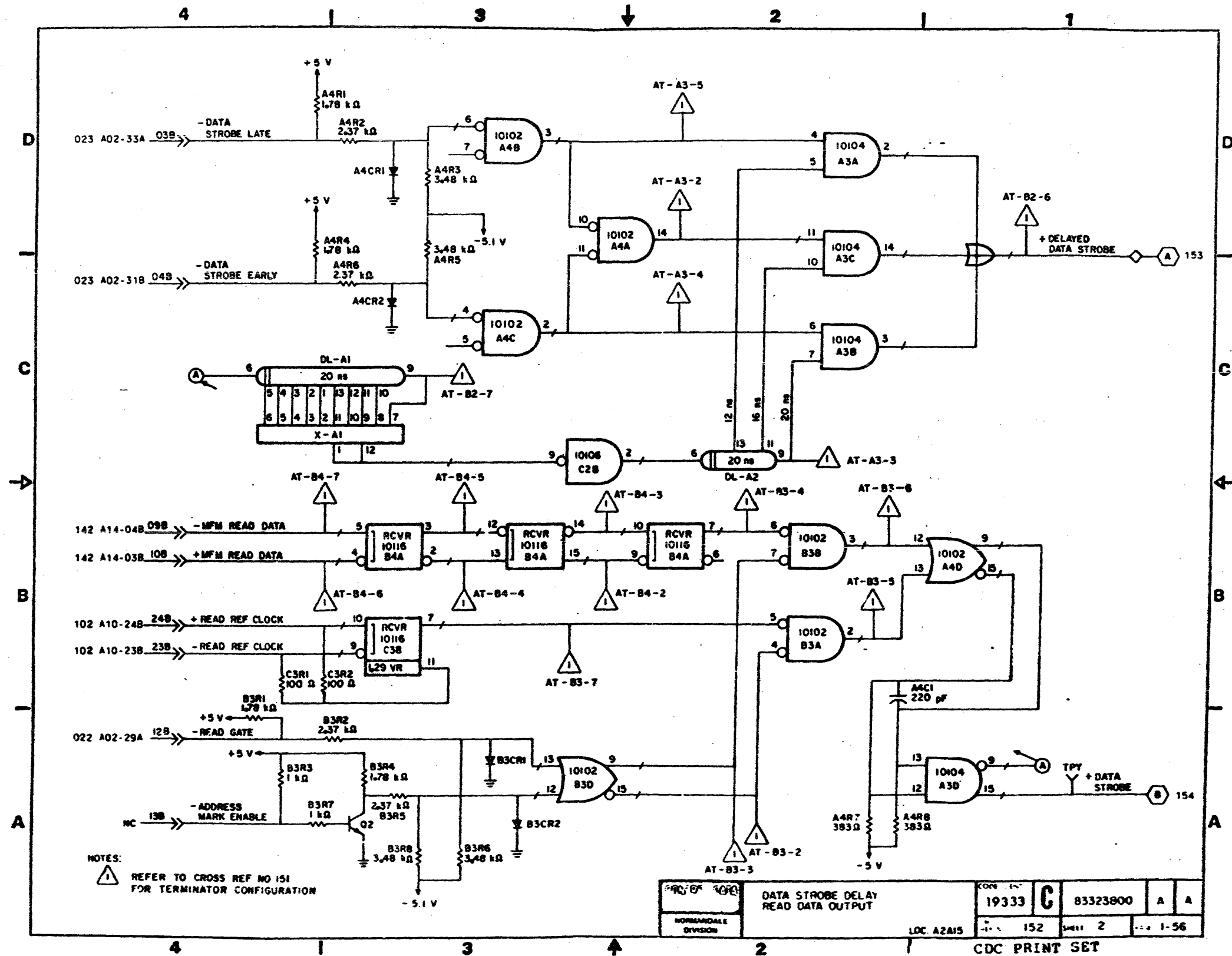
3 VDE ONLY
 4 NON-VDE ONLY



Drawn MANDERSON
 Checked
 Engineer
 CDC PRINT SET
 3-SP-RM05-0-BK7B
 SHEET 58 OF 130

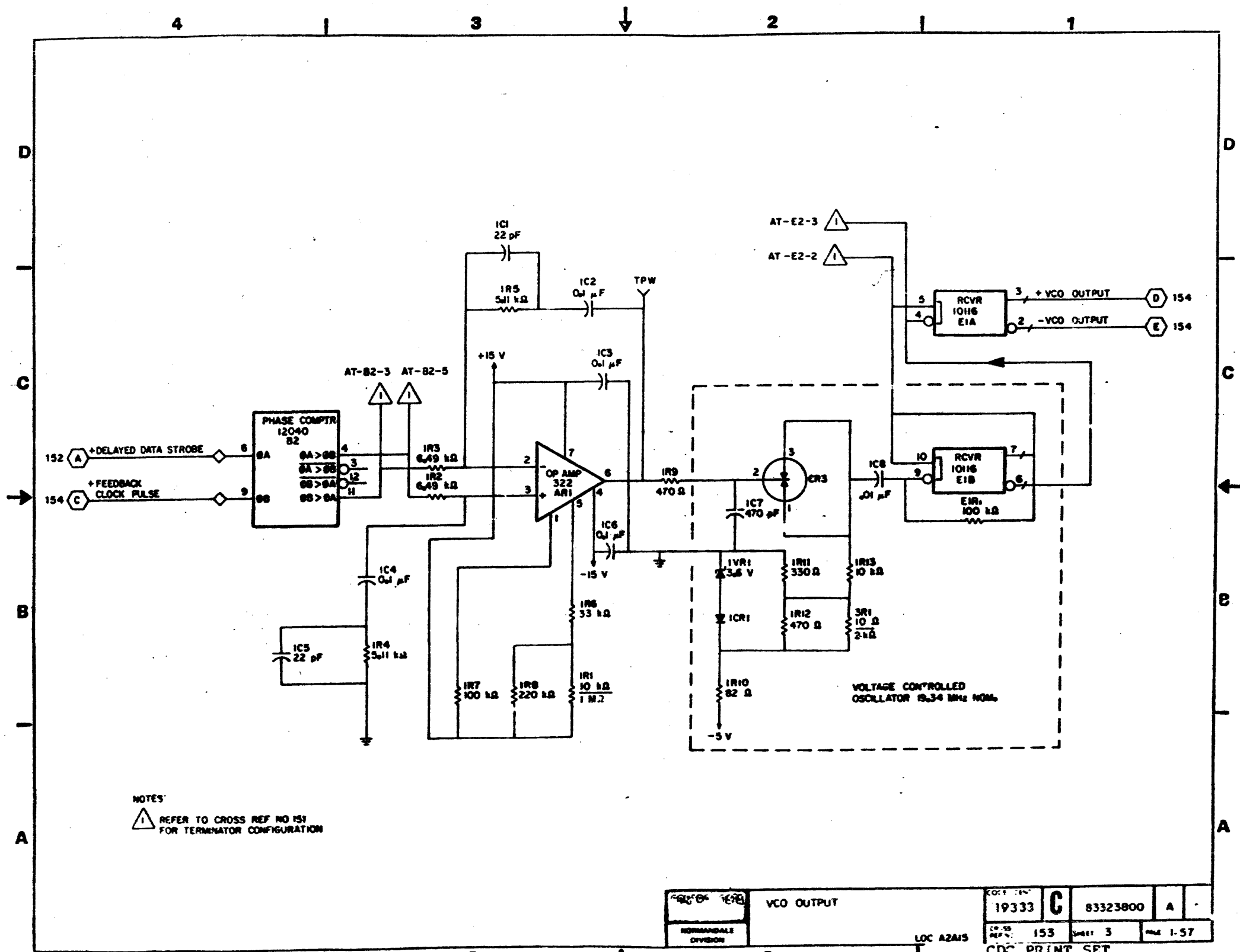
READ PLO DIAGRAMS
 TYPE BLZV
 LOC A2A15
 19333 C 83323800 C B
 151 1-5 1-55
 REF 81200015
 REF 81200030

REV 3



19333	C	83323800	A	A
152	SHEET 2	1-56		

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 59 of 180
 REV B

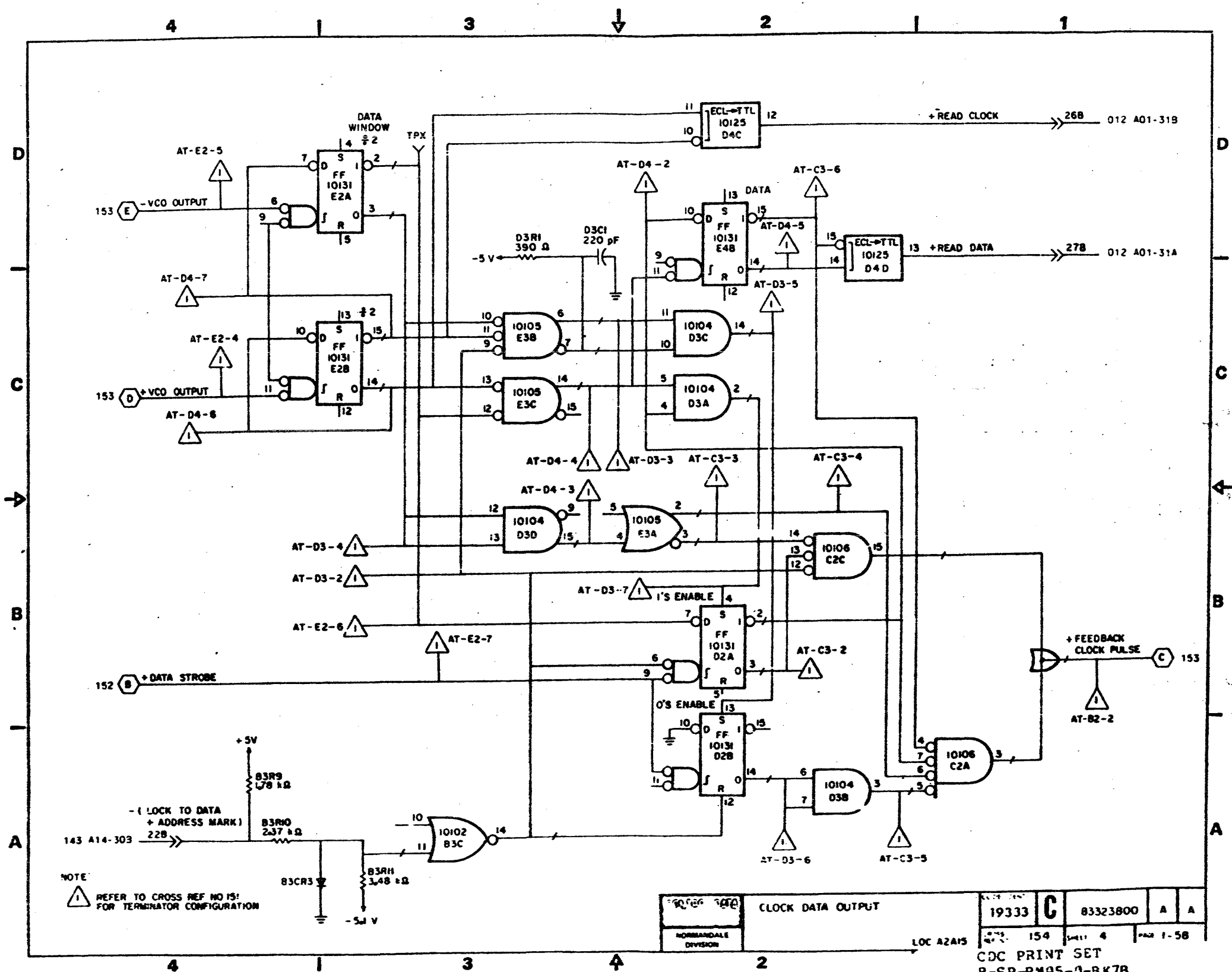


NOTES:
 1 REFER TO CROSS REF NO 151 FOR TERMINATOR CONFIGURATION

19333	C	83323800	A
153	SHEET 3	FIG 1-57	

CDC PRINT SET
 B-SP-RM05-0-8K7B
 SHEET 60 of 180

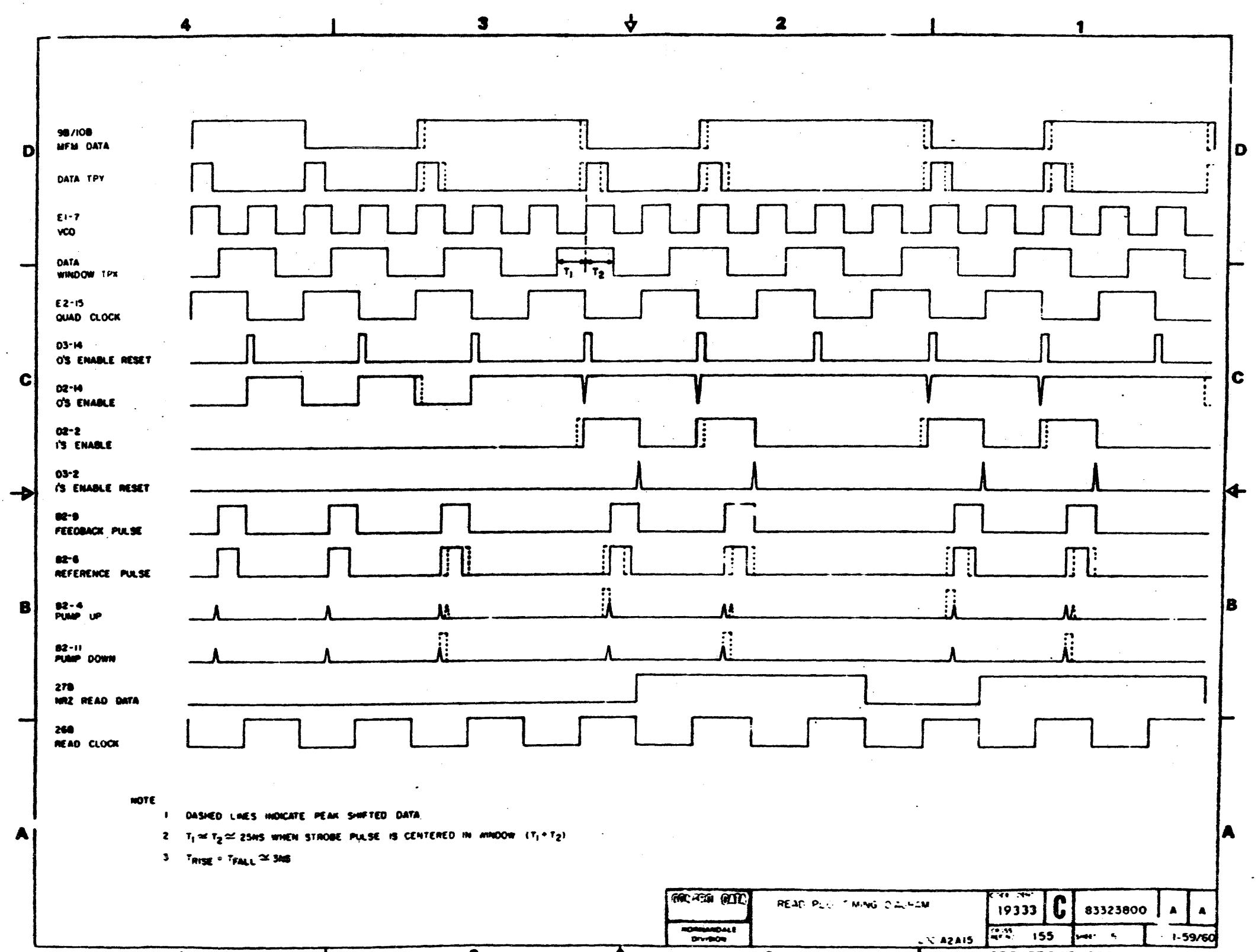
REV B



NOTE
 REFER TO CROSS REF NO 151
 FOR TERMINATOR CONFIGURATION

19333	C	83323800	A	A
154	SHEET 4	PAGE 1-58		

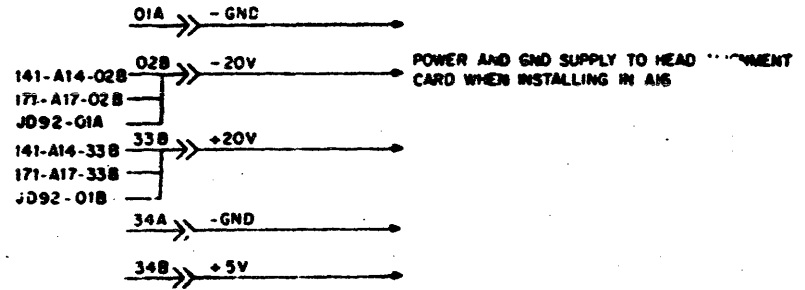
LOC A2A15
 CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 61 OF 180
 REV B



READ PLOTTING DIVISION	READ PLOTTING DIVISION	19333	C	83323800	A	A
	LN A2A15	155				1-59/60

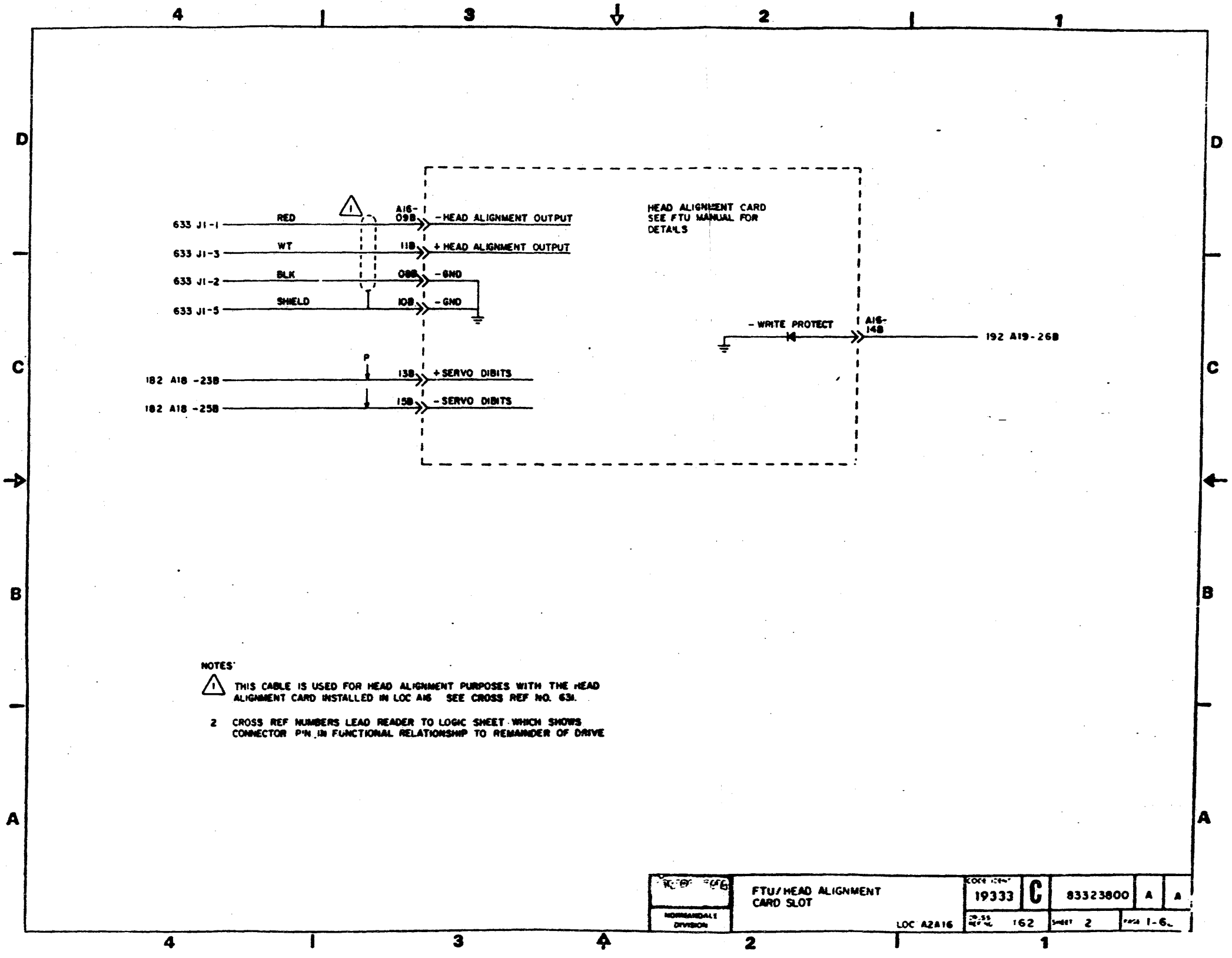
REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A																		

REVISIONS						
REV	ECO	DESCRIPTION	DRFT	DATE	CHK'D	
A	PE23000	RELEASED				



DRAWN		C. G. C. G.	FTU/HEAD ALIGNMENT CARD	CODE	19333	C	83323800	A	A
CHECKED			SLOT WIRING DIAGRAMS	LOC	A2A16				
ENGINEER		ROBERT DALE		GROUP REF	161	SHEET	1 of 2		1-61
APPROVED		DIVISION							

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 53 of 180
 REV B



NOTES:

1 THIS CABLE IS USED FOR HEAD ALIGNMENT PURPOSES WITH THE HEAD ALIGNMENT CARD INSTALLED IN LOC A16 SEE CROSS REF NO. 63.

2 CROSS REF NUMBERS LEAD READER TO LOGIC SHEET WHICH SHOWS CONNECTOR P/N IN FUNCTIONAL RELATIONSHIP TO REMAINDER OF DRIVE

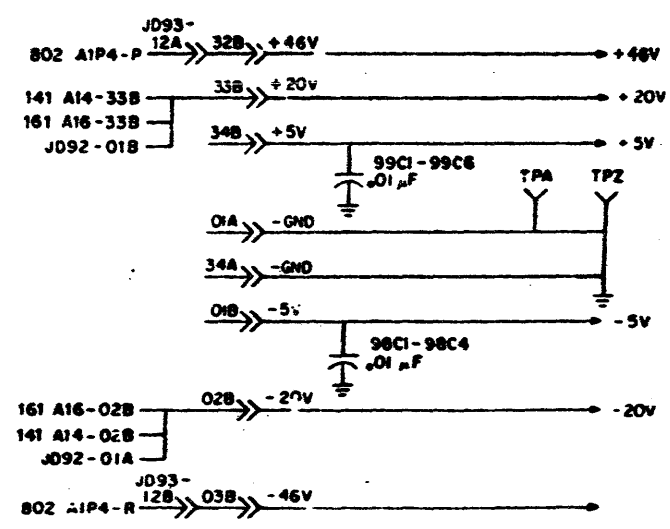
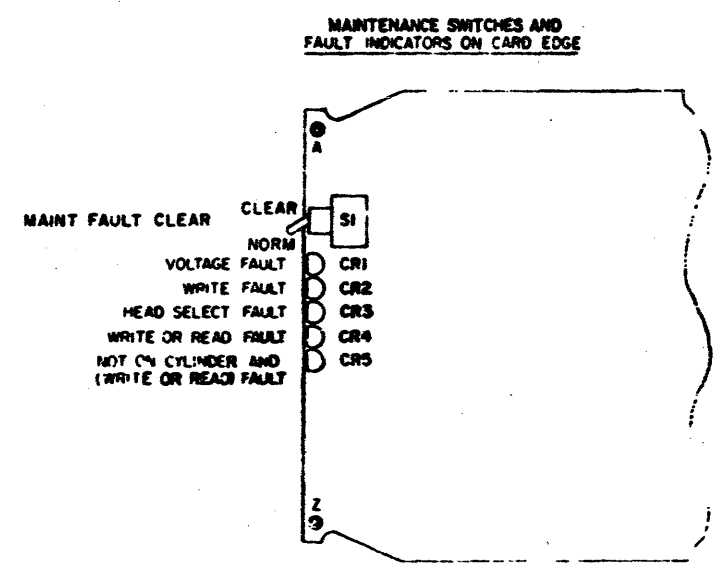
NONMAGNETIC DIVISION	FTU/HEAD ALIGNMENT CARD SLOT	19333	C	83323800	A	A
	LOC A2A16	162	SHEET 2	PAGE 1-6		

CDC PRINT SET
B-SP-R405-0-BK7B
SHEET 54 of 180

REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A	A	A															
B	A	A	A	A	A															
C	A	C	A	A																

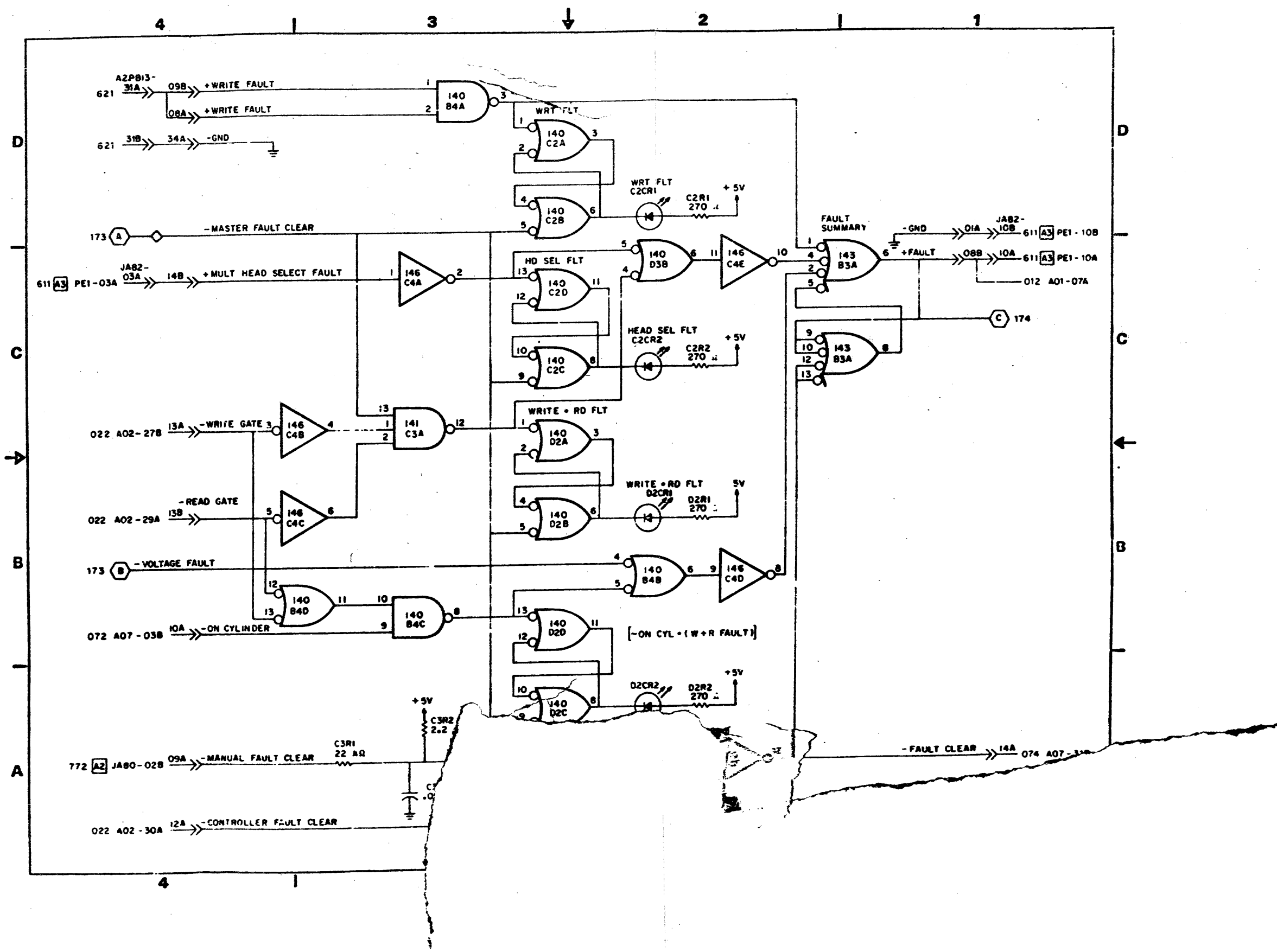
REVISIONS					
REV	ECO	DESCRIPTION	DRFT	DATE	CHK'D
A	PE23000	REL. 1.0.1			
B	S7453	ADD VDE			
C	PE37451	CHG - KFV COMP ASST			

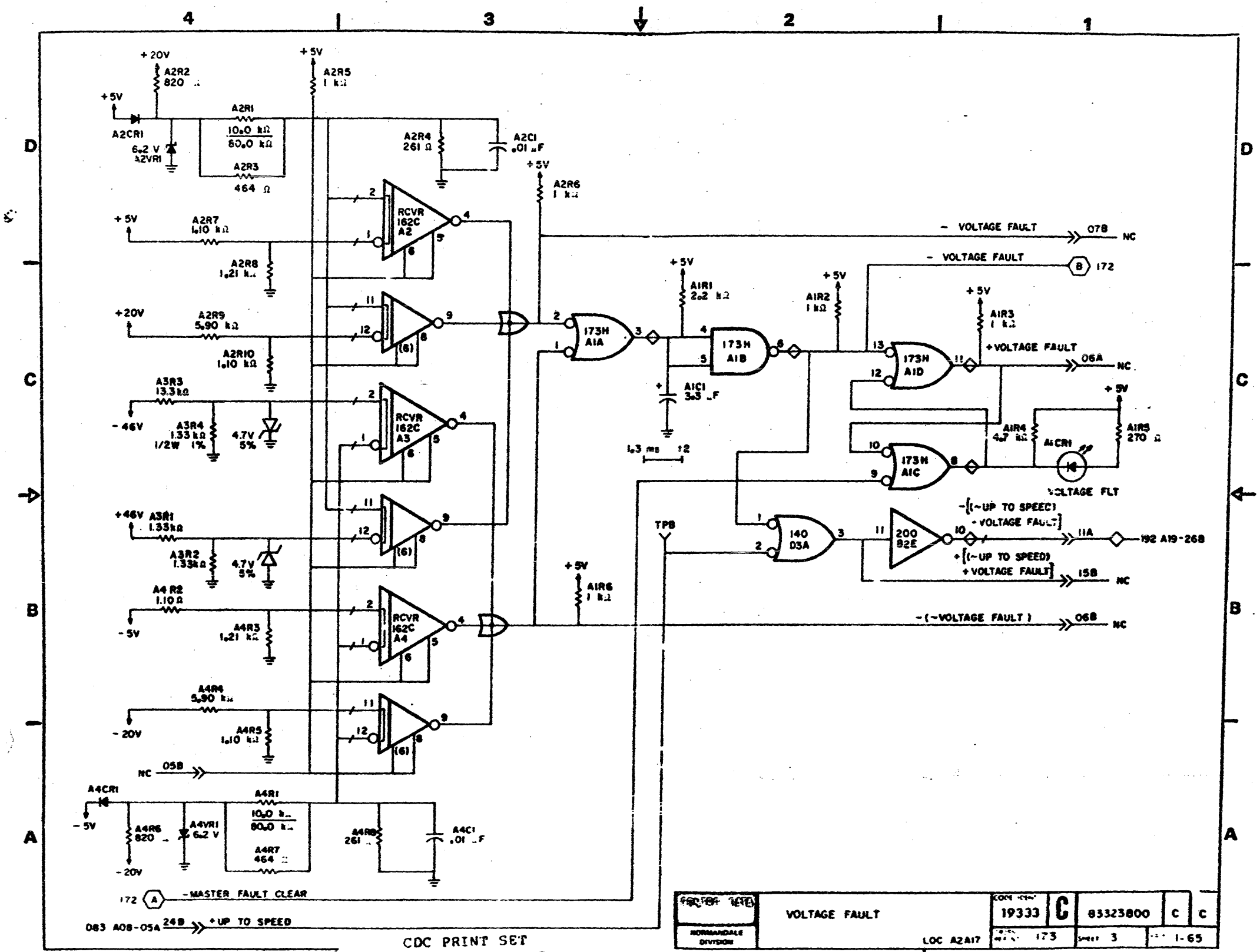
UNUSED LOGIC ELEMENTS		
TYPE	LOCATION	OUTPUT PIN(S)
175H	C1	5,6
4049	E2	10,12
200	B2	6



DRAWN: <i>G. Rad, MC 3477</i> CHECKED: ENGINEER: APPROVED:	DATE: <i>10-1-63</i> NORMAL/ABN:	FAULT CARD DIAGRAMS TYPE: <i>MFV</i> LOC: <i>A2A17</i>	COPY NO: 19333 PART NO: 83323800 SHEET: 1 OF 5 DATE: 1-63
---	-------------------------------------	---	---

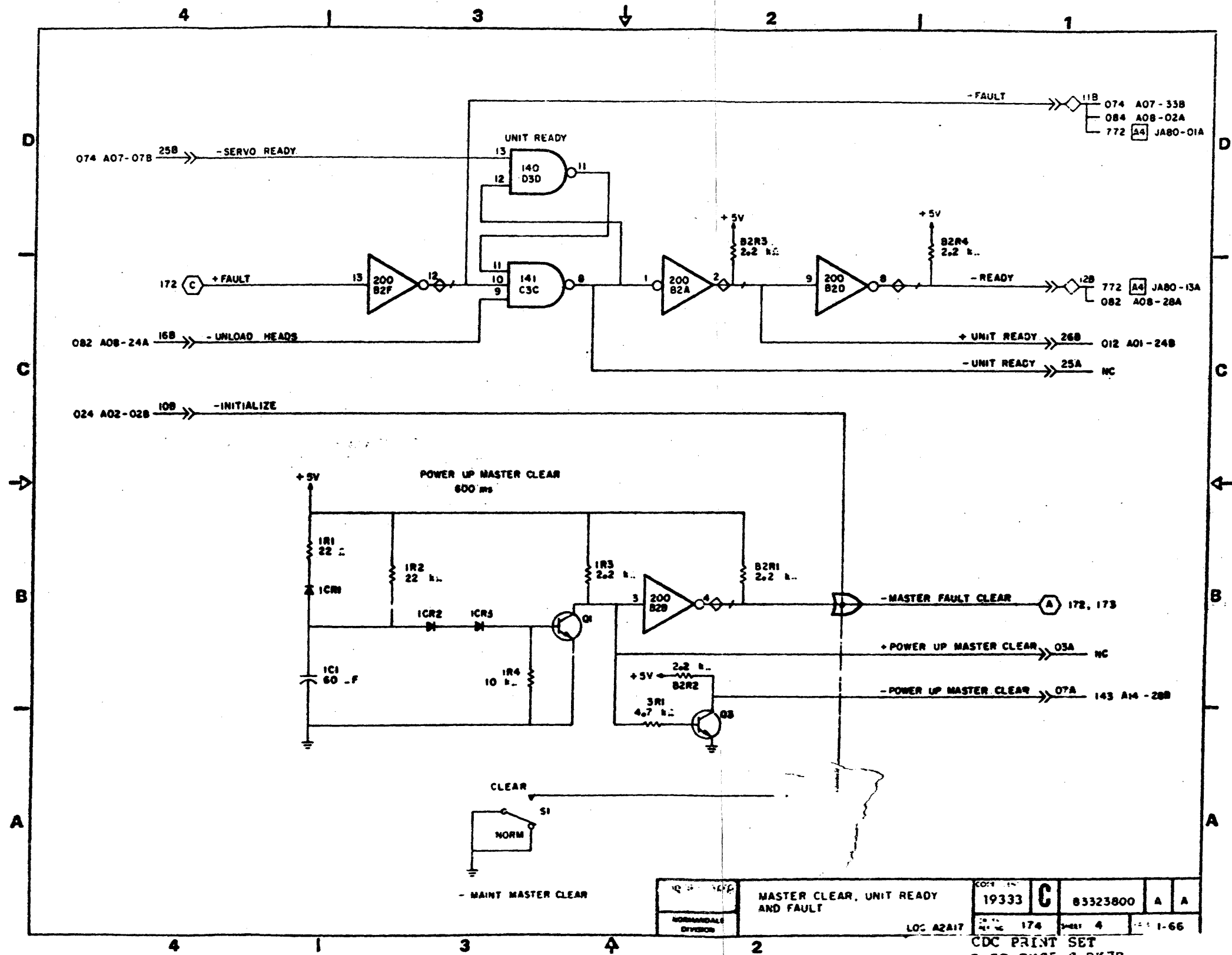
CDC PRINT SET
 B-SP-RM05-0-BK79
 SHEET 65 of 180
 REF 81200017
 REF 81200031
 REV B

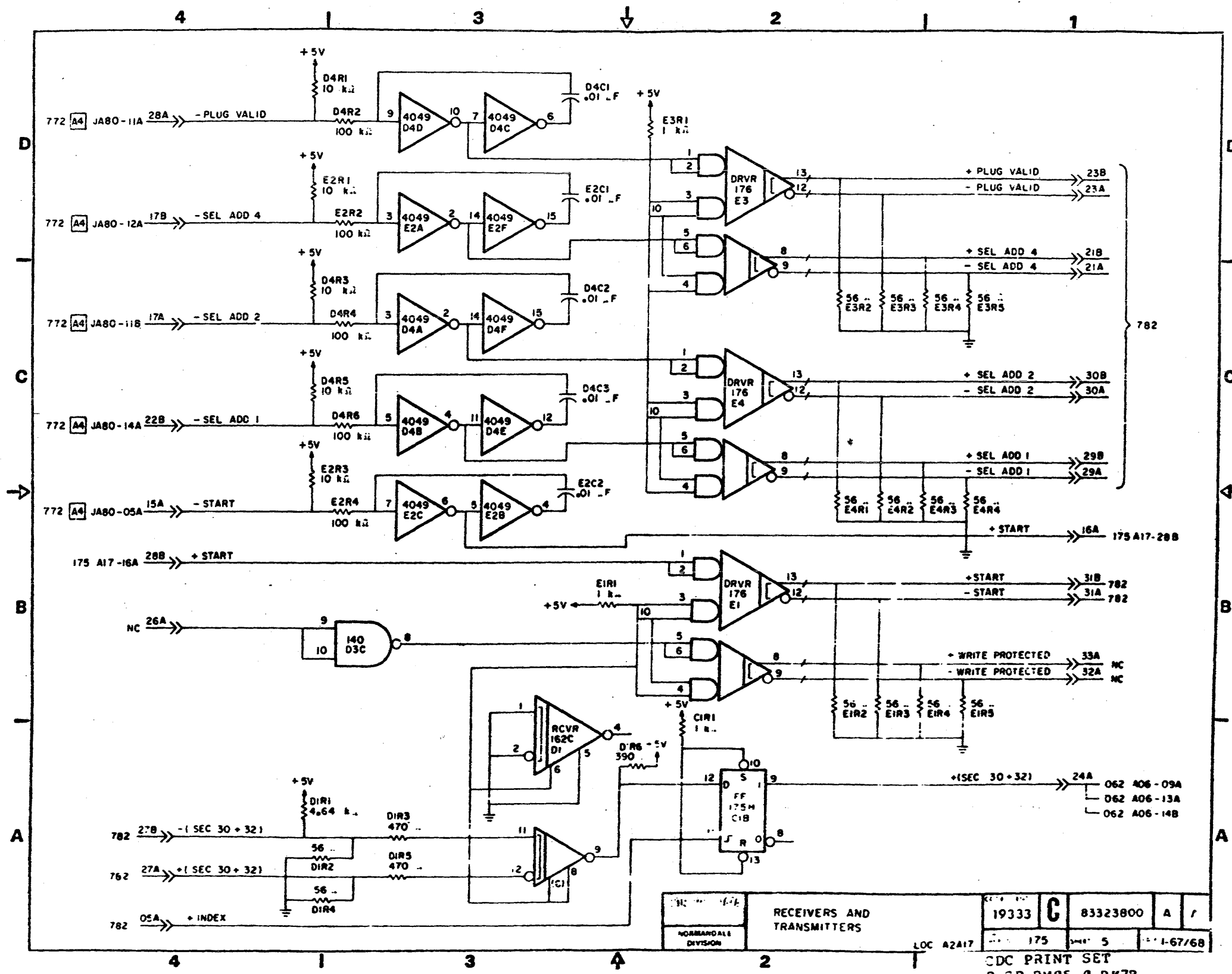




CDC PRINT SET
 B-SP-RM05-U-9K7B
 SHEET 67 OF 180
 REV B

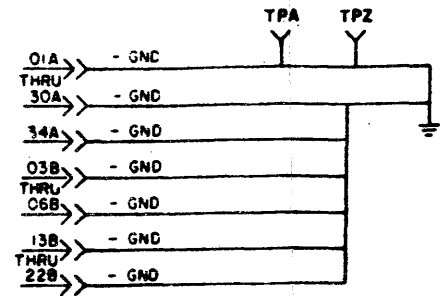
FORM 107 (REV. 1-65)	VOLTAGE FAULT	COM. NO. 19333	83323800	C	C
NONPARALEL DIVISION	LOC A2A17	173	SHEET 3	1-65	





RECEIVERS AND TRANSMITTERS
 19333 C 83323800 A /
 175 5 1-67/68

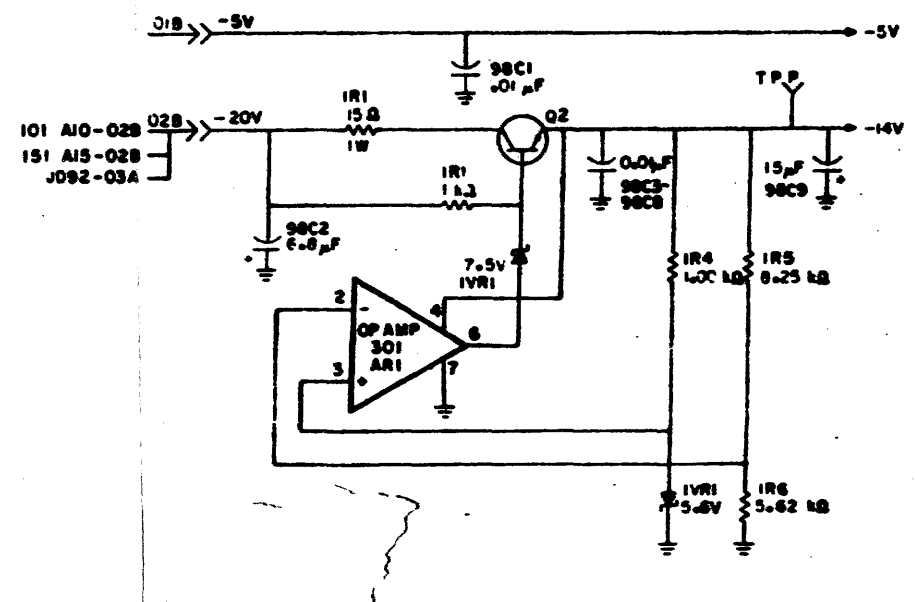
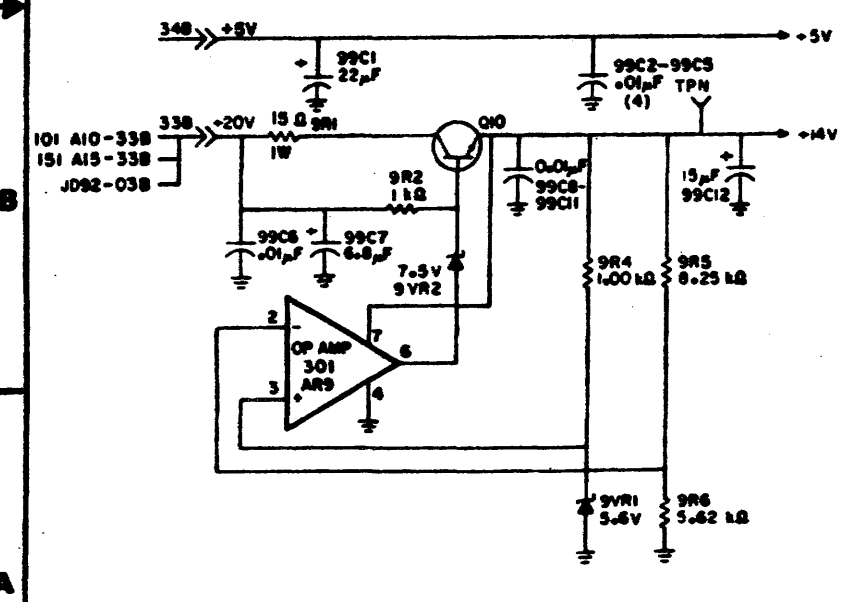
REVISION STATUS OF SHEETS																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
A	A	A	A	A																



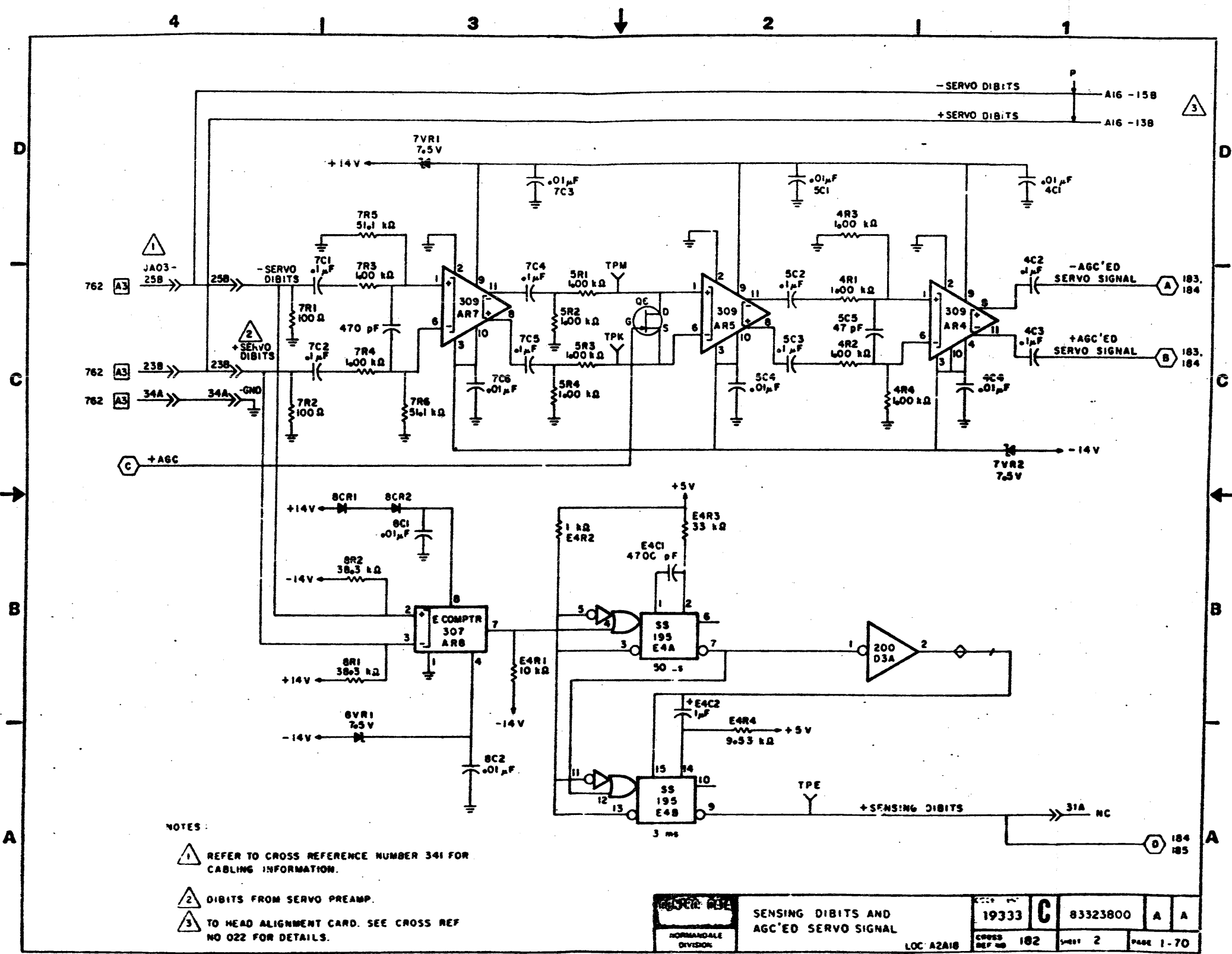
UNUSEC LOGIC ELEMENTS

TYPE	LOCATION	OUTPUT PIN(S)
200	D3	4, 6

REVISIONS				
REV	ECO	DESCRIPTION	DATE	CHK'D
A		RELEASE		



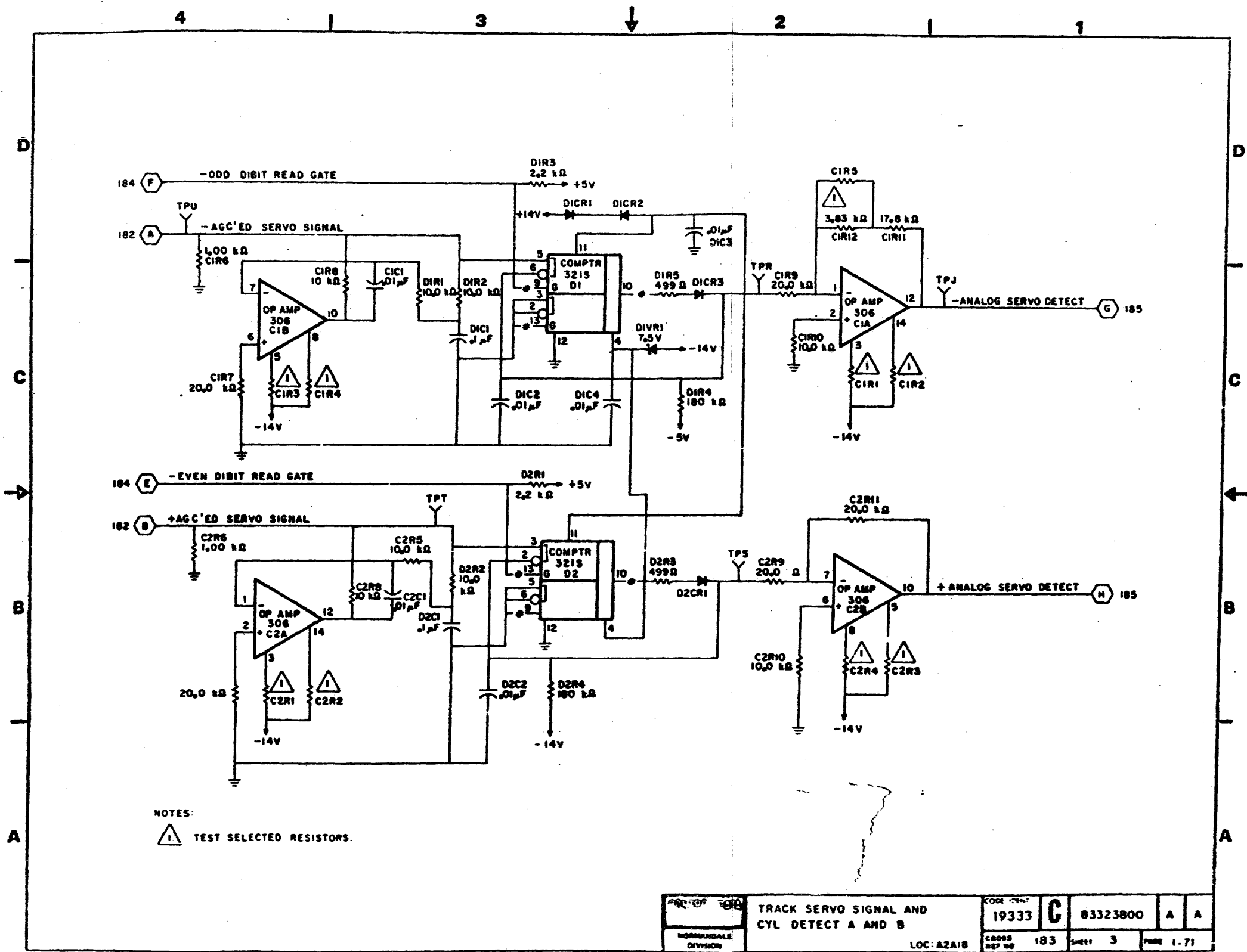
DRAWN: <i>U. B. ...</i> CHECKED: <i>J. ...</i> APPROVED: <i>J. ...</i>	DATE: 5-4-77 WORKSHEET: 19333 DIVISION:	FINE SERVO DECODER DIAGRAMS TYPE: MFRV LOC: A2A10	19333 181 1-5 1-69	83323800 A A
--	---	--	-----------------------------	--------------------



- NOTES:
- 1 REFER TO CROSS REFERENCE NUMBER 341 FOR CABLING INFORMATION.
 - 2 DIBITS FROM SERVO PREAMP.
 - 3 TO HEAD ALIGNMENT CARD. SEE CROSS REF NO 022 FOR DETAILS.

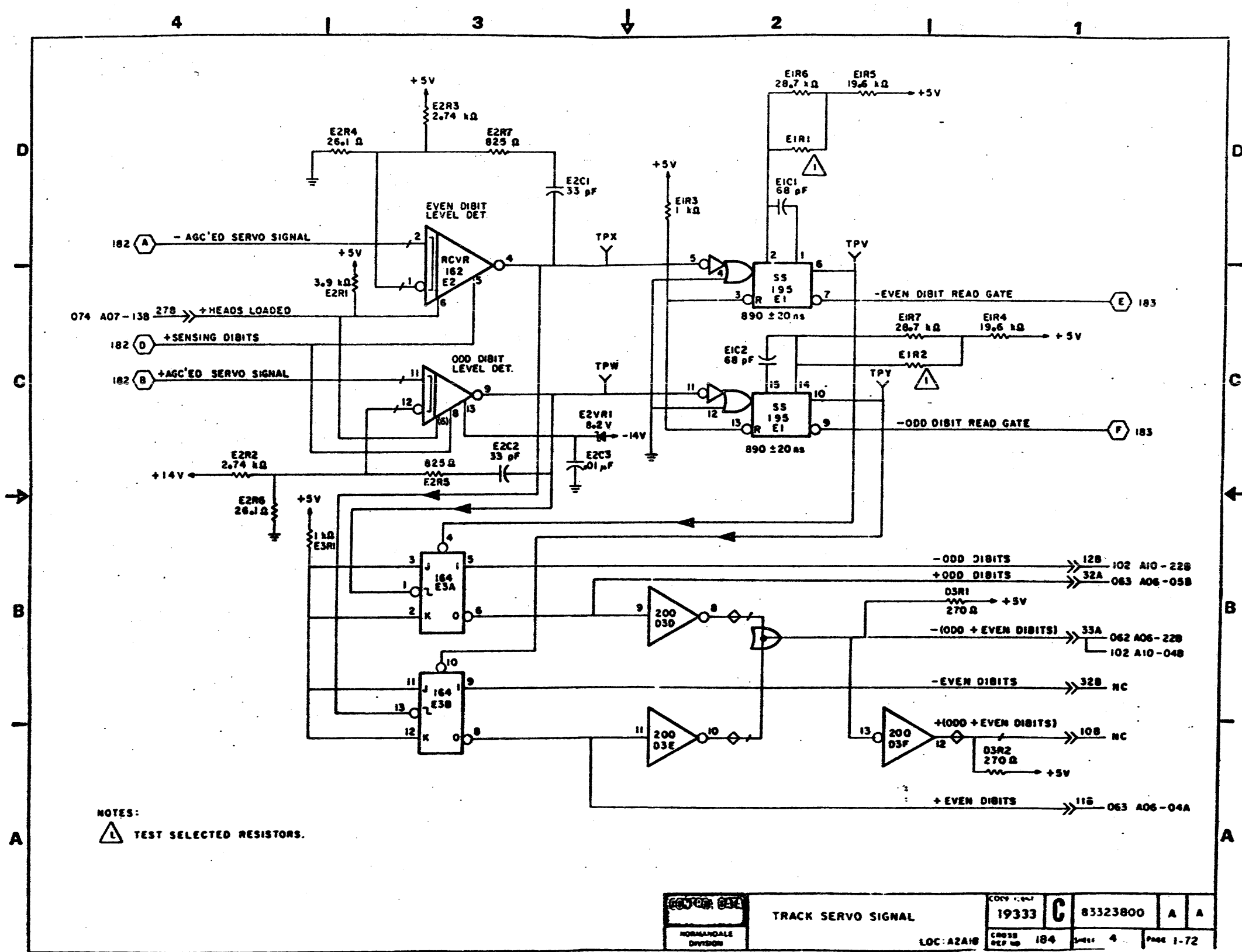
NORMAN DALE DIVISION	SENSING DIBITS AND AGC'ED SERVO SIGNAL	19333	C	83323800	A	A
		CROSS REF NO 182	SHEET 2	PAGE 1-70		

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 71 OF 180
 REV B



 NORTHROP CORPORATION NORWALK, CALIF. DIVISION	TRACK SERVO SIGNAL AND CYL DETECT A AND B	CODE 19333 CROSS REF NO 183	C SHEET 3	83323800 PAGE 1-71	A A
	LOC: A2A18				

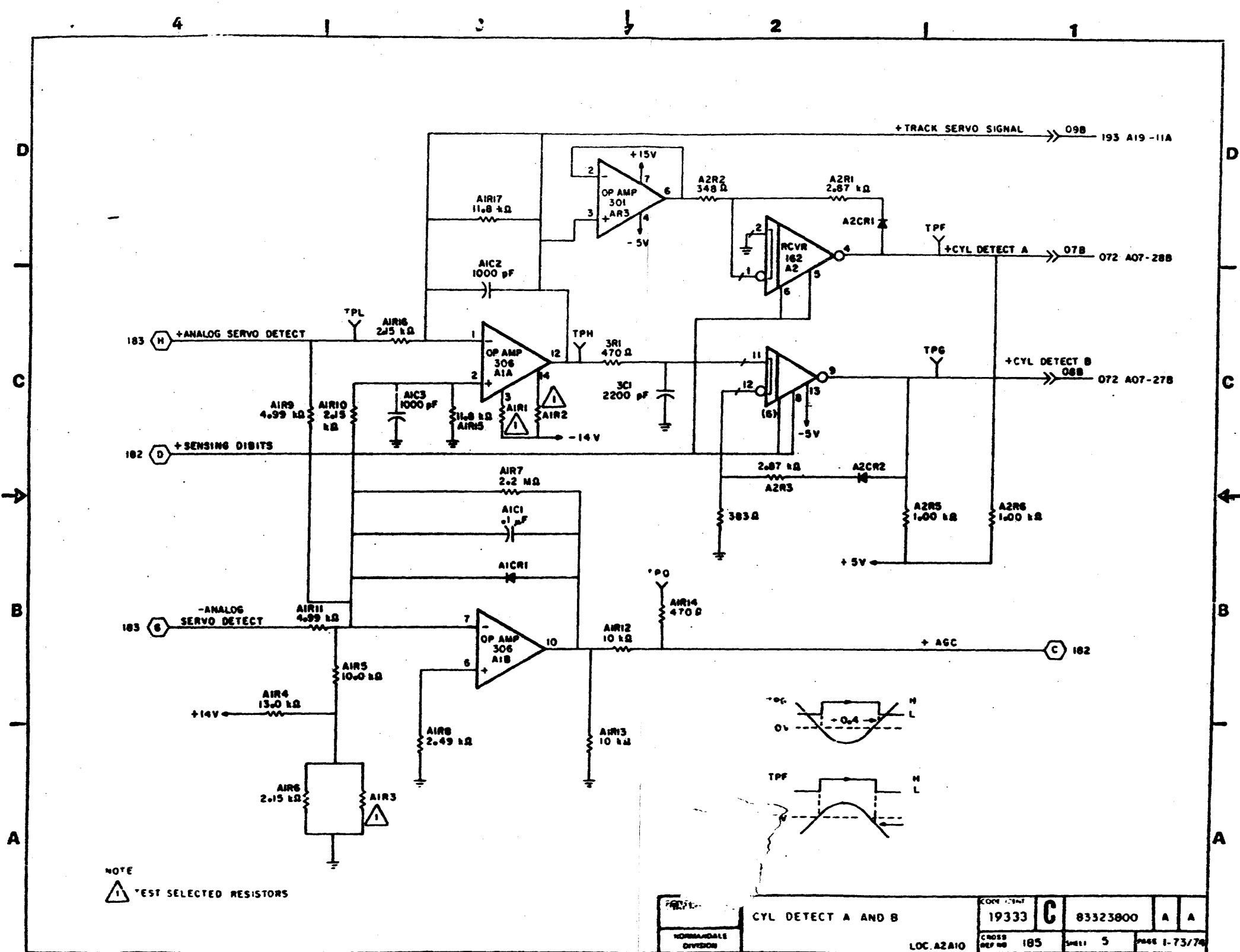
CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 72 of 180
 REV B



NOTES:
 ⚠ TEST SELECTED RESISTORS.

	TRACK SERVO SIGNAL		19333	C	83323800	A	A
	LOC: A2A10		CROSS REF NO 184	Sheet 4	Page 1-72		

CDC PRINT SET
 B-SP-RM05-0-8K78
 SHEET 73 of 180
 REV B



NOTE
 1 TEST SELECTED RESISTORS

CYL DETECT A AND B

19333	C	83323800	A	A
CROSS REF NO 185	SHEET 5	PAGE 1-73/78		

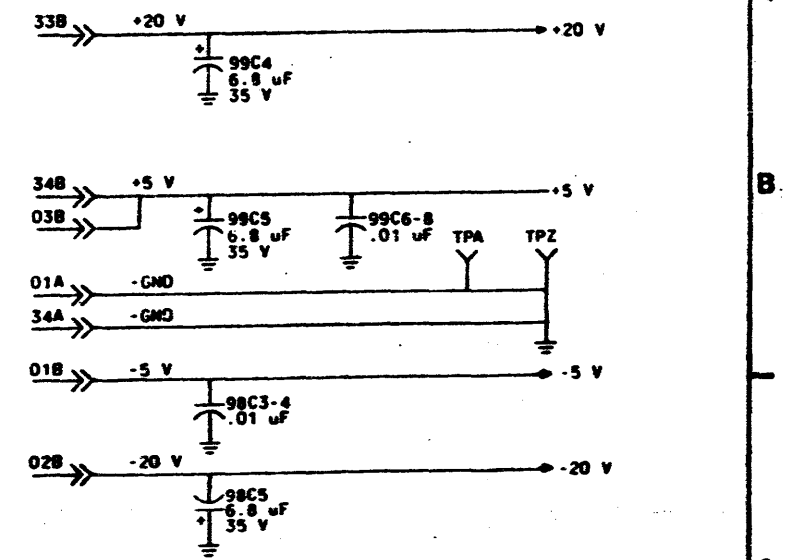
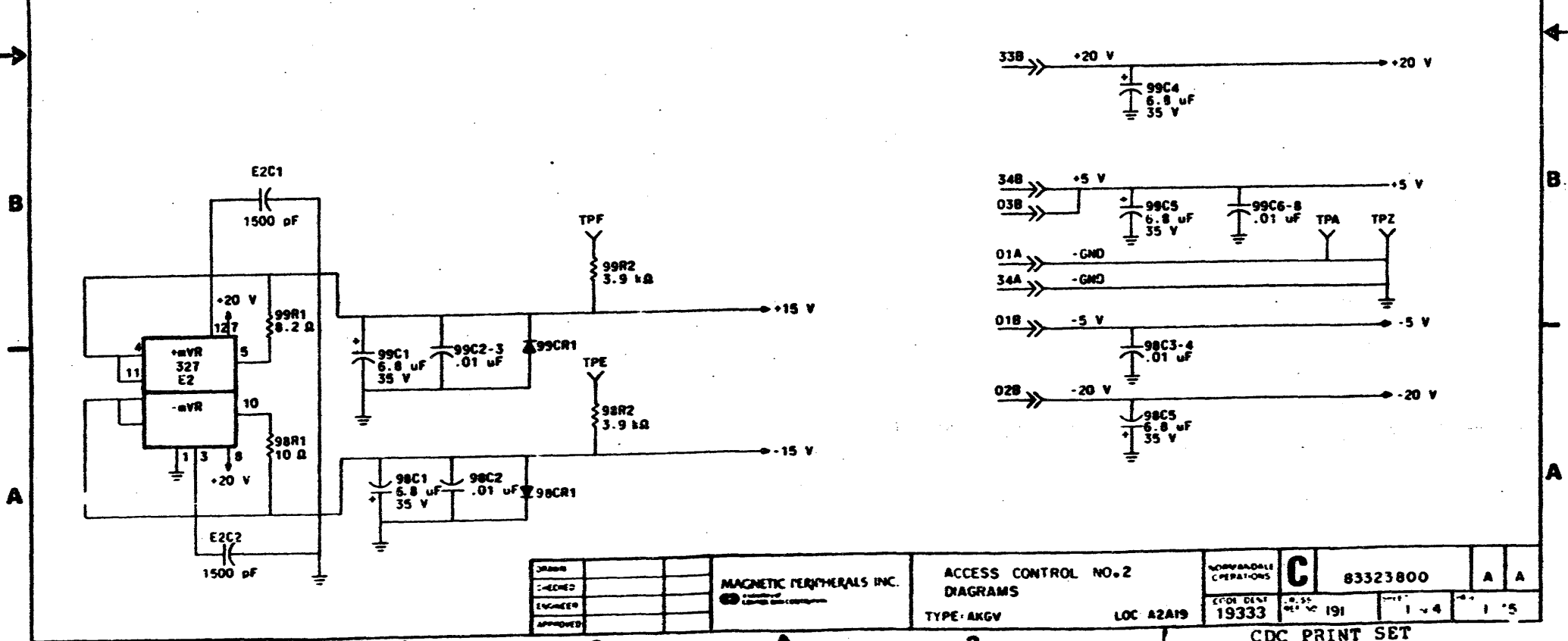
CDC PRINT SET
 B-SP-R405-0-BK78
 SHEET 74 of 180

REV B

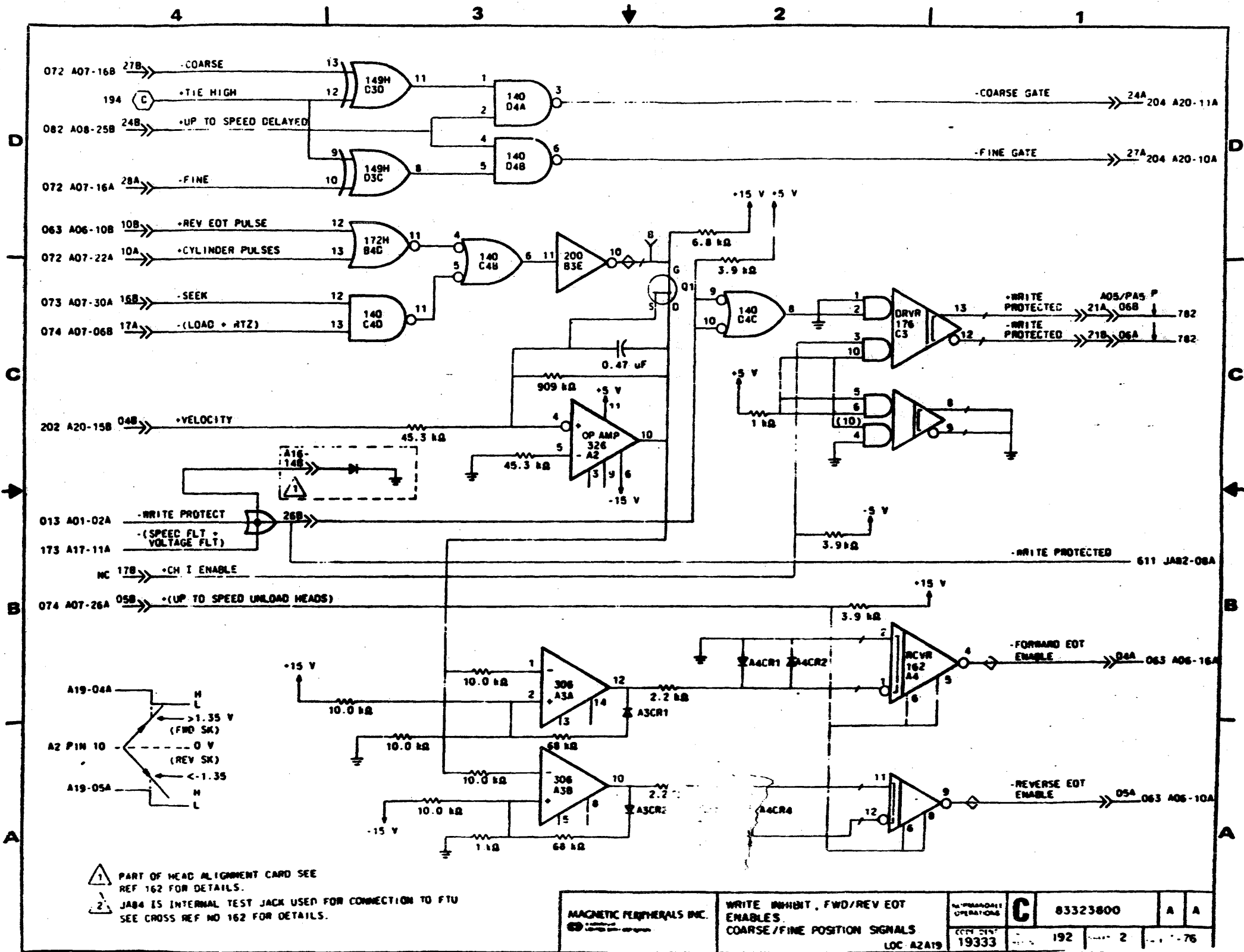
REVISION STATUS OF SHEETS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
A	A	A	A																	

REV.	BY	DATE	DESCRIPTION	APP.	DATE
1	RELEASEE				

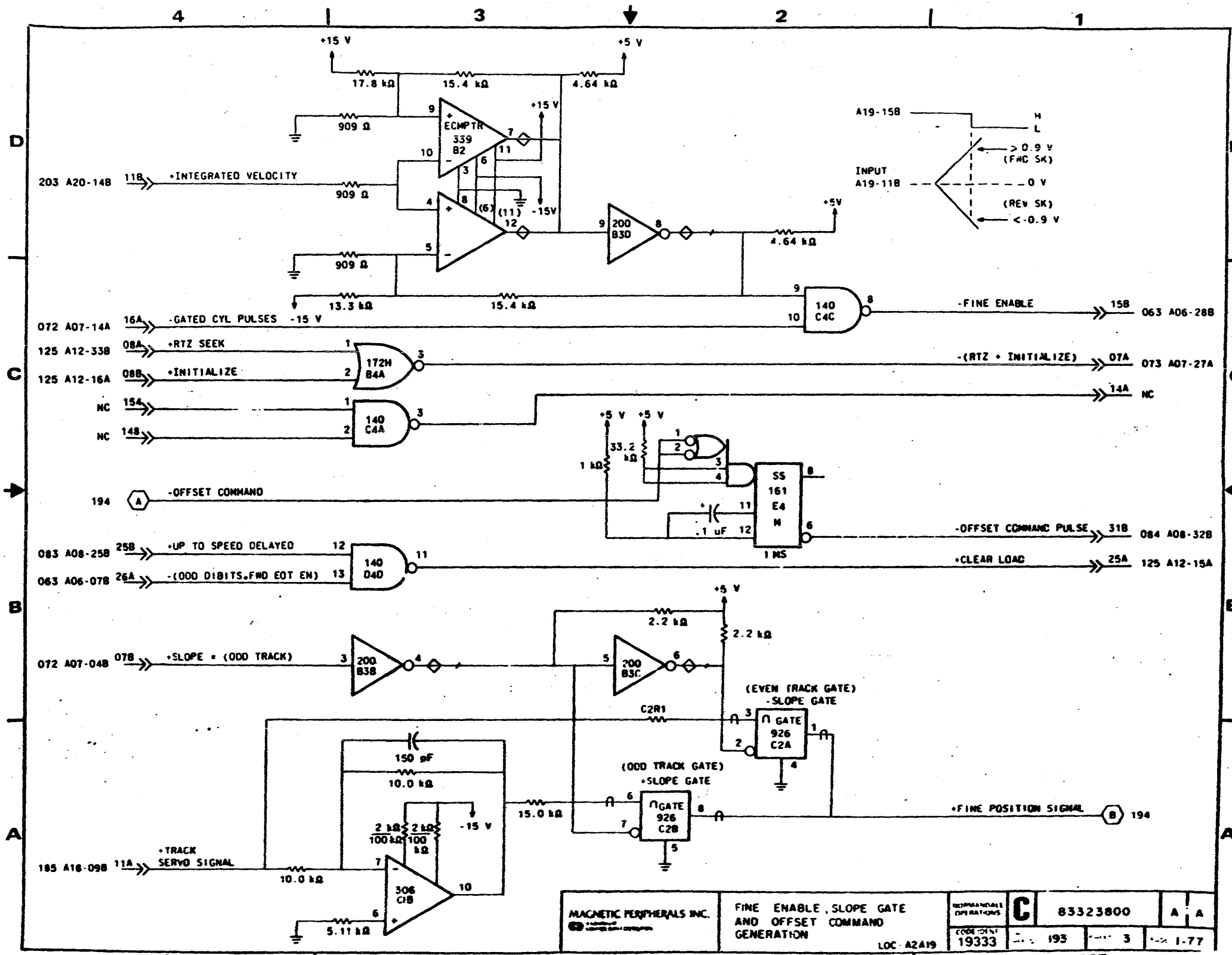


DESIGNED		MAGNETIC PERIPHERALS INC. <small>A DIVISION OF</small> GEORGE EASTMAN CORPORATION	ACCESS CONTROL NO. 2	NONVANDALE OPERATIONS	C 83323800	A	A	
ENGINEER			DIAGRAMS	CTROL DENT		19333		
APPROVED			TYPE: AKGV	LOC: A2A19		REV. NO.	191	1

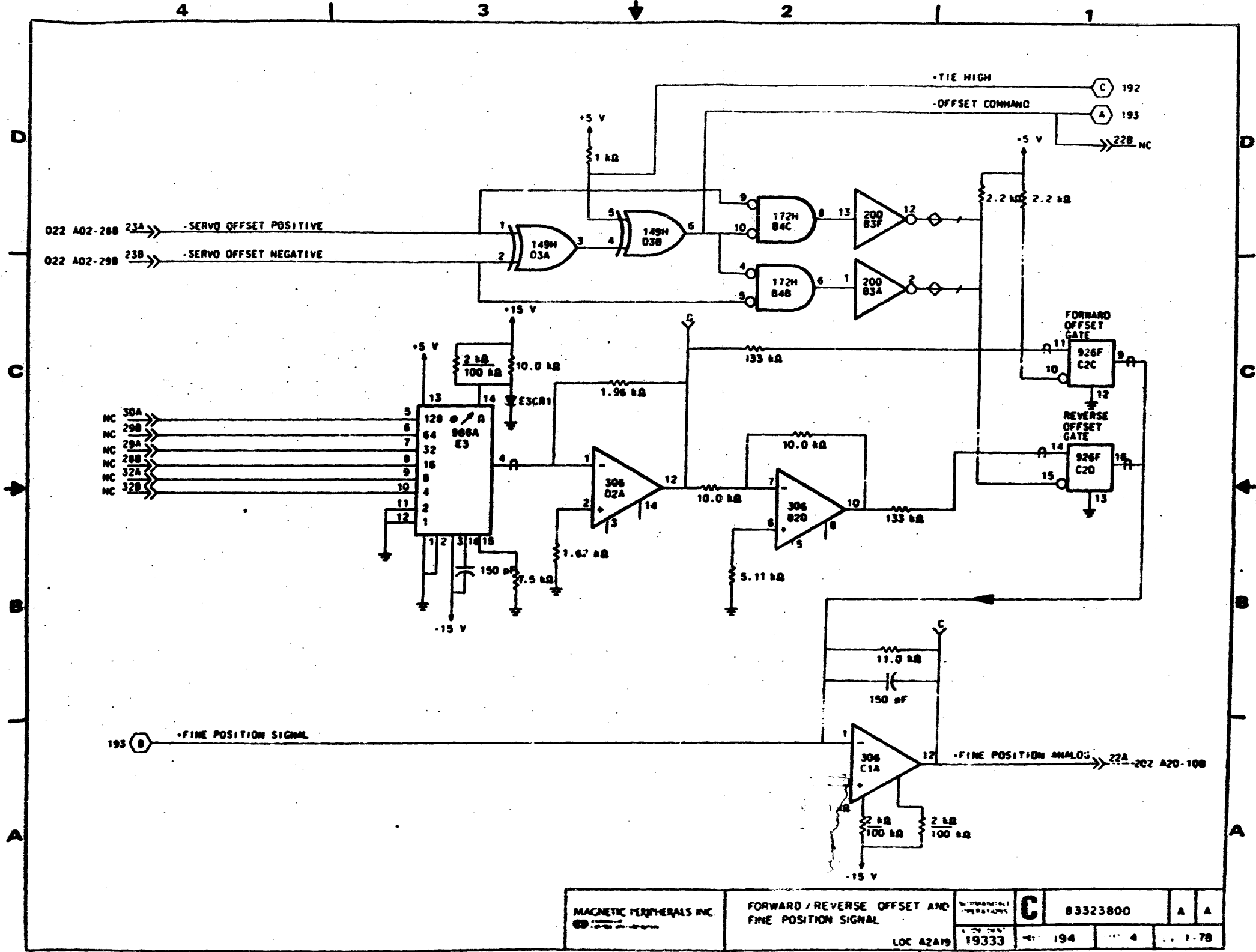


1 PART OF HEAD ALIGNMENT CARD SEE REF 162 FOR DETAILS.
 2 JAB4 IS INTERNAL TEST JACK USED FOR CONNECTION TO FTU SEE CROSS REF NO 162 FOR DETAILS.

MAGNETIC PERIPHERALS INC. <small>10000 W. 10th Ave. Denver, CO 80202</small>	WRITE INHIBIT, FWD/REV EOT ENABLES COARSE/FINE POSITION SIGNALS LOC A2A19	OPERATIONS C	83323800	A A
	19333	192 2	76	



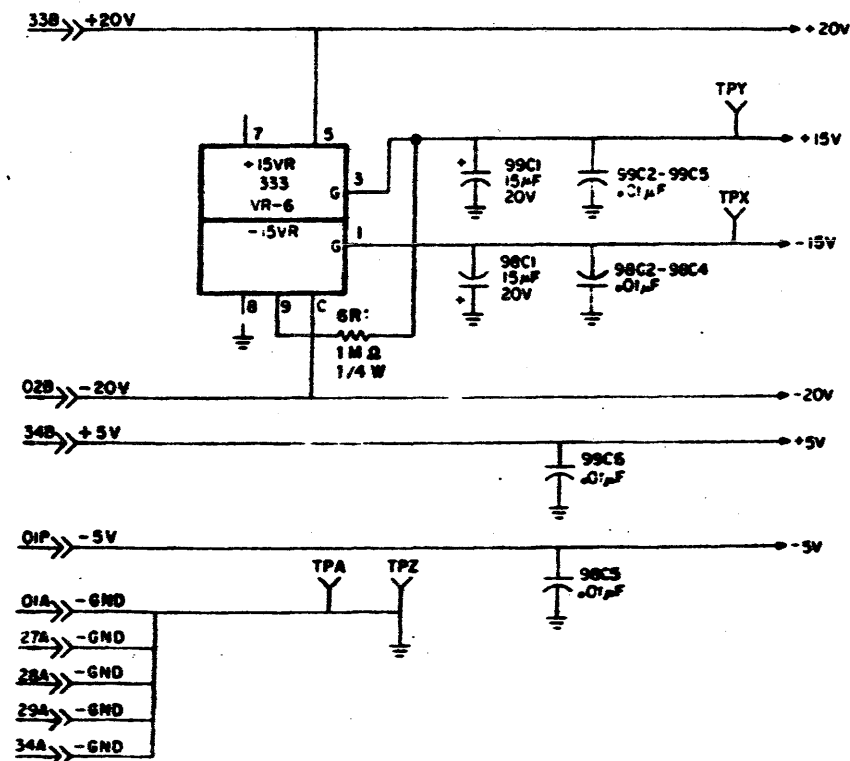
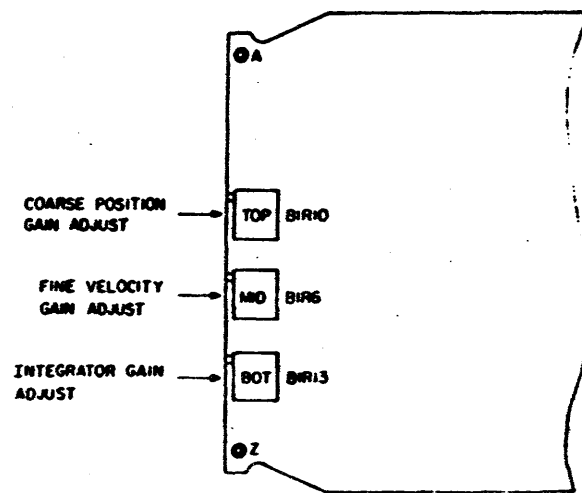
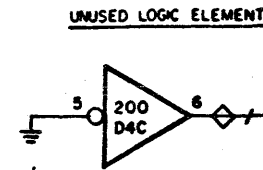
MAGNETIC PERIPHERALS INC. A Division of General Electric Company	FINE ENABLE, SLOPE GATE AND OFFSET COMMAND GENERATION		NONMANUAL OPERATIONS	83323800	A	A
	LOC. A2419		CODE 001 19333	193	3	1-77



MAGNETIC PERIPHERALS INC. LOC A2A19	FORWARD / REVERSE OFFSET AND FINE POSITION SIGNAL	C 19333	83323800	A	A
			194	4	1-78

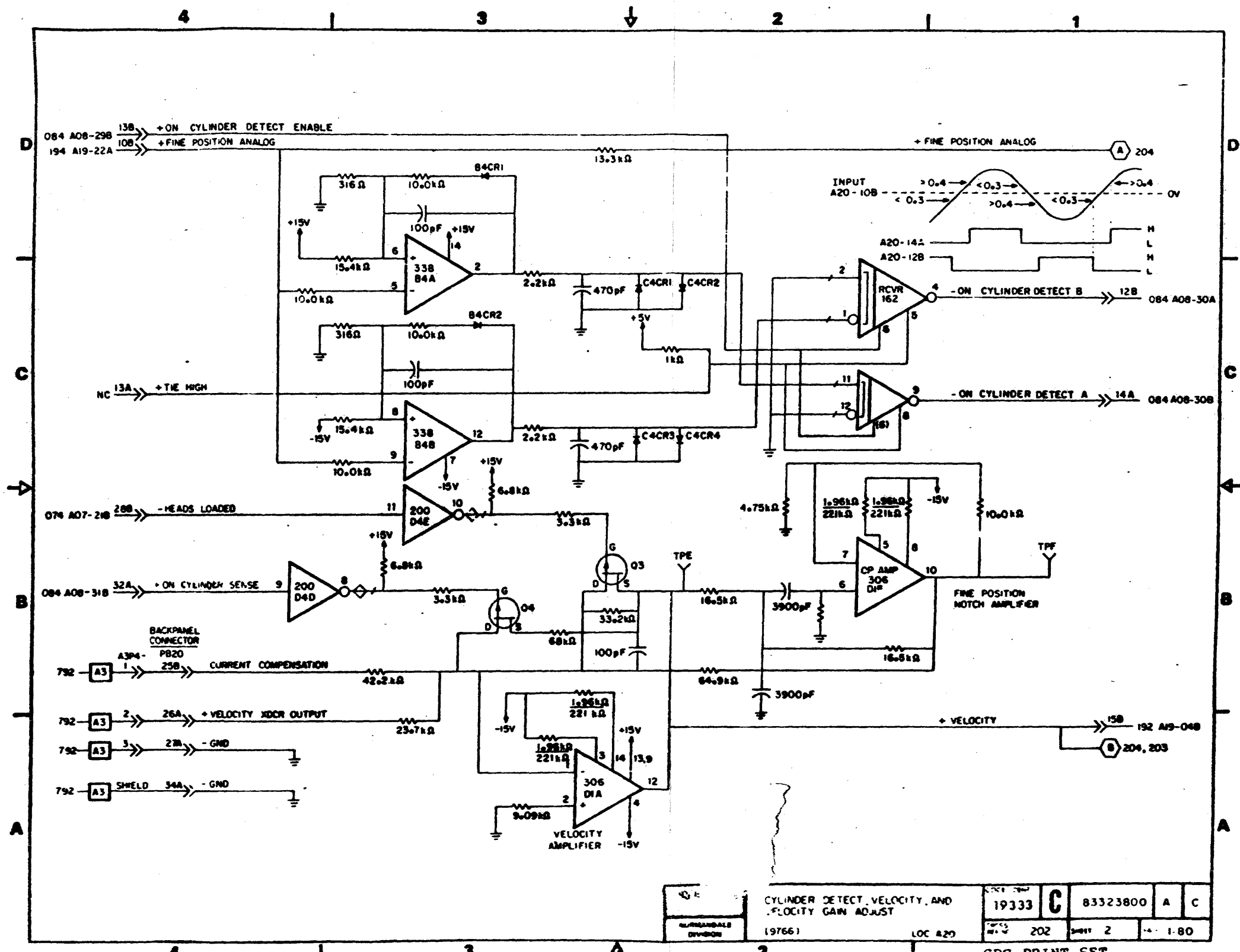
REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A																	
B	A	B	A																	
C	C	C	C																	
D	C	D	C																	
E	C	D	C																	

REVISIONS						
REV	ECO	DESCRIPTION	DRFT	DATE	CHK'D	
A	PE2757	RELEASED				
B	PE27526	ENHANCEMENT				
C	PE55229	LOGIC CORR				
D	PE55230	LOGIC CORR				
E	PE57088A	DESIGN IMPROVEMENT				



DRAWN	WCC-BSTROM								
CHECKED									
DESIGNED									
APPROVED									

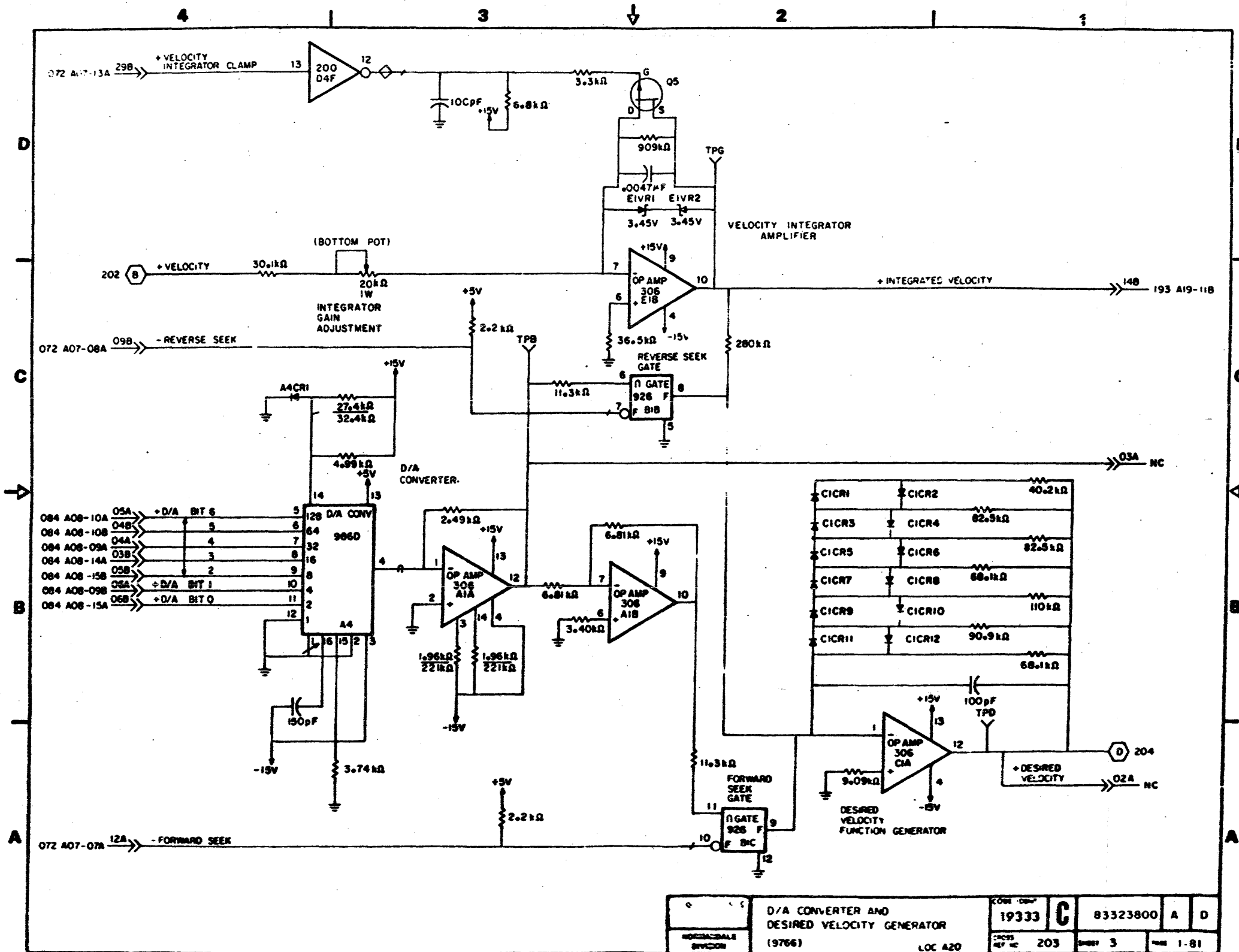
ANALOG SERVO DIAGRAMS
 TYPE 0MSV LOC A20
 19333 C 83323800 E E
 SHEET 1 of 4 PAGE 1-79
 REF 832-5220



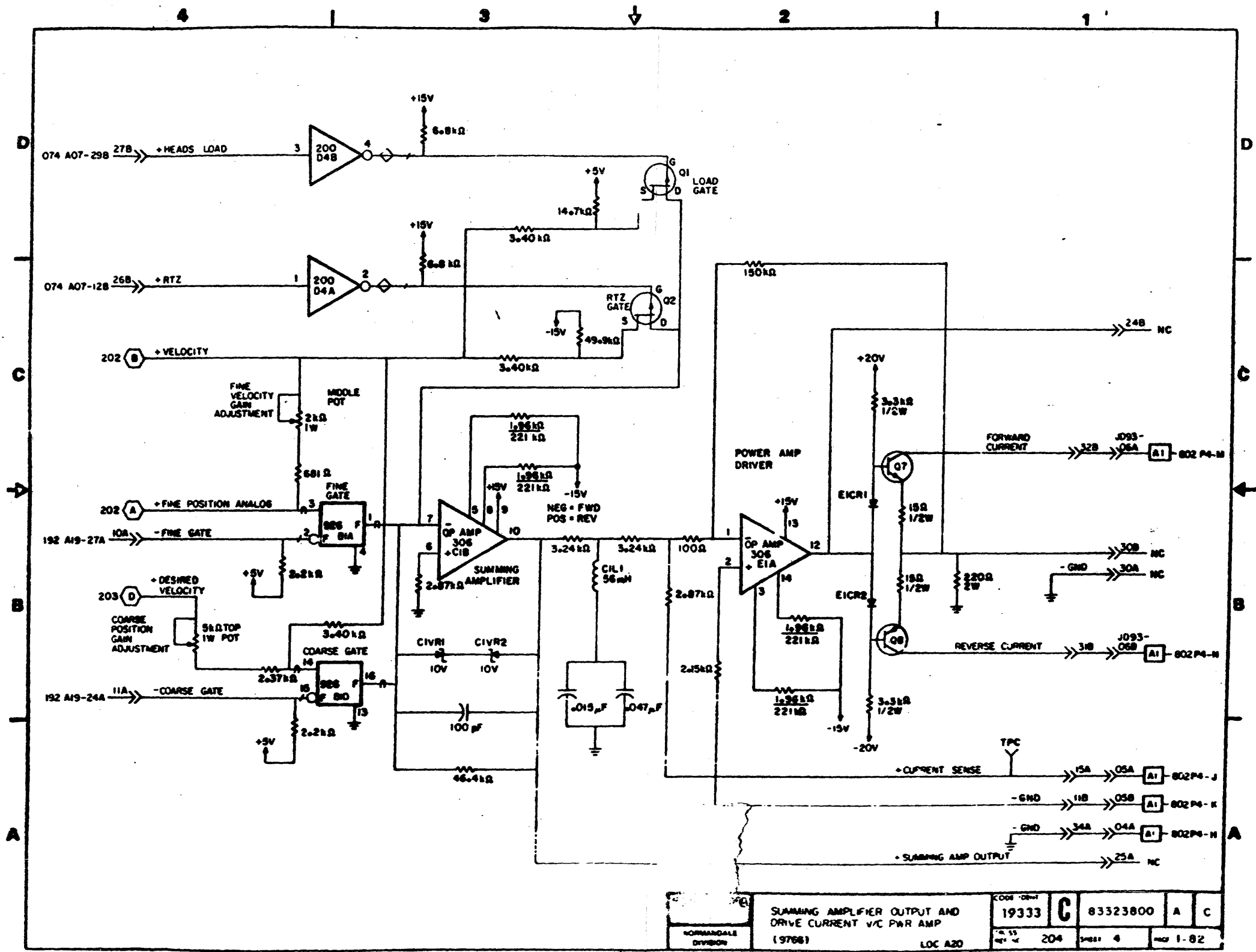
19333	C	83323800	A	C

CYLINDER DETECT, VELOCITY, AND FLOCITY GAIN ADJUST
 (19766) LOC 420

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 80 of 180
 REV B



INDICATOR SYMBOL	D/A CONVERTER AND DESIRED VELOCITY GENERATOR (9766)	19333	C	83323800	A	D
	LOC 420	203	3	1-81		

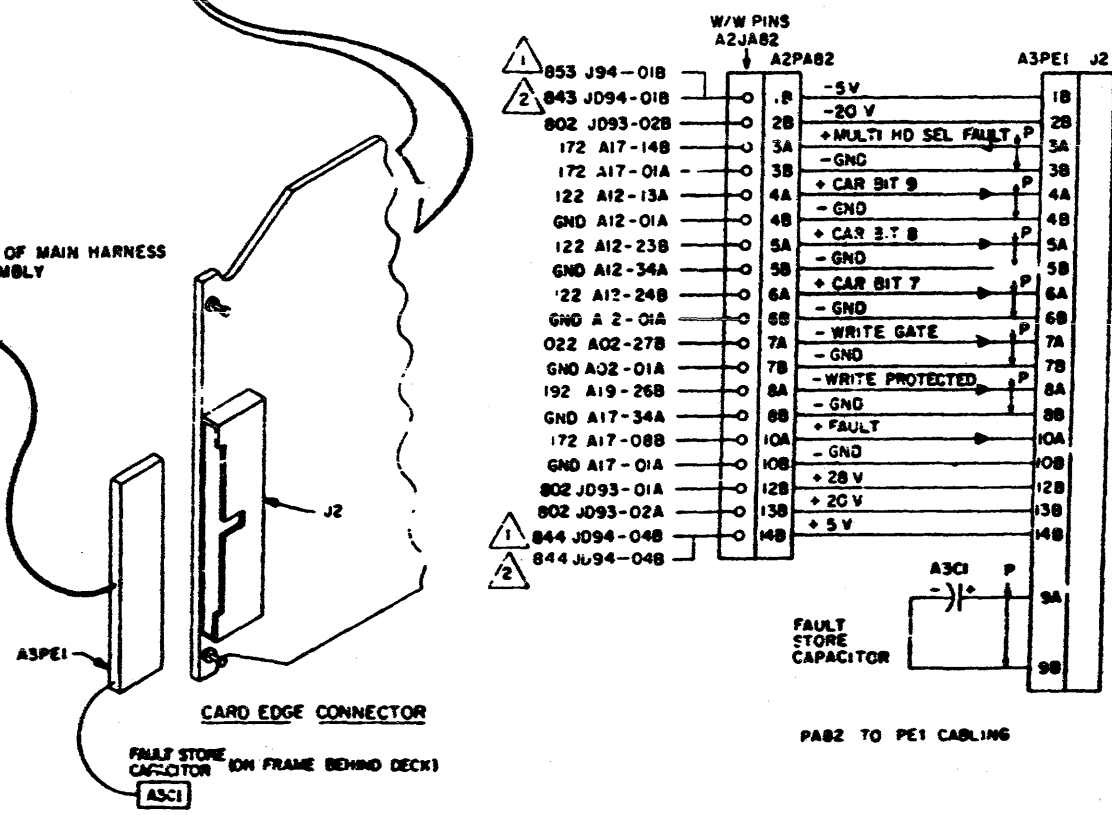
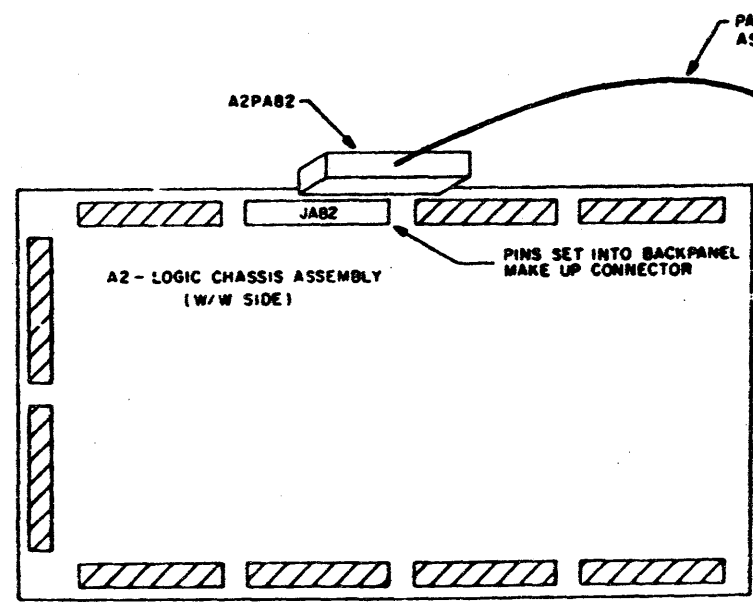
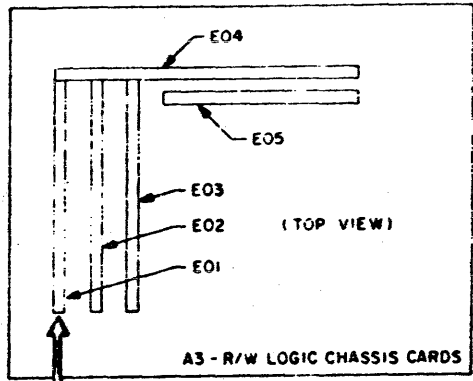


NORMAN DALE DIVISION	SUMMING AMPLIFIER OUTPUT AND DRIVE CURRENT V/C PWR AMP (19768)		CODE OR 19333	C	83323800	A	C
	LOC A20		204	4	1-82		

CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 82 of 180
REV B

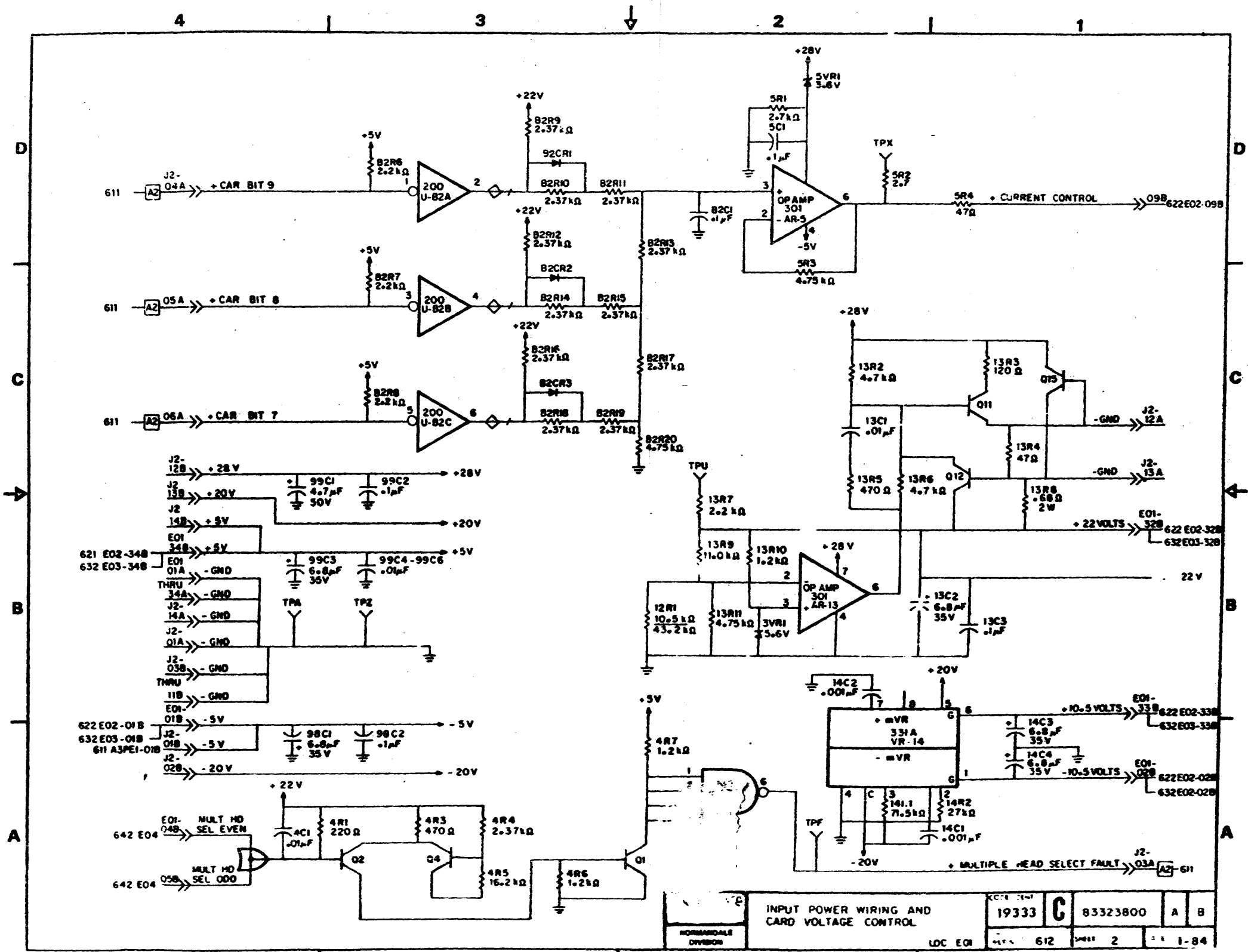
REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A																		
B	B	B																		
C	B	B																		

REVISIONS					
REV	ECO	DESCRIPTION	DRFT	DATE	CHK'D
A	PE2300	RELEASED		8-1	
B	PE5253	LOGIC DIA CORR	MA	3-7-75	
C	37453	ADD VDE	DMG	11-1-75	



1 VDE-ONLY
2 NON-VDE ONLY

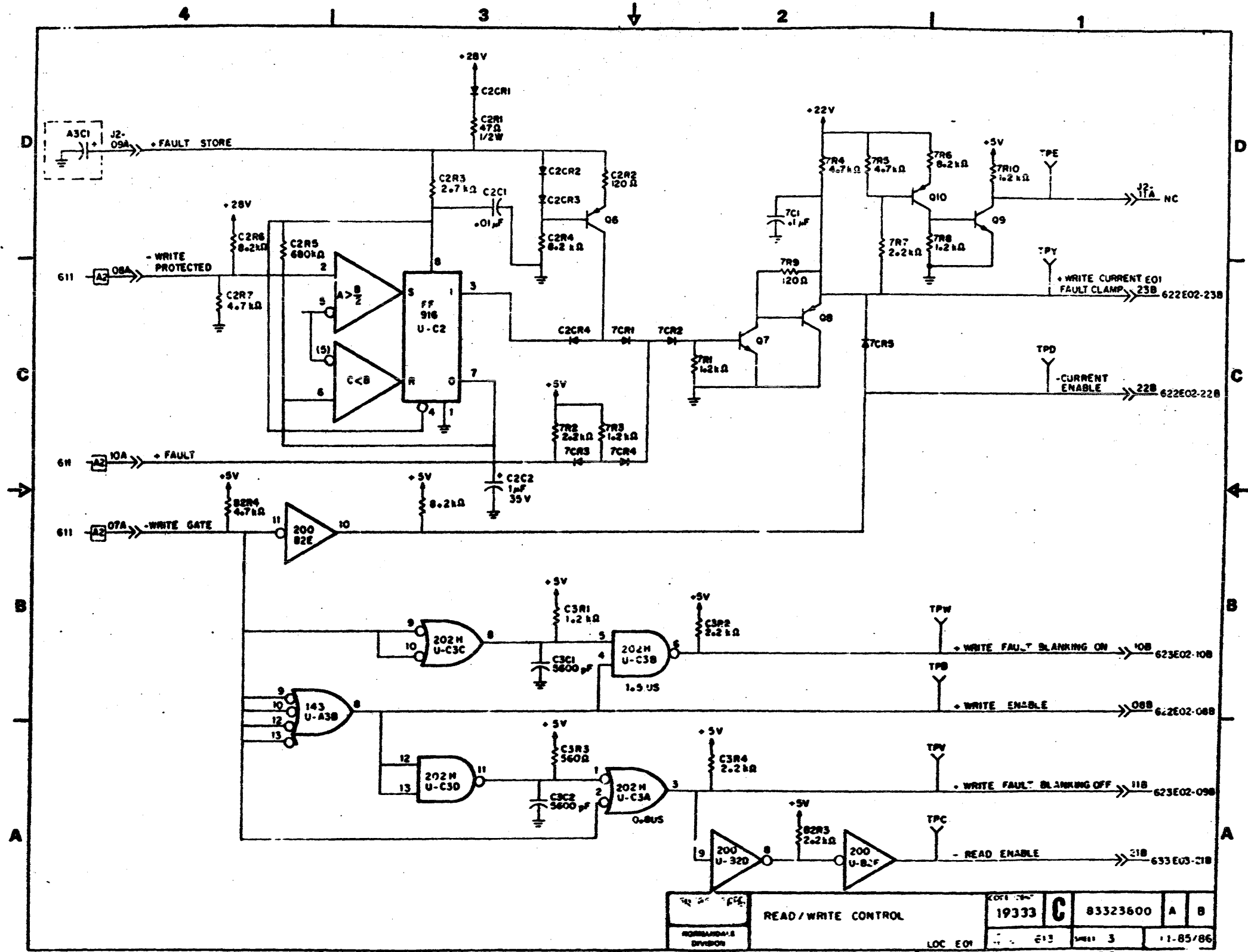
<table border="1"> <tr><td>DESIGN</td><td>DATE</td><td>BY</td></tr> <tr><td>CHECKED</td><td></td><td></td></tr> <tr><td>APPROVED</td><td></td><td></td></tr> </table>	DESIGN	DATE	BY	CHECKED			APPROVED			<p>R/W CONTROL AND CABLING DIAGRAMS</p> <p>TYPE: 4P/W LOC: E01</p>	<p>CODE 19333 C 83323800 C C</p> <p>611 1 of 3 1-3</p> <p>REF 83215221 REF 8-25-7032</p>
DESIGN	DATE	BY									
CHECKED											
APPROVED											



INPUT POWER WIRING AND
CARD VOLTAGE CONTROL

19333	C	83323800	A	B
LOC E01	612	2	1-84	

CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 94 of 130
REV B

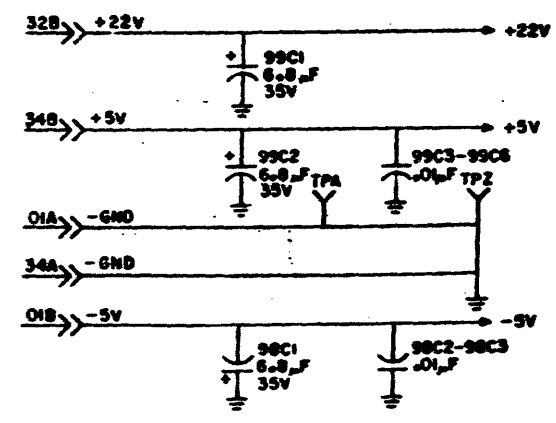
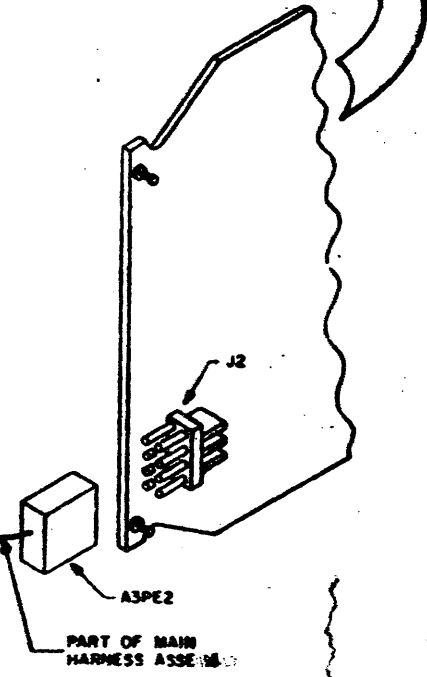
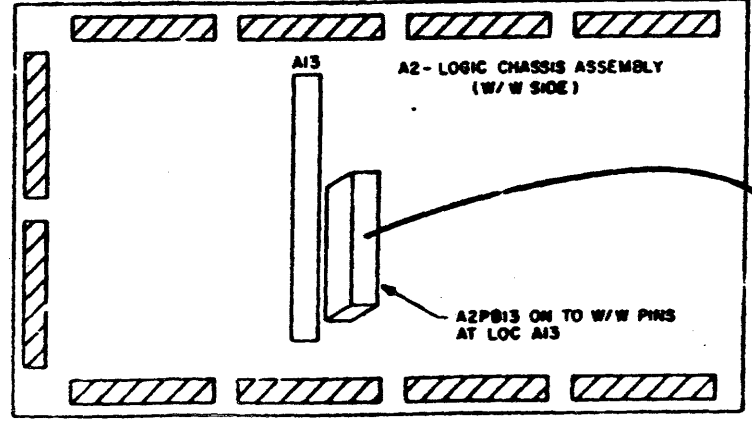
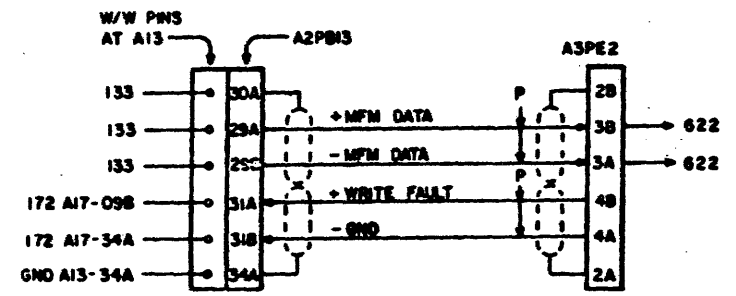
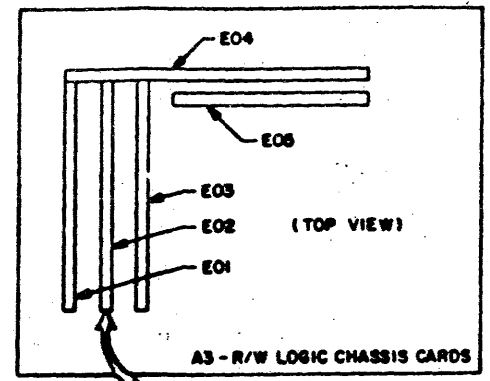


READ/WRITE CONTROL			
19333	C	83323600	A B
...

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 85 of 180
 REV B

REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A																	
B	B	B																	
C	C	B																	

REVISIONS					
REV	BY	DESCRIPTION	DATE	CHK'D	APP'D
A	PE2500	RELEASED	27	25	
B					
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					
N					
O					
P					
Q					
R					
S					
T					
U					
V					
W					
X					
Y					
Z					



DESIGNED BY	W BERGSTROM	10-21-78	TYPE: BPJV	LOC E02	19333	C	83323800	D	C
CHECKED					621	1-3	1-87		
APPROVED									

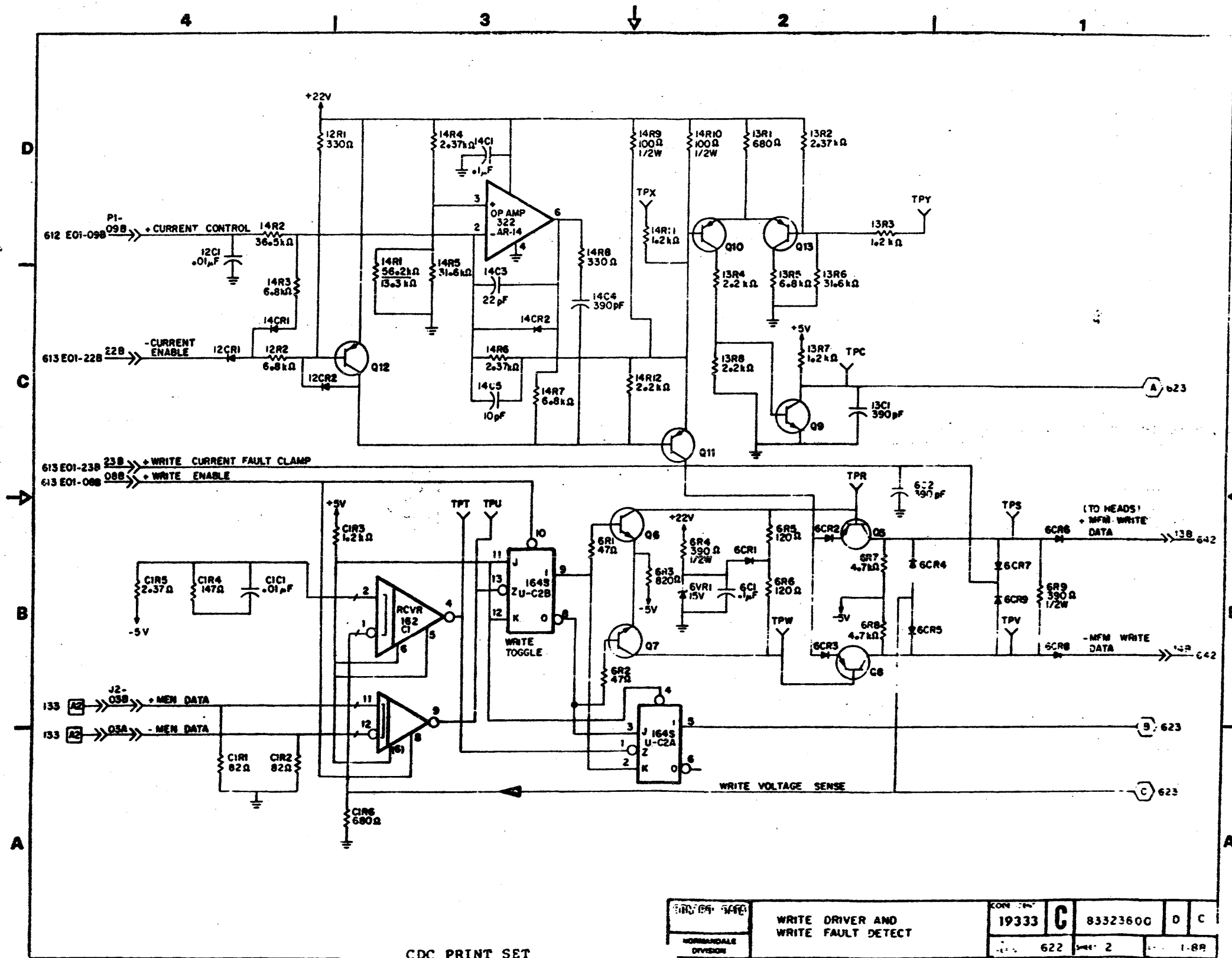
WRITE DRIVER CARD EDGE CONNECTOR AND CABLING DIAGRAMS

TYPE: BPJV

LOC E02

CDC PRINT SET
3-SP-RM05-0-3K7B
SHEET 85 of 190

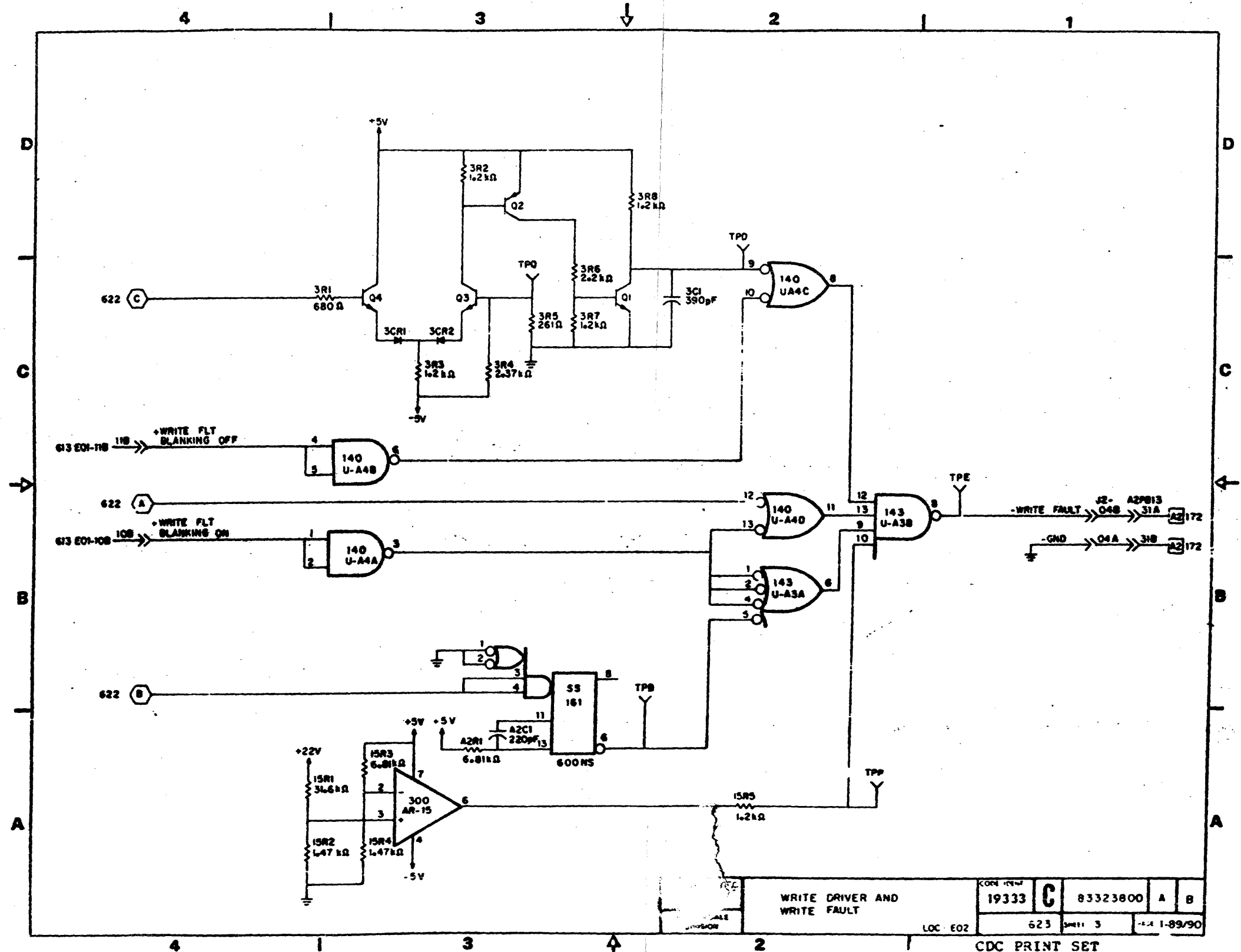
REV 3



CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 87 of 180

REV B

NORMANDALE DIVISION	WRITE DRIVER AND WRITE FAULT DETECT		19333	C	8332360G	D	C
	622	SHEET 2	1-88				



WRITE DRIVER AND
WRITE FAULT

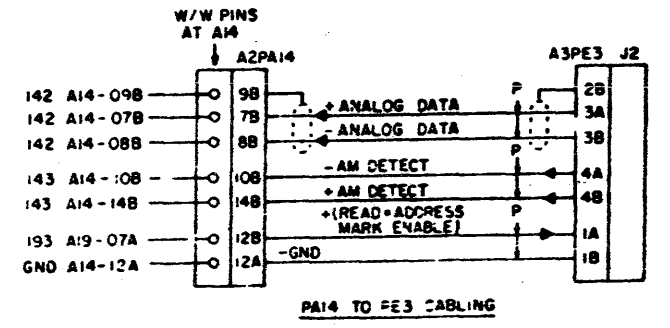
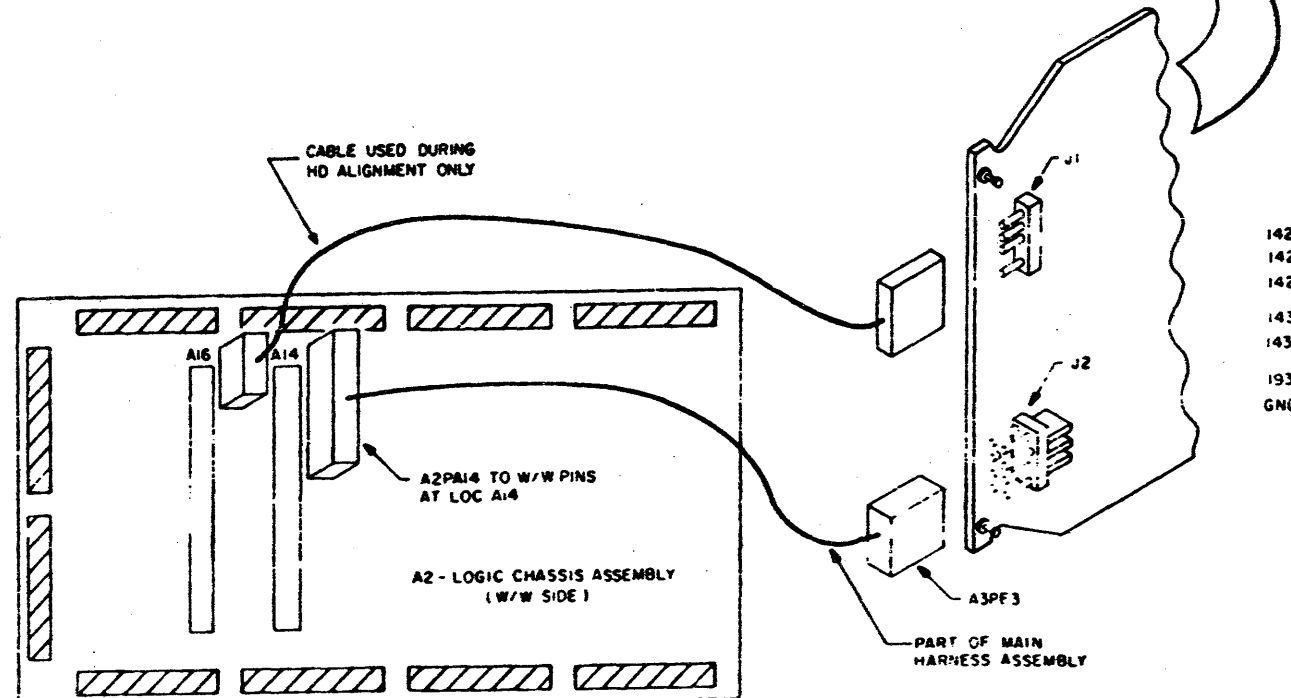
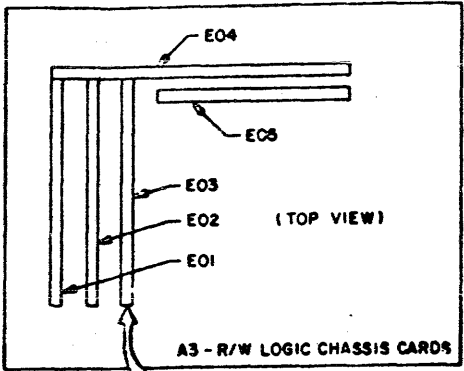
19333	C	83323800	A	B
623	SHEET 3	1-89/90		

CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 88 OF 180

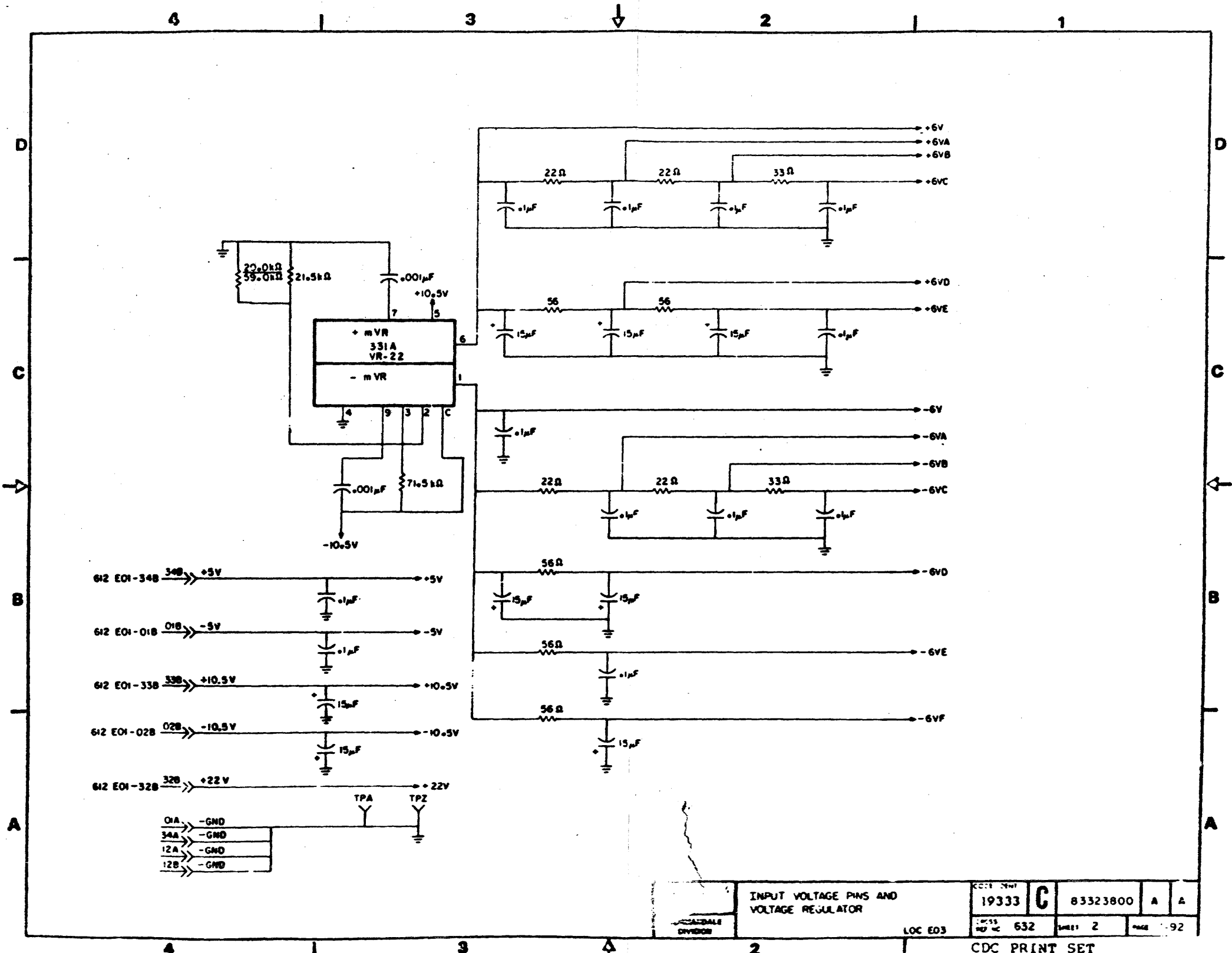
REV B

REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A																

REVISIONS					
REV	ECO	DESCRIPTION	COPIES	DATE	BY
A	7/23/60	RELEASE			

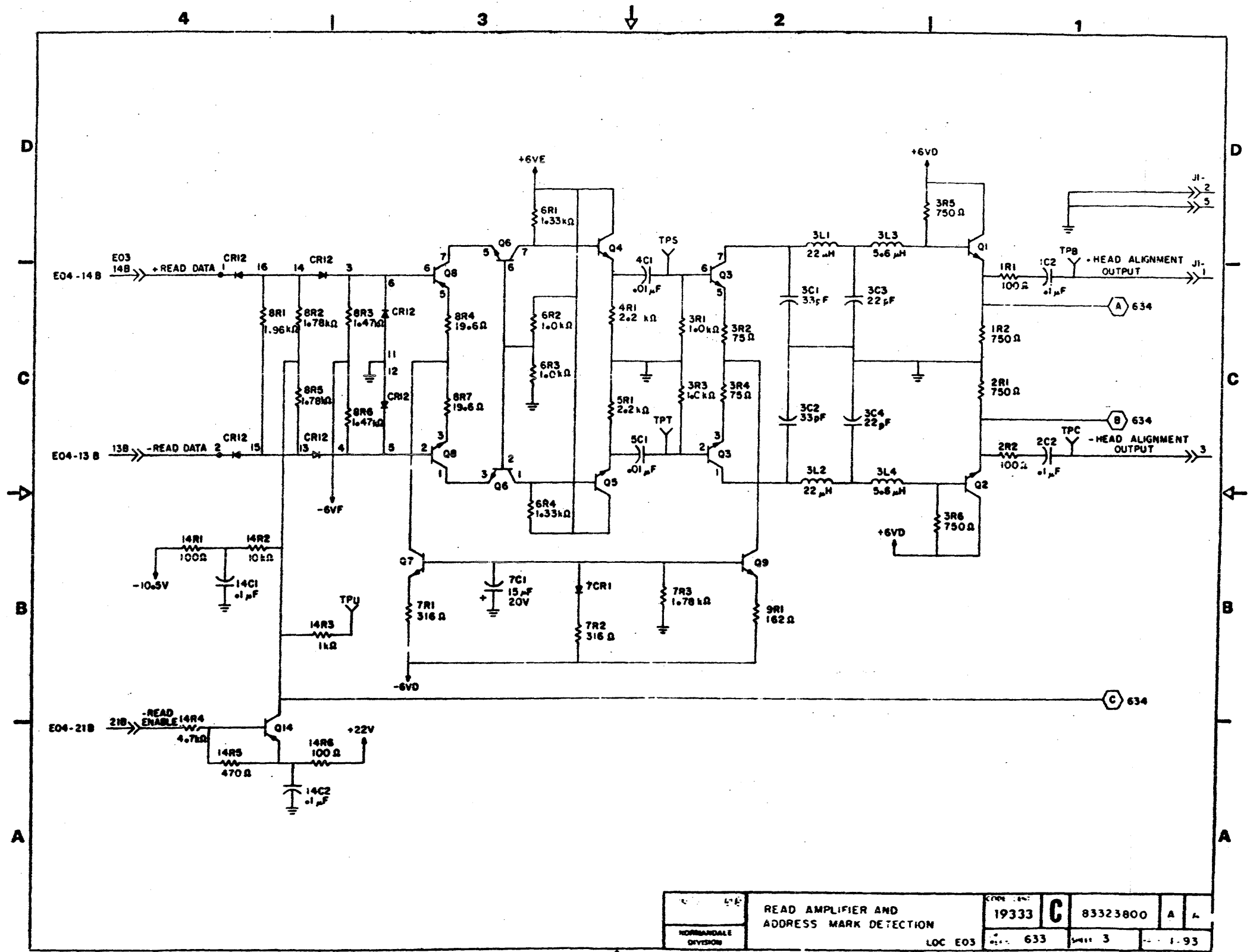


DRAWN	2	10/76	READ AMPLIFIER AND ADDRESS MARK DETECTION DIAGRAMS	CODE 19333	C	83323800	A	A
CHECKED			TYPE 4PHV	NO. 631	SHEET 1 of 4	PAGE 1-91		
ENGINEER			LOC E03	CDC PRINT SET				
APPROVED				B-SP-RM05-0-3K7B				
				SHEET 99 of 190				
				REV B				



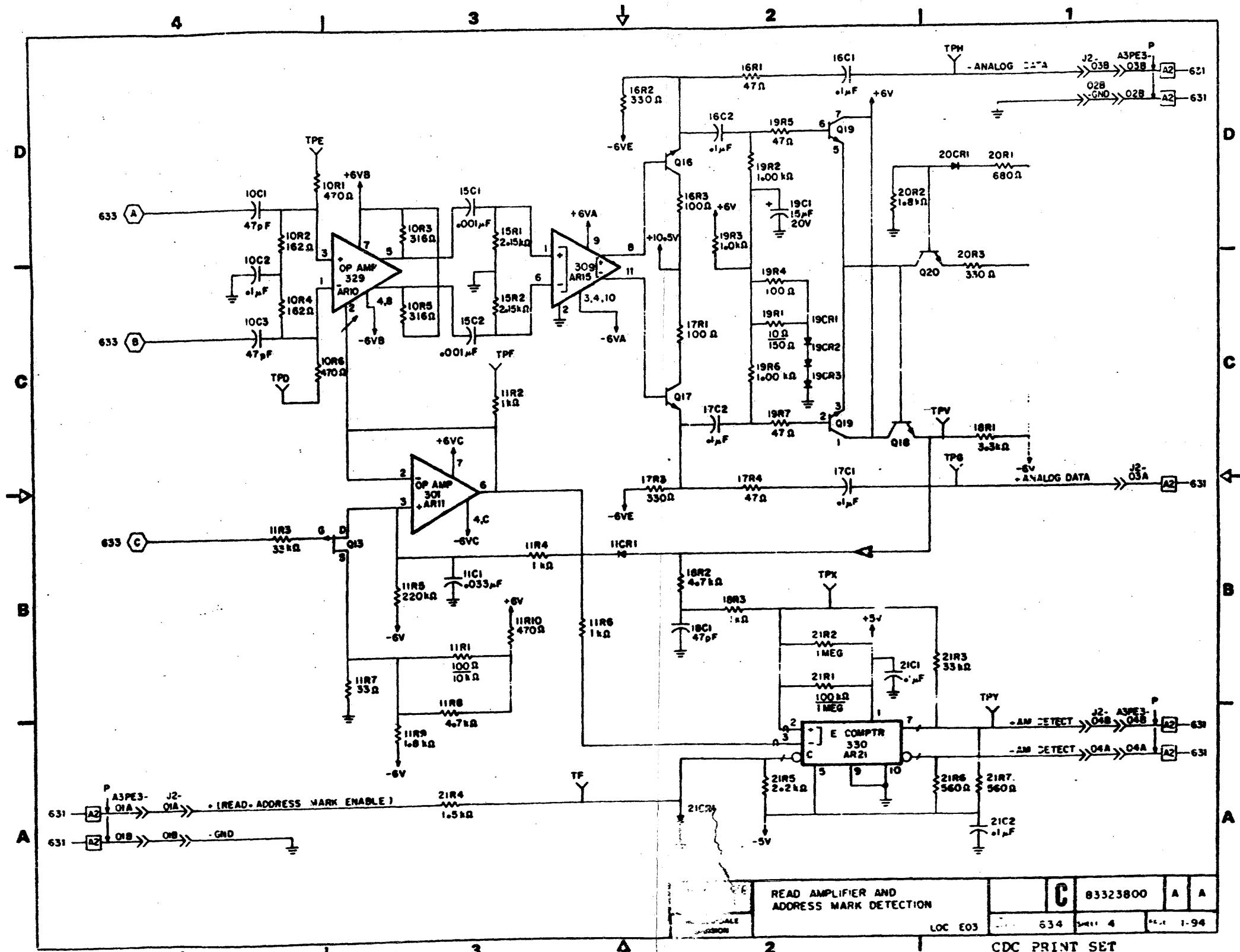
CALDWELL DIVISION	INPUT VOLTAGE PINS AND VOLTAGE REGULATOR		REV: 19333	C	83323800	A	A
	LOC E03	632	SHEET 2				

CDC PRINT SET
 B-SP-RM05-0-8K7B
 SHEET 90 of 180
 REV 3



NORANDA DIVISION	READ AMPLIFIER AND ADDRESS MARK DETECTION	19333	C	83323800	A	A
	LOC E03	633	3	1-93		

CDC PRINT SET
 B-SP-RM05-U-BK7B
 SHEET 91 of 180 REV B

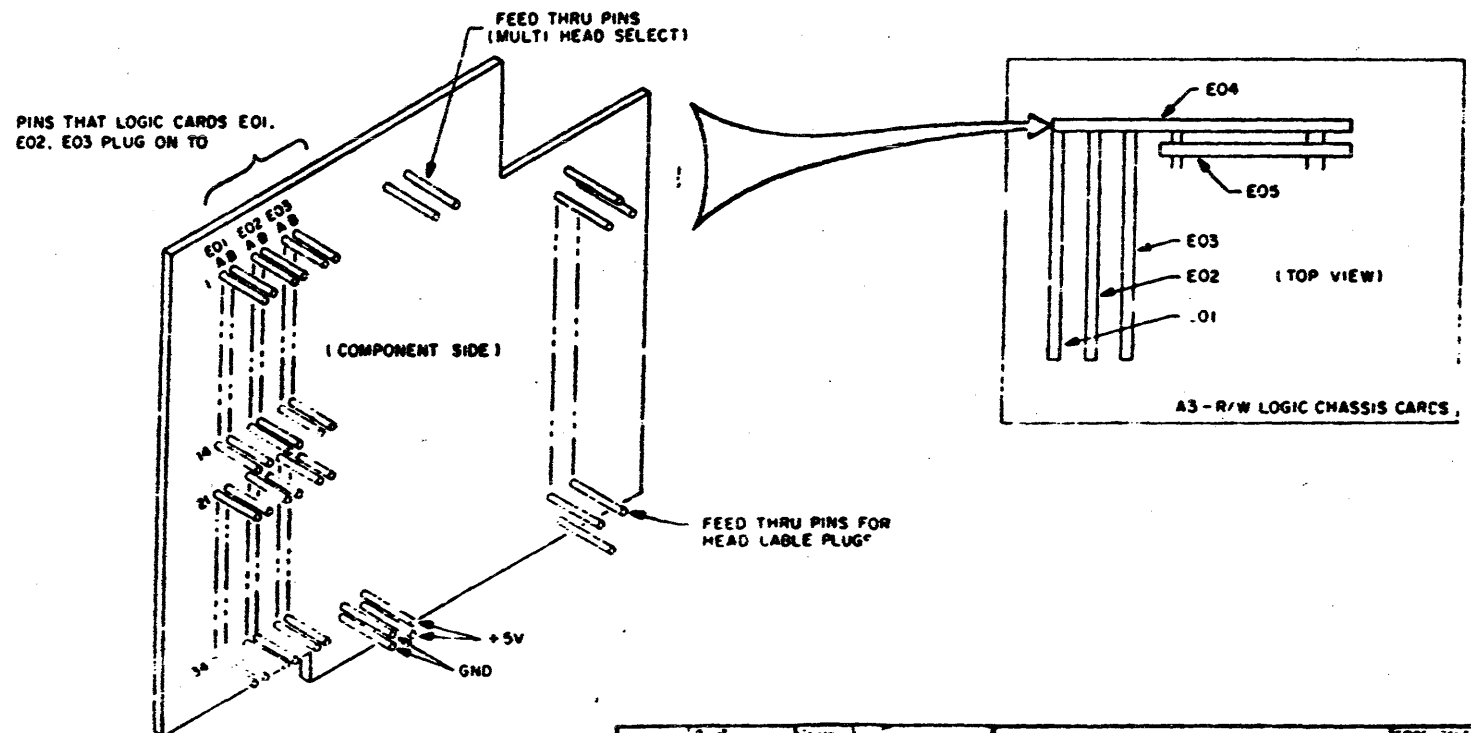


READ AMPLIFIER AND ADDRESS MARK DETECTION

C	83323800	A	A
LOC E03	634	4	1-94

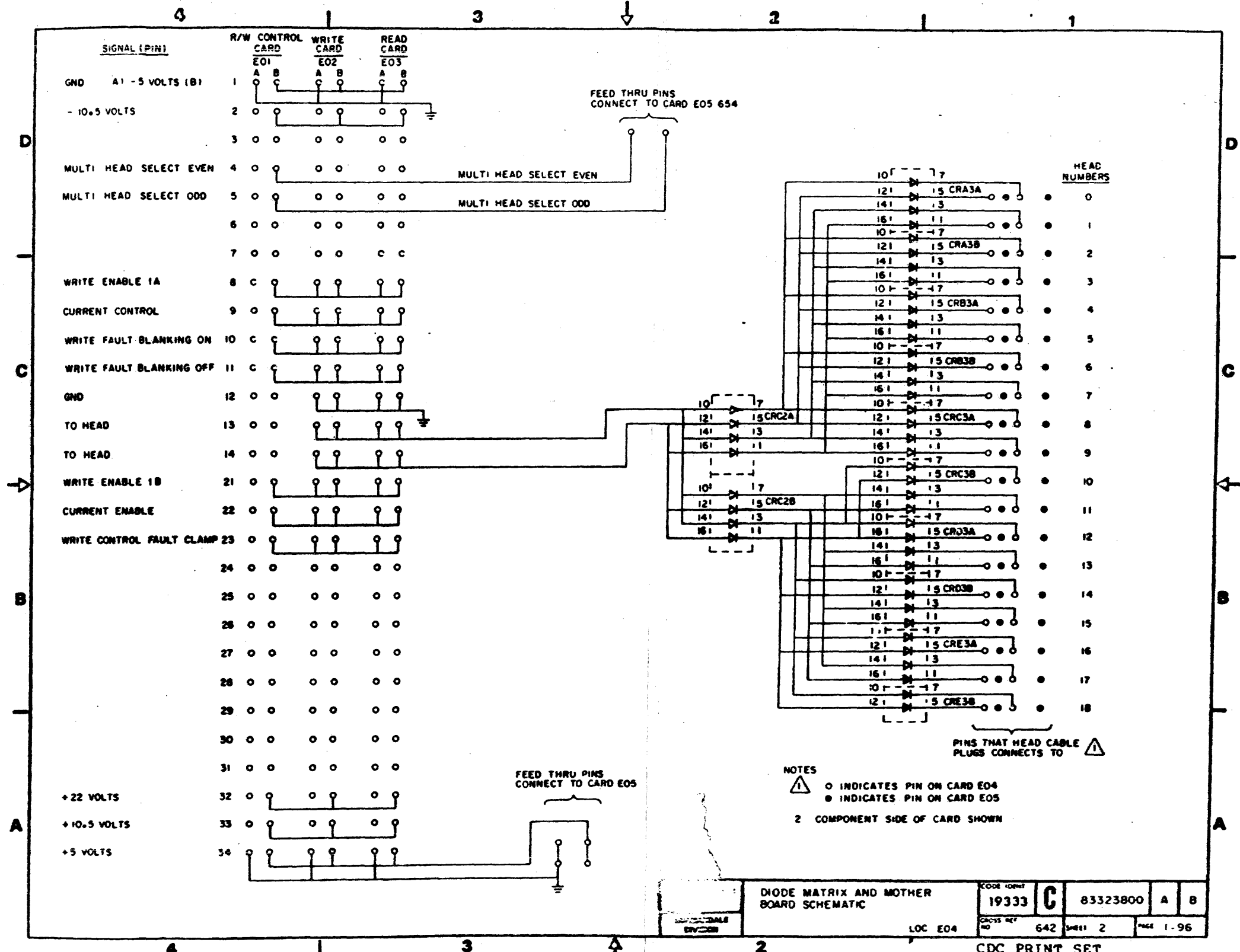
REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A																			
B	B																			

REVISIONS					
REV.	ECO	DESCRIPTION	DATE	BY	CHKD
A	PEL4000	RELEASED	12-27-78	XC	28
B	PEL5275	REV. 2A	8-6-79		147



DESIGN	LAB 412	DATE		DIODE MATRIX AND MOTHER BOARD BOARD LAYOUT DIAGRAMS	19333	C	83323800	A	B
CHECKED				TYPE 4XFN	641	1 of 2	1-95		
ENGINEER				LOC E04					
APPROVED									

CDC PRINT SET
 B-S2-RM05-9-BK78
 SHEET 93 of 183
 REV B



NOTES
 ⚠ ○ INDICATES PIN ON CARD E04
 ● INDICATES PIN ON CARD E05
 2 COMPONENT SIDE OF CARD SHOWN

DIODE MATRIX AND MOTHER BOARD SCHEMATIC

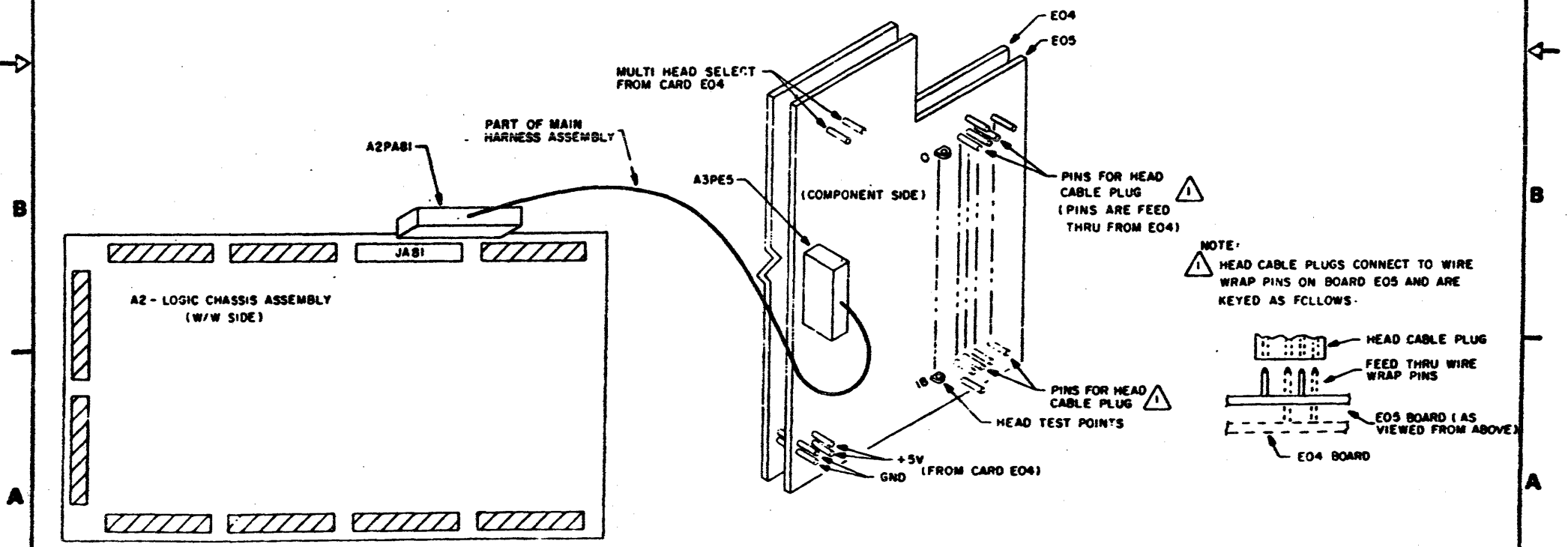
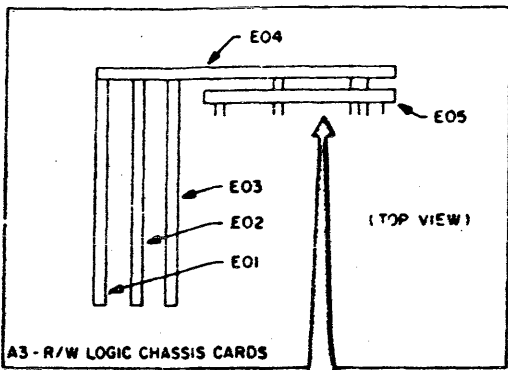
CODE 19333	C	83323800	A	B
CHITS REF NO 642	SHEET 2	PAGE 1-96		

CDC PRINT SET
 3-SP-RM05-0-BK7B
 SHEET 94 of 180

REV B

REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A	A															
B	A	B	A	A															

REVISIONS					
REV	ECO	DESCRIPTION	DRFT	DATE	CHK'D
1	ALL	RELEASED	MLE		
2	RESISTOR	...			



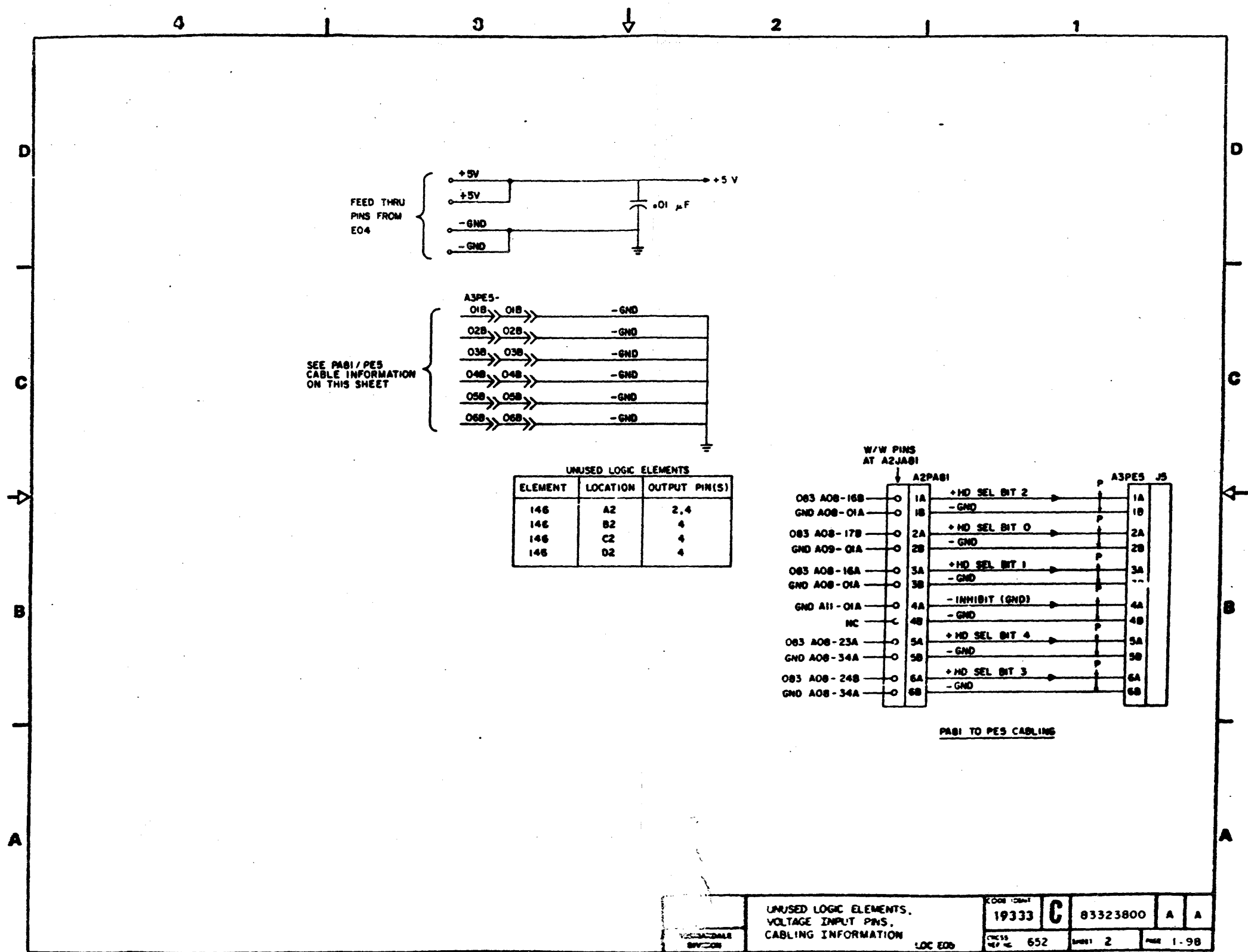
DRAWN	G. R. ...	DATE	
CHECKED			
ENGINEER			
APPROVED			

HEAD SELECT BOARD, HEAD PLUG CONNECTORS, CABLING AND CARD LAYOUT DIAGRAMS

TYPE BXGN

LOC E25

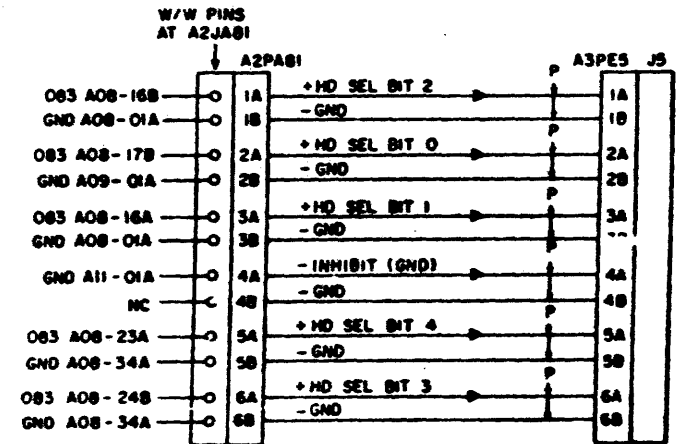
CODE	19333	C	83323800	A	B
CROSS REF	651	SHEET	1 OF 5	PAGE	1-97



FEED THRU PINS FROM E04

SEE PAB1/PES CABLE INFORMATION ON THIS SHEET

UNUSED LOGIC ELEMENTS		
ELEMENT	LOCATION	OUTPUT PIN(S)
146	A2	2,4
146	B2	4
146	C2	4
146	D2	4



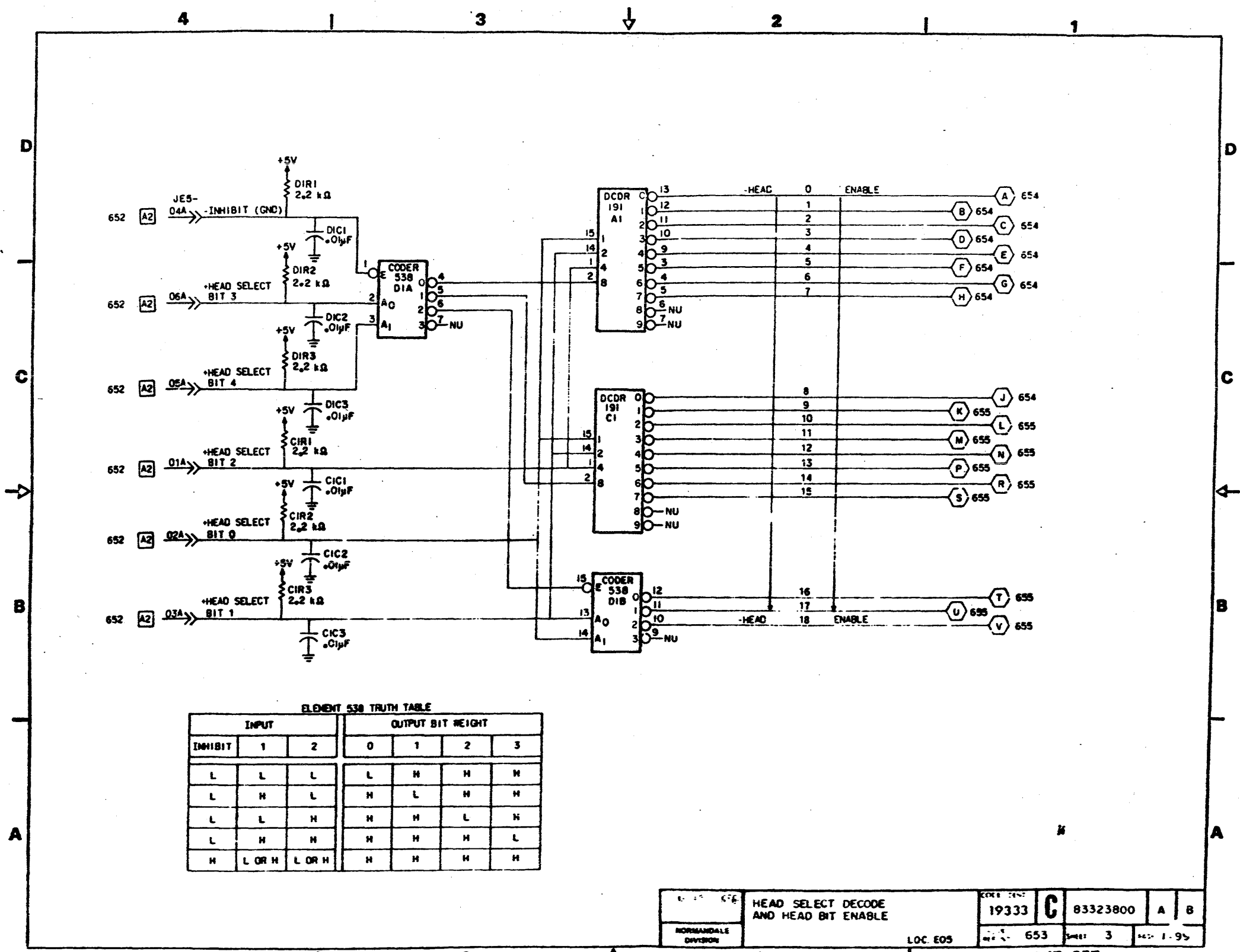
PAB1 TO PES CABLING

UNUSED LOGIC ELEMENTS,
VOLTAGE INPUT PINS,
CABLING INFORMATION

19333	C	83323800	A	A
652	2	1-98		

CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 96 OF 180

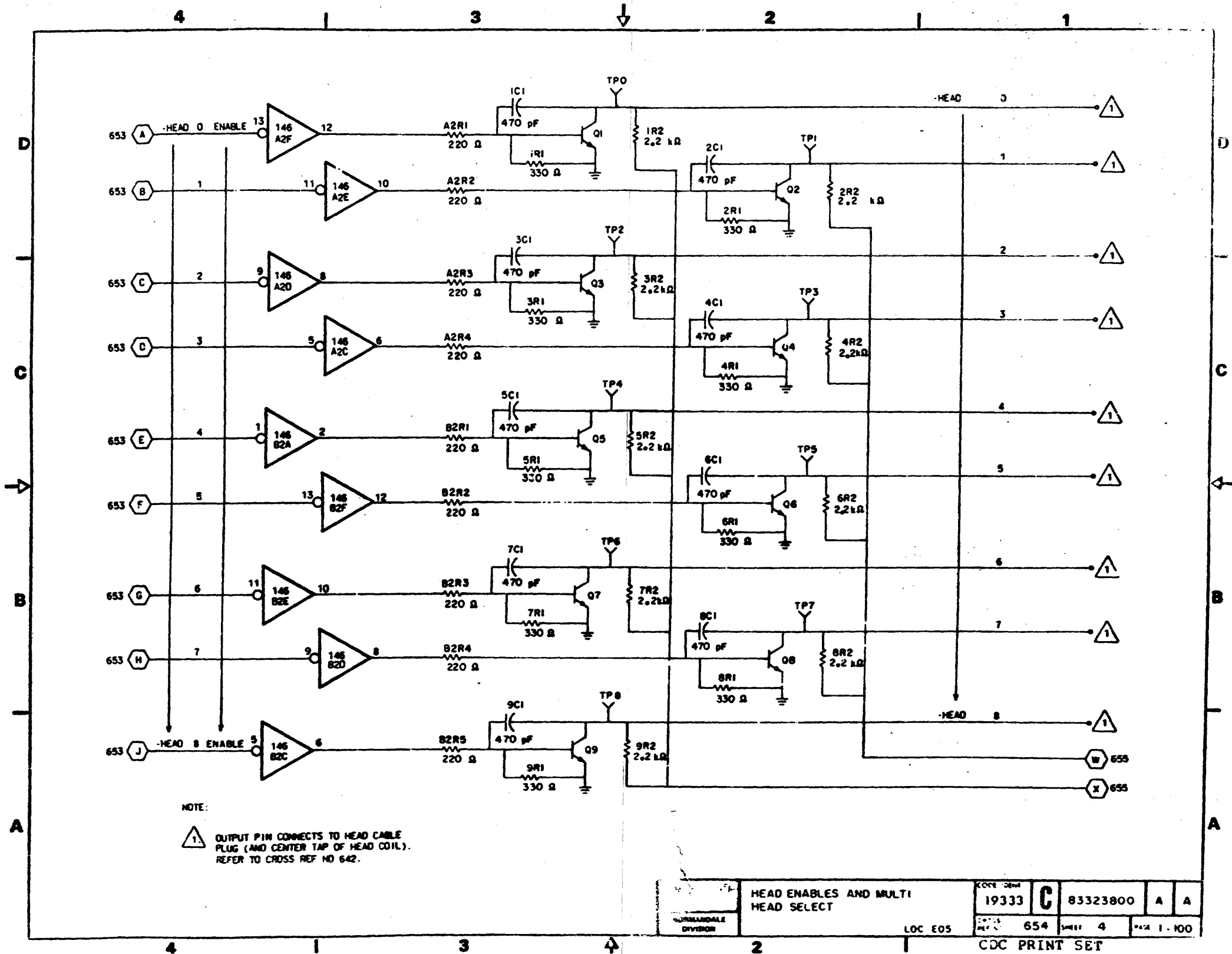
REV B



ELEMENT 538 TRUTH TABLE

INHIBIT	INPUT		OUTPUT BIT WEIGHT			
	1	2	0	1	2	3
L	L	L	L	H	H	H
L	H	L	H	L	H	H
L	L	H	H	H	L	N
L	H	H	H	H	H	L
H	L OR H	L OR H	H	H	H	H

NORLANDALE DIVISION	HEAD SELECT DECODE AND HEAD BIT ENABLE	19333	C	83323800	A	B
	LOC E05	653	SHEET 3	1-95		

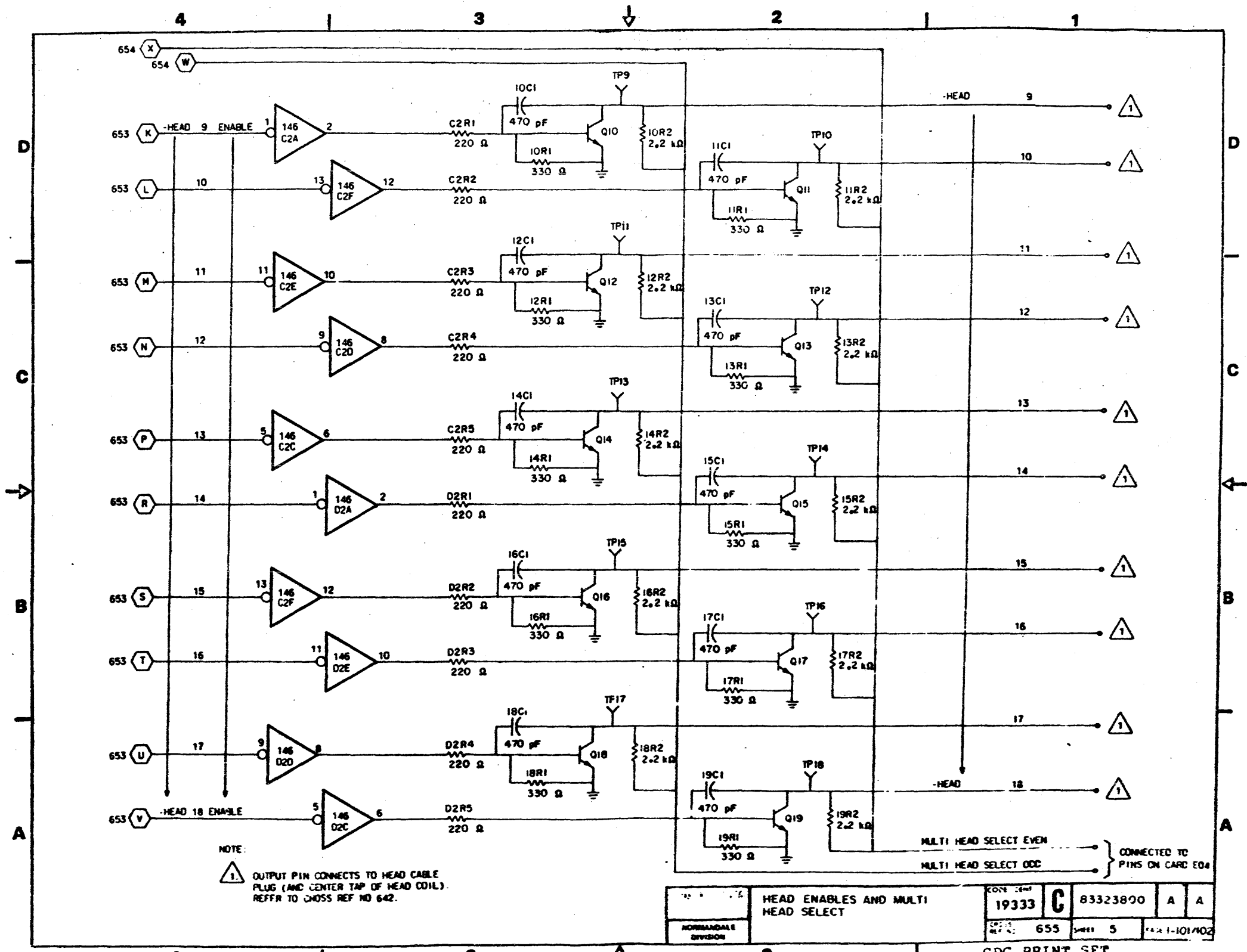


NOTE:
 △ OUTPUT PIN CONNECTS TO HEAD CABLE PLUG (AND CENTER TAP OF HEAD COIL). REFER TO CROSS REF NO 642.

HEAD ENABLES AND MULTI HEAD SELECT	CODE 19333	C	83323800	A	A
	LOC E05				

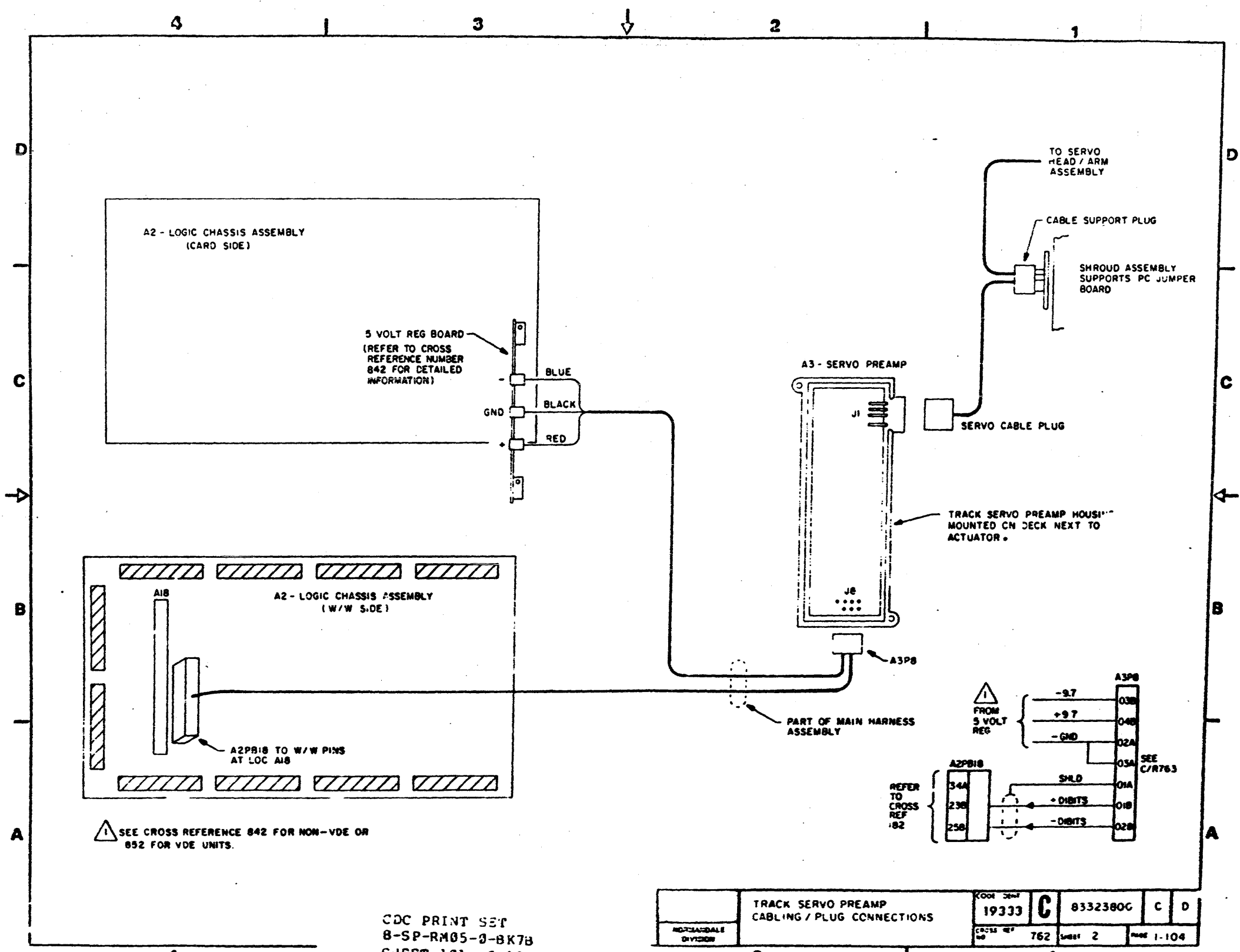
CDC PRINT SET
 3-SP-RM05-0-BK7B
 SHEET 98 of 180

REV 3



NORANDA DIVISION	HEAD ENABLES AND MULTI HEAD SELECT	CONTRACT 19333	C	83323800	A	A
		655	SHEET 5	REV 1-101/102		

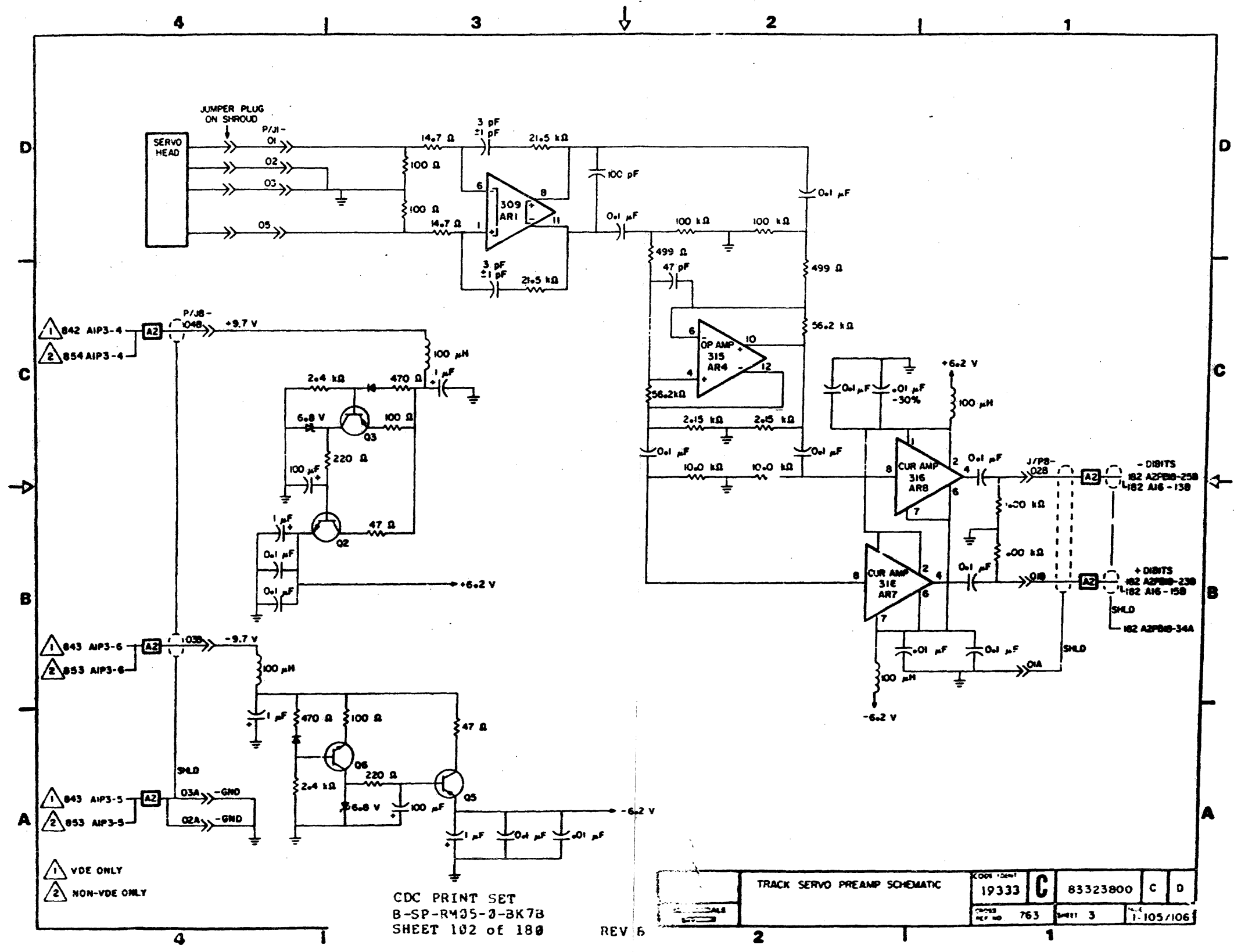
CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 99 of 180
REV B



CDC PRINT SET
8-SP-RM05-0-BK7B
SHEET 101 of 180

REV 3

MILWAUKEE DIVISION	TRACK SERVO PREAMP CABLING / PLUG CONNECTIONS	19333	C	8332380G	C	D
		762	SHEET 2	PAGE 1-104		



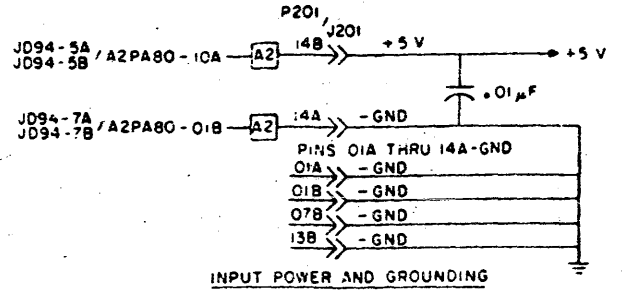
1 VDE ONLY
 2 NON-VDE ONLY

CDC PRINT SET
 B-SP-RM05-2-3K73
 SHEET 102 of 180

REV 5

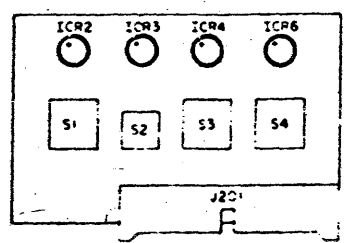
TRACK SERVO PREAMP SCHEMATIC		CODE IDENT	83323800		C	D
		19333				
DESIGN	763	SHEET	3		1-105/106	

REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A																		
B	A	A																		
C	C	C	C																	
D	D	C	D																	

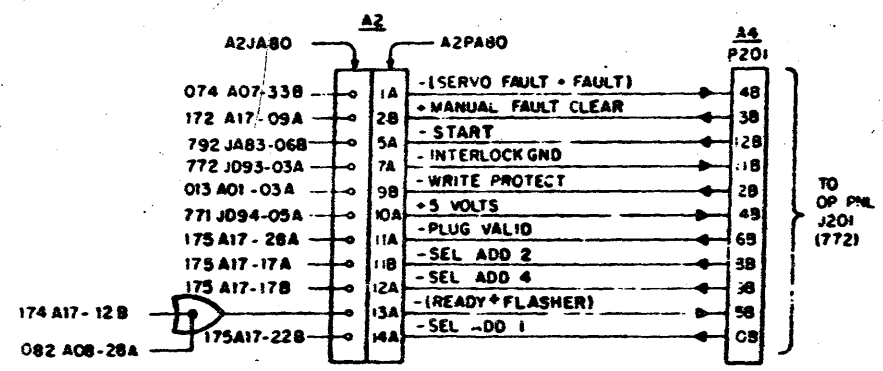
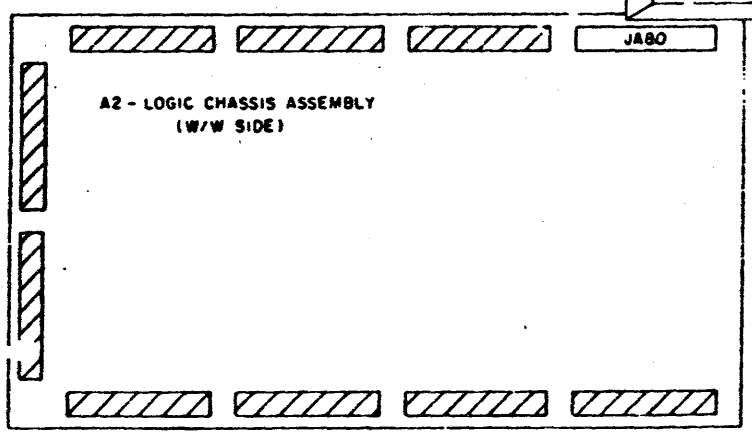


REVISIONS					
REV	ECO	DESCRIPTION	DRFT	DATE	CHK'D
A	PL33799	REVISED			
B	57441	CORRECT DIAGRAMS			
C	57453	ADD JDE			
D	57535	CORRECT DIAGRAMS			

OPERATOR CONTROL PANEL
(COMPONENT LAYOUT)

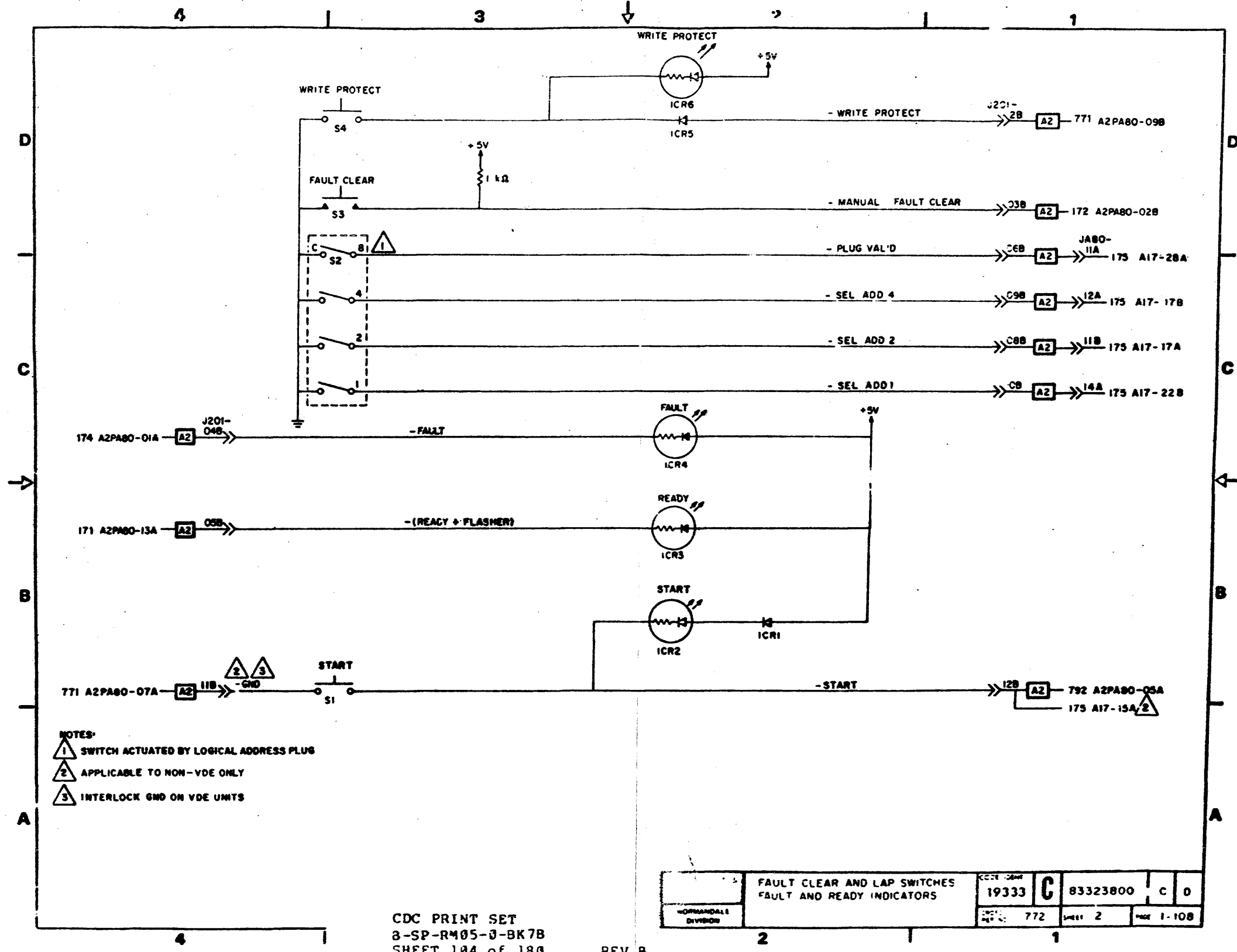


CONTROL PANEL
HARNESS ASSEMBLY



DRAWN BY BERGSTRÖM JC-78 CHECKED ENGINEER APPROVED	NORMAN DALE DIVISION	A4 - OPERATOR CONTROL PANEL DIAGRAMS TYPE HZYM	19333 771	C 83323800	E D 1-107
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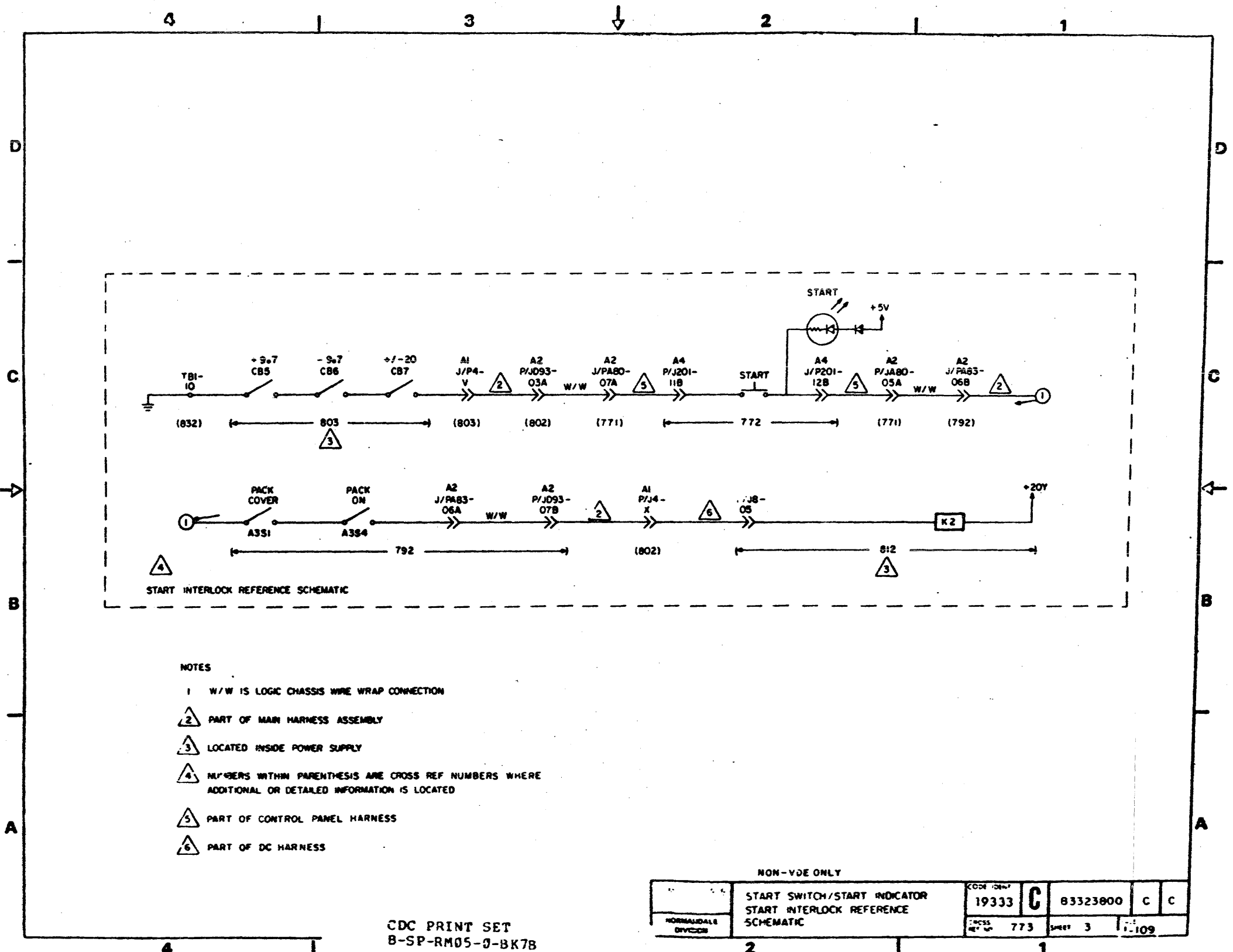
CDC PRINT SET
 B-SP-RM05-8-BK7B
 SHEET 103 of 180
 REV B



CDC PRINT SET
8-SP-RM05-0-BK7B
SHEET 104 of 180

REV B

HORNELL DIVISION	FAULT CLEAR AND LAP SWITCHES FAULT AND READY INDICATORS	CCD CODE	19333	C	83323800	C	D
		INSTR. NO.	772	SHEET	2	PAGE	1-108



START INTERLOCK REFERENCE SCHEMATIC

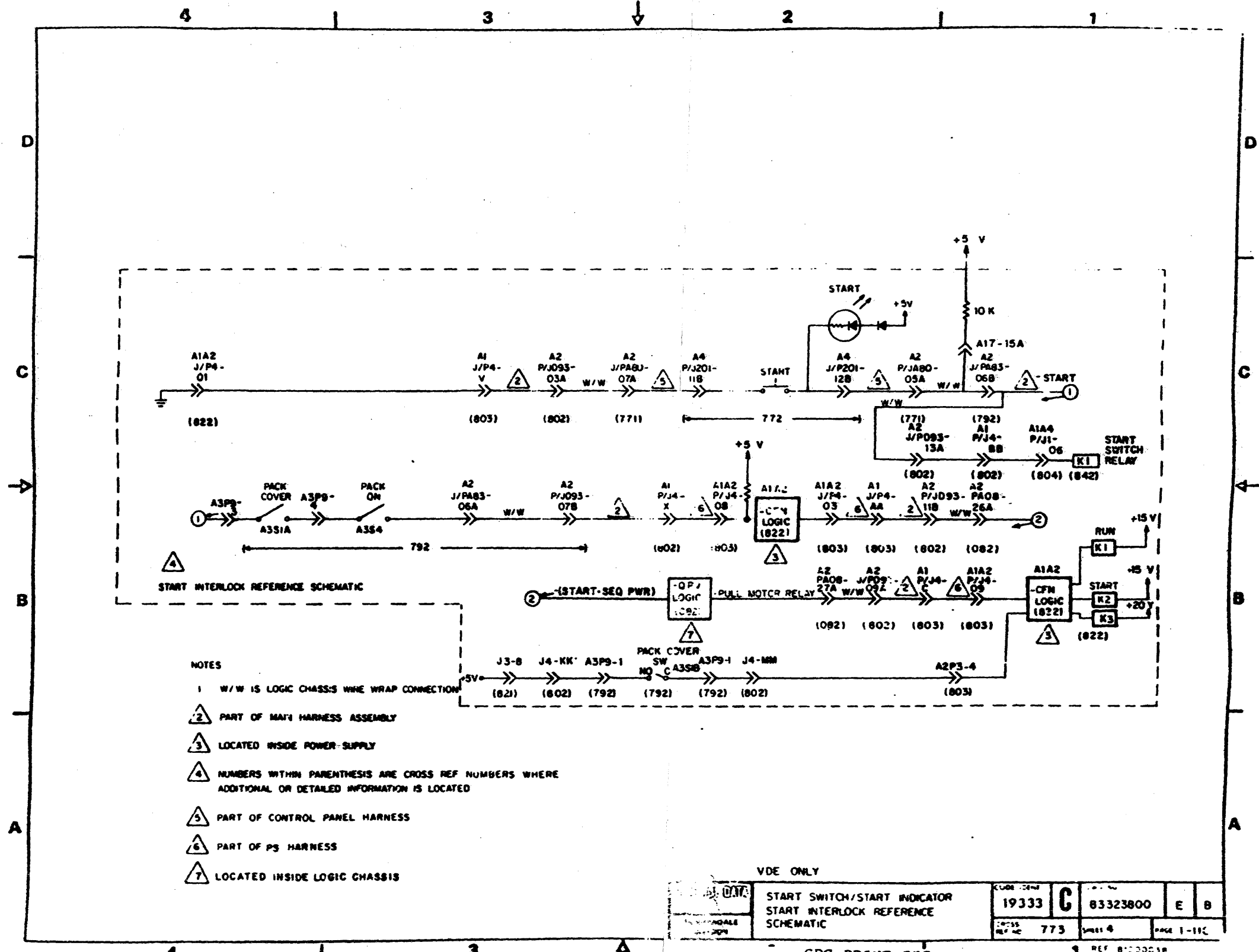
NOTES

- 1 W/W IS LOGIC CHASSIS WIRE WRAP CONNECTION
- 2 PART OF MAIN HARNESS ASSEMBLY
- 3 LOCATED INSIDE POWER SUPPLY
- 4 NUMBERS WITHIN PARENTHESIS ARE CROSS REF NUMBERS WHERE ADDITIONAL OR DETAILED INFORMATION IS LOCATED
- 5 PART OF CONTROL PANEL HARNESS
- 6 PART OF DC HARNESS

CDC PRINT SET
 B-SP-RM05-J-BK7B
 SHEET 105 of 180

REV B

NON-VDE ONLY			
START SWITCH/START INDICATOR START INTERLOCK REFERENCE SCHEMATIC	CODE IDENT 19333 C	83323800	C C
NORMAN DALE DIVISION	PROCESS REV UP 773	SHEET 3	109

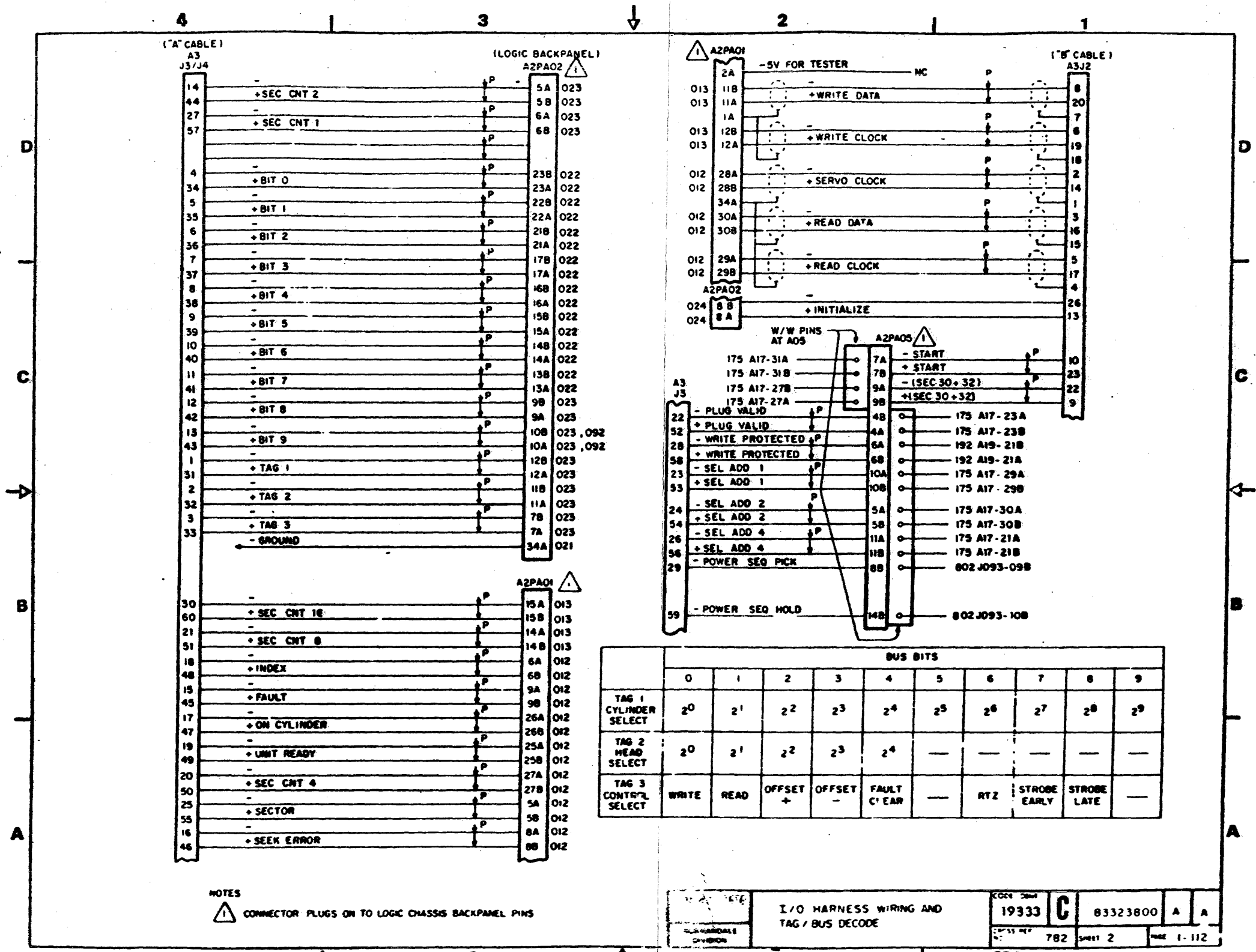


- NOTES
- 1 W/W IS LOGIC CHASSIS WIRE WRAP CONNECTION
 - 2 PART OF MAIN HARNESS ASSEMBLY
 - 3 LOCATED INSIDE POWER SUPPLY
 - 4 NUMBERS WITHIN PARENTHESIS ARE CROSS REF NUMBERS WHERE ADDITIONAL OR DETAILED INFORMATION IS LOCATED
 - 5 PART OF CONTROL PANEL HARNESS
 - 6 PART OF PS HARNESS
 - 7 LOCATED INSIDE LOGIC CHASSIS

VDE ONLY

START SWITCH/START INDICATOR START INTERLOCK REFERENCE SCHEMATIC	19333	C	83323800	E	B
	773	SHEET 4	PAGE 1-11C		

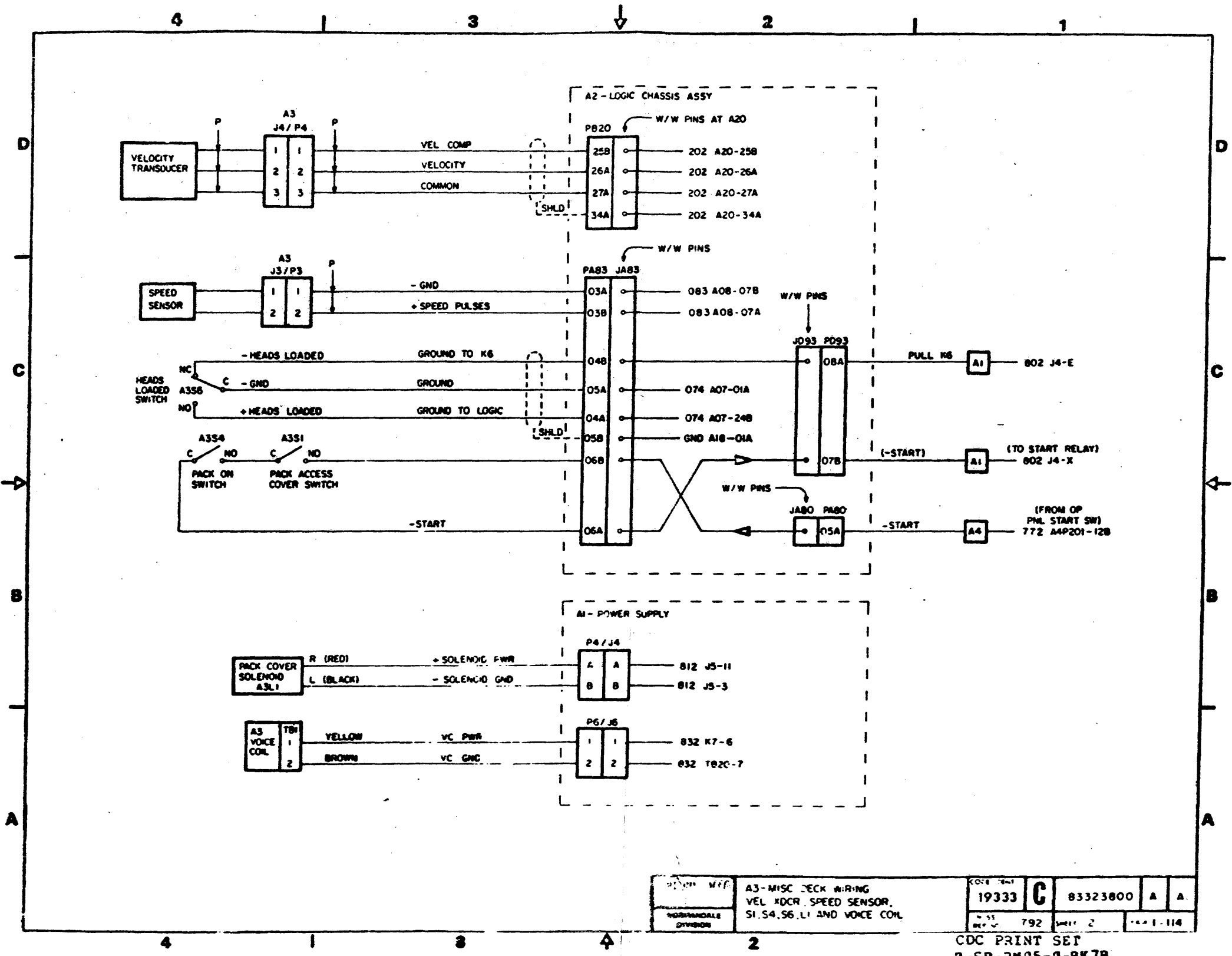
CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 106 OF 180
REV B



NOTES
 ⚠ CONNECTOR PLUGS ON TO LOGIC CHASSIS BACKPANEL PINS

	BUS BITS									
	0	1	2	3	4	5	6	7	8	9
TAG 1 CYLINDER SELECT	2 ⁰	2 ¹	2 ²	2 ³	2 ⁴	2 ⁵	2 ⁶	2 ⁷	2 ⁸	2 ⁹
TAG 2 HEAD SELECT	2 ⁰	2 ¹	2 ²	2 ³	2 ⁴	—	—	—	—	—
TAG 3 CONTR'L SELECT	WRITE	READ	OFFSET +	OFFSET -	FAULT C' EAR	—	RTZ	STROBE EARLY	STROBE LATE	—

I/O HARNESS WIRING AND TAG / BUS DECODE	19333	C	83323800	A	A
	782				

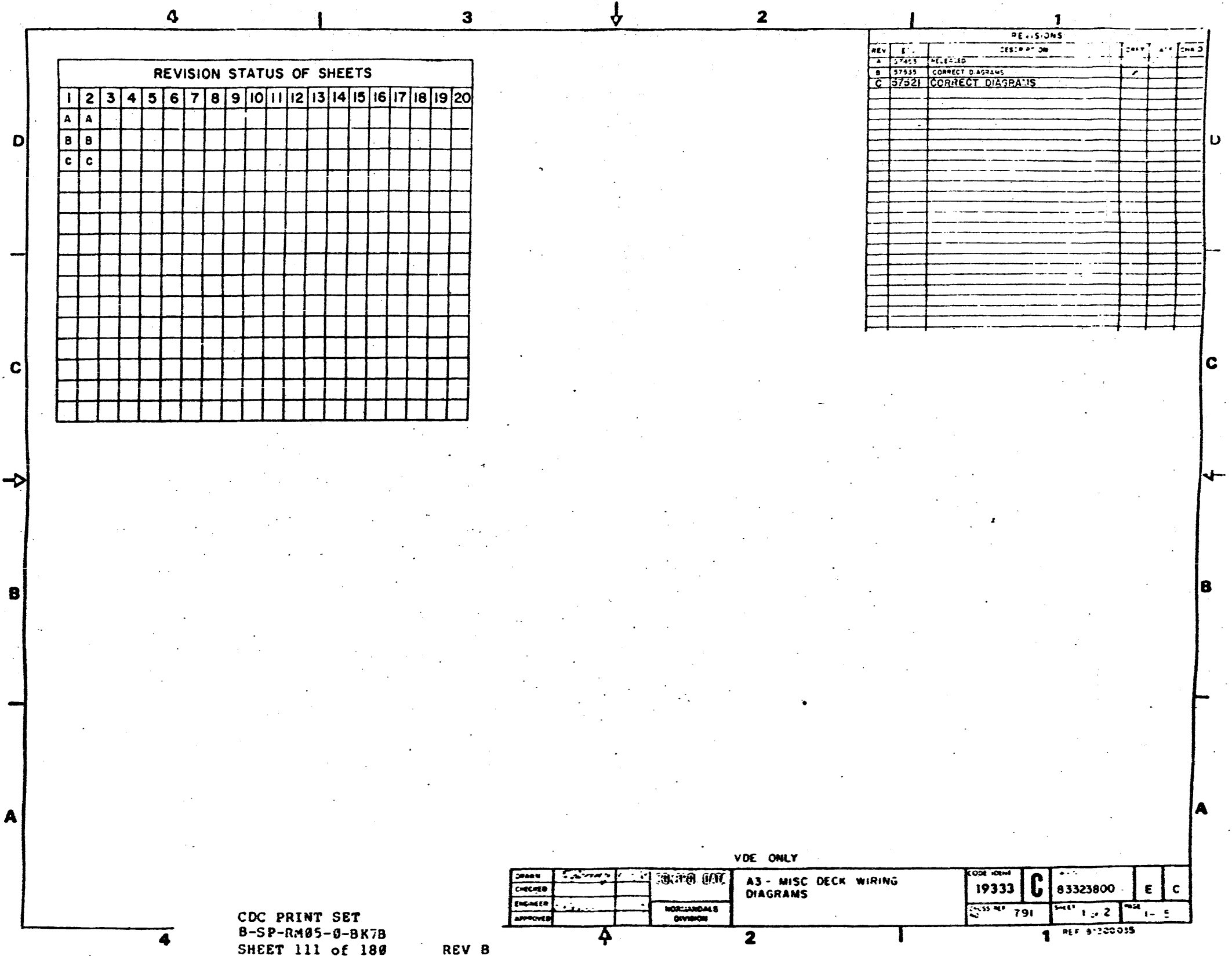


19333	C	83323800	A	A
792	2	1-114		

CDC PRINT SET
 3-SP-RM05-0-BK7B
 SHEET 110 of 180
 REV B

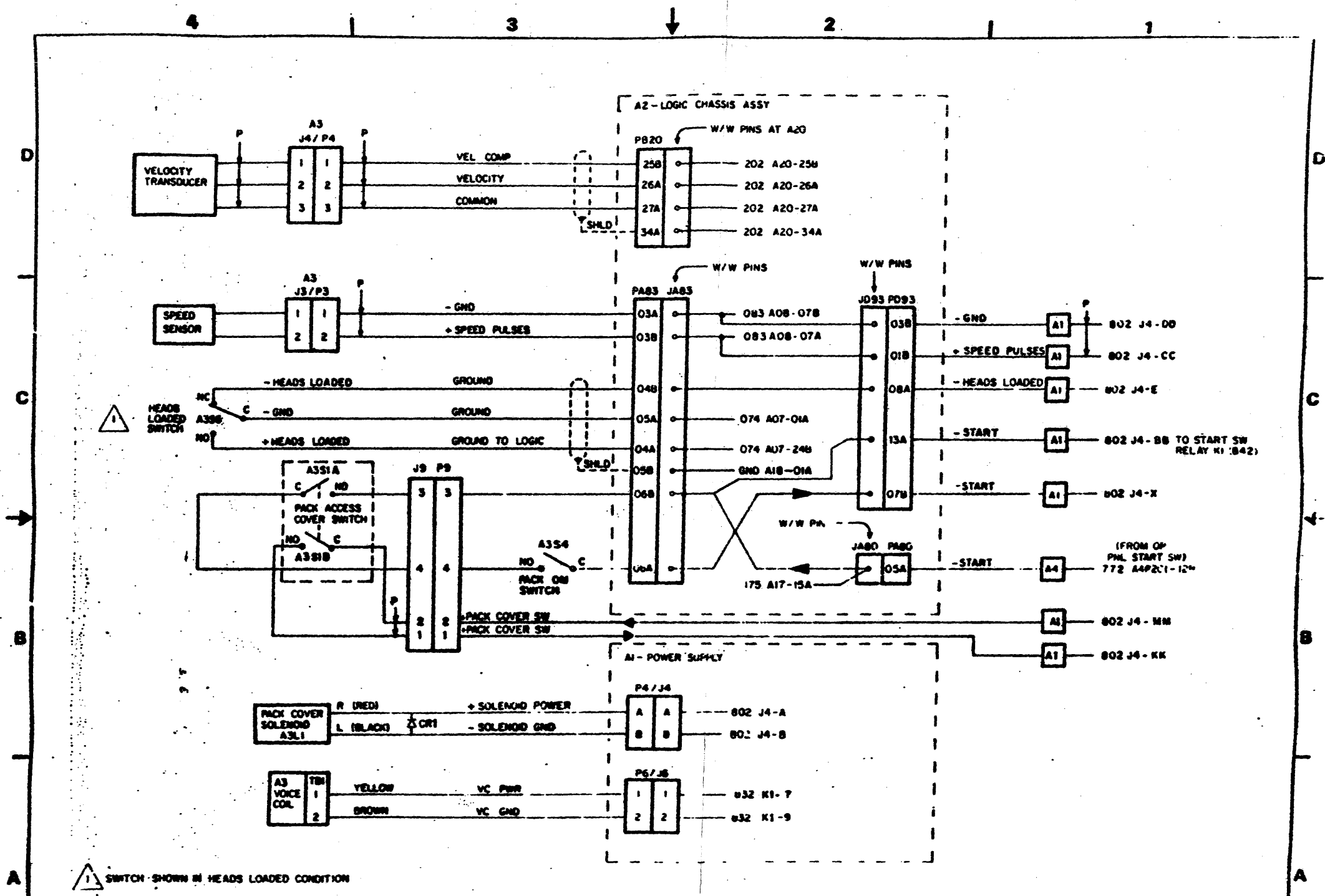
REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A																			
B	B																			
C	C																			

REVISIONS				
REV	DATE	DESCRIPTION	CHK'D BY	CHK'D
A	57455	RELEASED		
B	57535	CORRECT DIAGRAMS		
C	57521	CORRECT DIAGRAMS		



CDC PRINT SET
 B-SP-RM05-0-8K7B
 SHEET 111 of 180
 REV B

VDE ONLY										
DRAWN	CHECKED	ENGINEER	APPROVED	19333	83323800	E	C	791	1-2	1-5
A3 - MISC DECK WIRING DIAGRAMS				REF 97200015						



CDC PRINT SET
 B-SP-RM05-0-3K7B
 SHEET 112 of 180

REV B

	A3-MISC DECK W/IN TAG		19333	C	833239JC	E	B
	VEL XDCR, SPEED SENSOR, SI, S4, S6, L1 AND VOICE COIL		792	2			

REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A																	
B	B	B	B																	
C	B	C	C																	

REVISIONS					
REV	ECO	DESCRIPTION	DRY	DATE	CHK'D
A	PE23000	RELEASE			
B	97493	ADD VDE			
C	PE27391	CHS NOISE CAPS			

CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 113 of 180

REV B

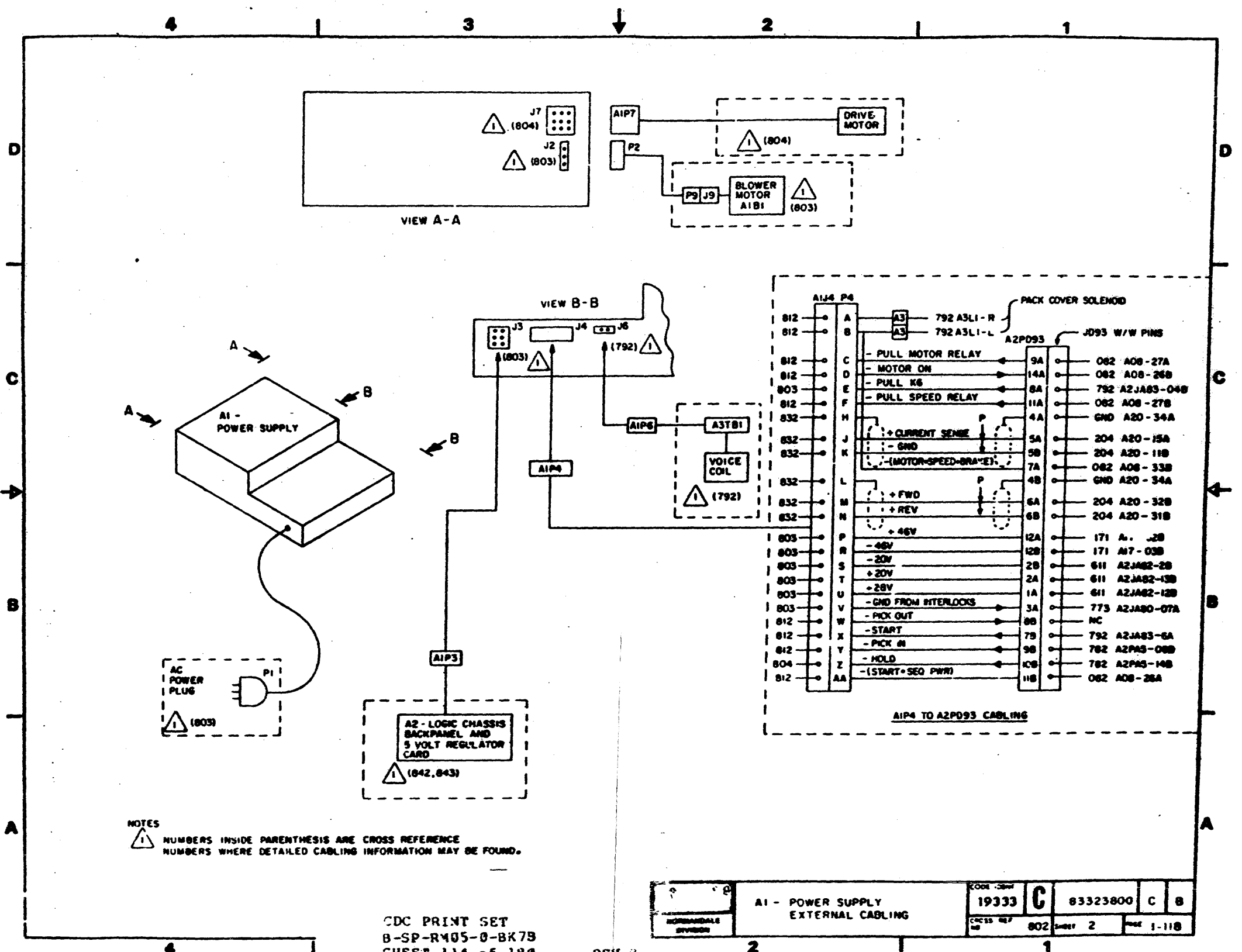
DESIGN	
CHECKED	
ENGINEER	
APPROVED	

NON-VDE ONLY

AI - POWER SUPPLY
DIAGRAMS

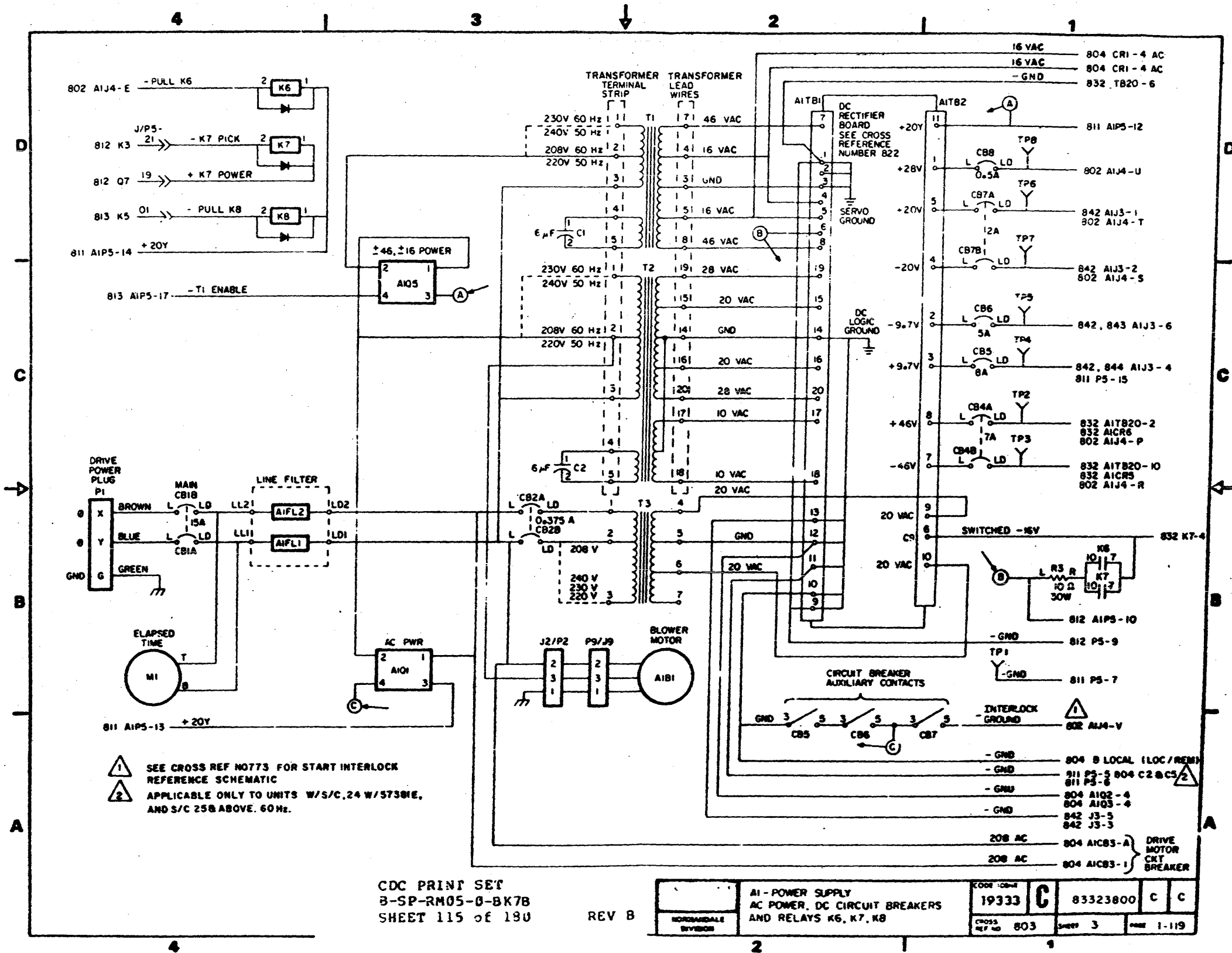
19333	C	83323800	C	C
801	SHEET 1 of 4	1-117		

REF 81200024



CDC PRINT SET
 B-SP-R405-0-BK7B
 SHEET 114 OF 180

REV B

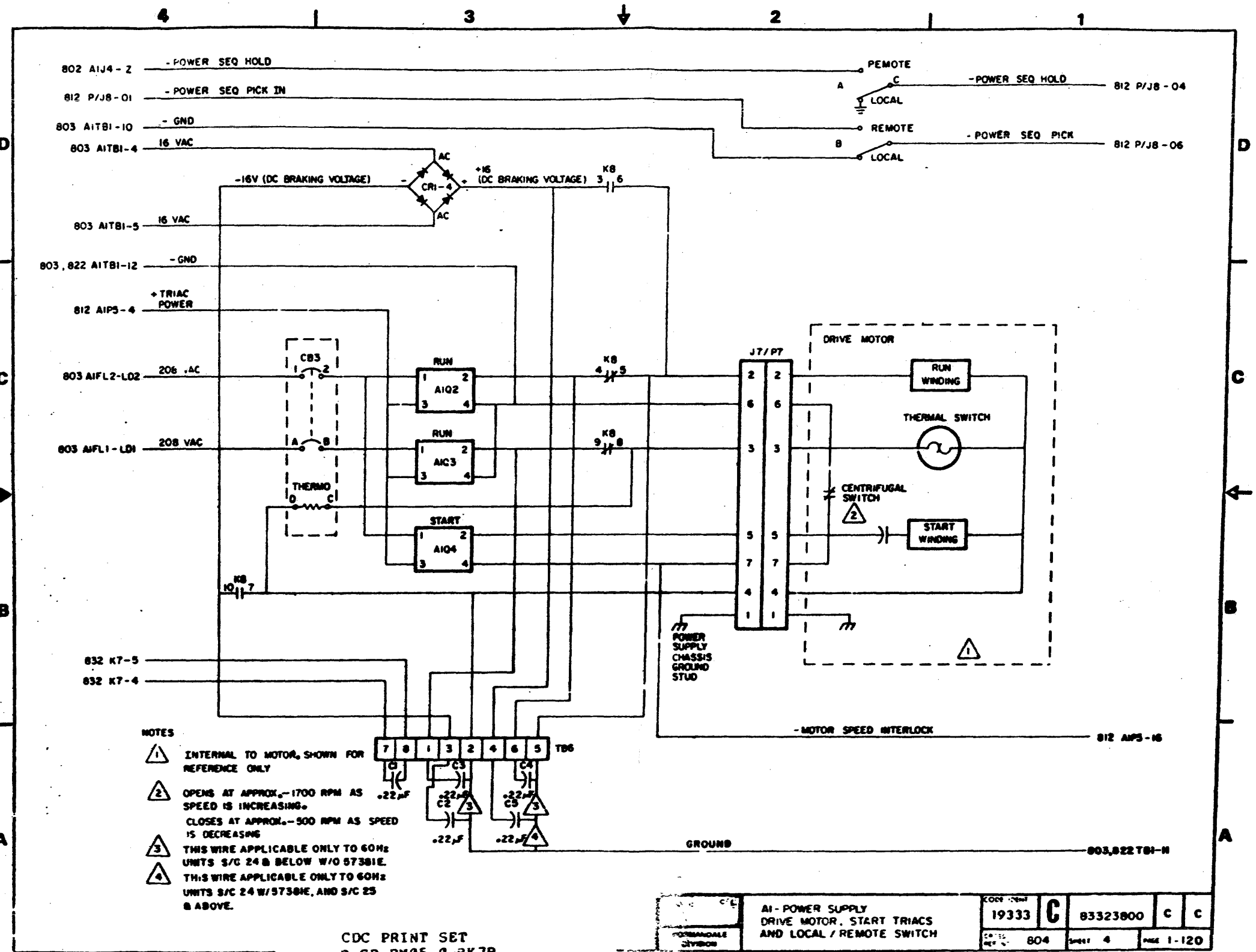


⚠ SEE CROSS REF N0773 FOR START INTERLOCK REFERENCE SCHEMATIC
 ⚠ APPLICABLE ONLY TO UNITS W/S/C.24 W/5738IE, AND S/C 258 ABOVE. 60 Hz.

CDC PRINT SET
 B-SP-RM05-0-8K7B
 SHEET 115 of 180

REV B

NORMANDALE DIVISION	AI - POWER SUPPLY	CODE 10-4	C	83323800	C	C
	AC POWER, DC CIRCUIT BREAKERS AND RELAYS K6, K7, K8	19333				
		CROSS REF NO 803	SHEET 3	PAGE 1-119		



- NOTES
- 1 INTERNAL TO MOTOR, SHOWN FOR REFERENCE ONLY
 - 2 OPENS AT APPROX. -1700 RPM AS SPEED IS INCREASING. CLOSSES AT APPROX. -500 RPM AS SPEED IS DECREASING
 - 3 THIS WIRE APPLICABLE ONLY TO 60Hz UNITS S/C 24 B BELOW W/O 57381E.
 - 4 THIS WIRE APPLICABLE ONLY TO 60Hz UNITS S/C 24 W/57381E, AND S/C 25 B ABOVE.

CDC PRINT SET
 B-SP-RM05-0-3K7B
 SHEET 116 of 190

REV B

AI - POWER SUPPLY DRIVE MOTOR, START TRIACS AND LOCAL / REMOTE SWITCH	19333	C	83323800	C	C
804	SHEET 4	PAGE 1-120			

REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A	A																
B	B	B	B	B																
C	B	B	B	C																
D	B	D	D																	
E	B	E	D	E																

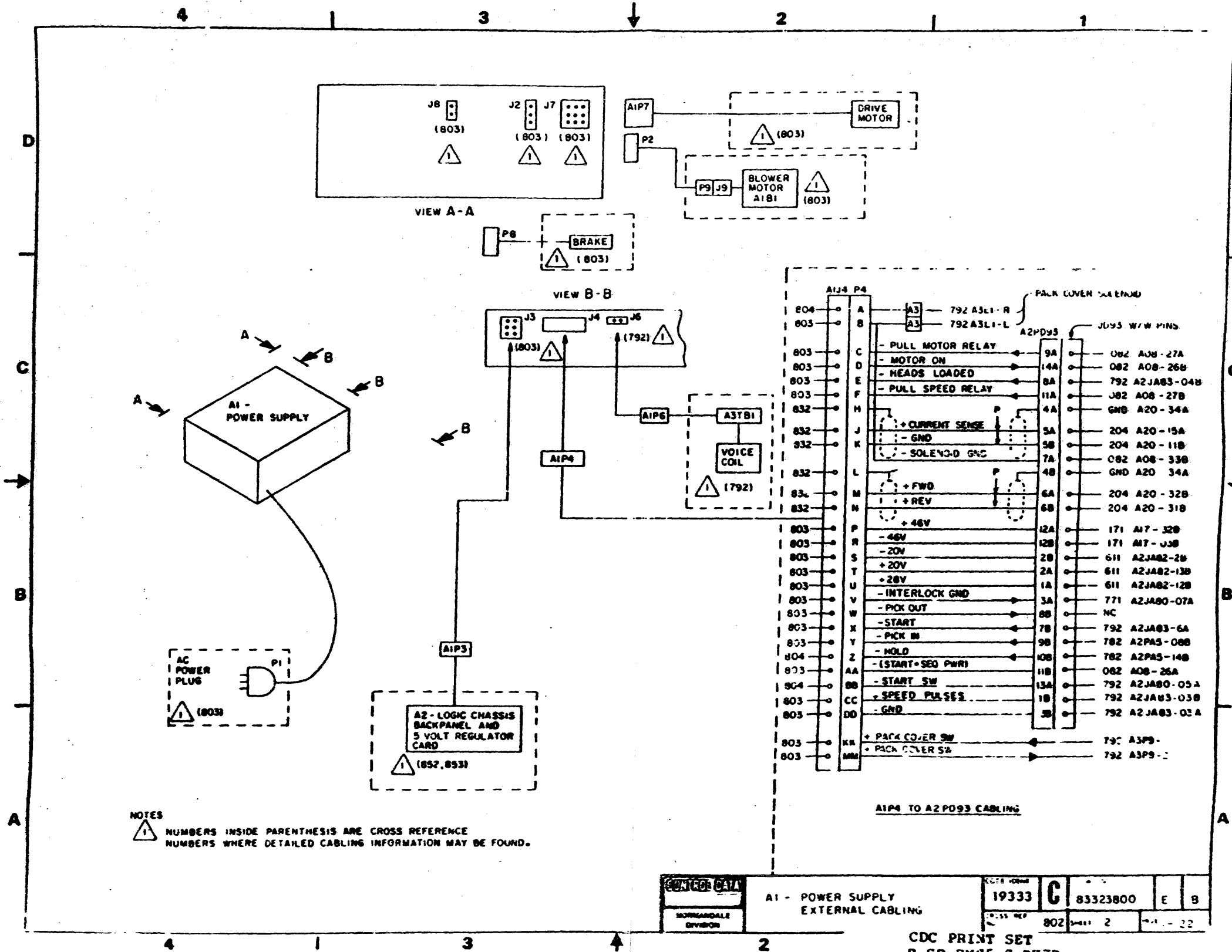
REVISIONS			
REV	ECO	DESCRIPTION	DATE
A	51254	RELEASE	
B	51255	CORRECT DIAGRAM	
C	PE64073	REWORK BFNN TO CFNN	
D	PE64127	REWORK ECEN PC BOARD	
E	PE10355	NEW REVISION AND CEN	

DESIGNED		CONTROL DATA NORRISDALE DIVISION	AI - POWER SUPPLY DIAGRAMS	DATE	19333	REV	C	APP. 5-1	E	E	
CHECKED				NO. 801	SHEET	1	TOTAL	5			
ENGINEER											
APPROVED											

VDE ONLY

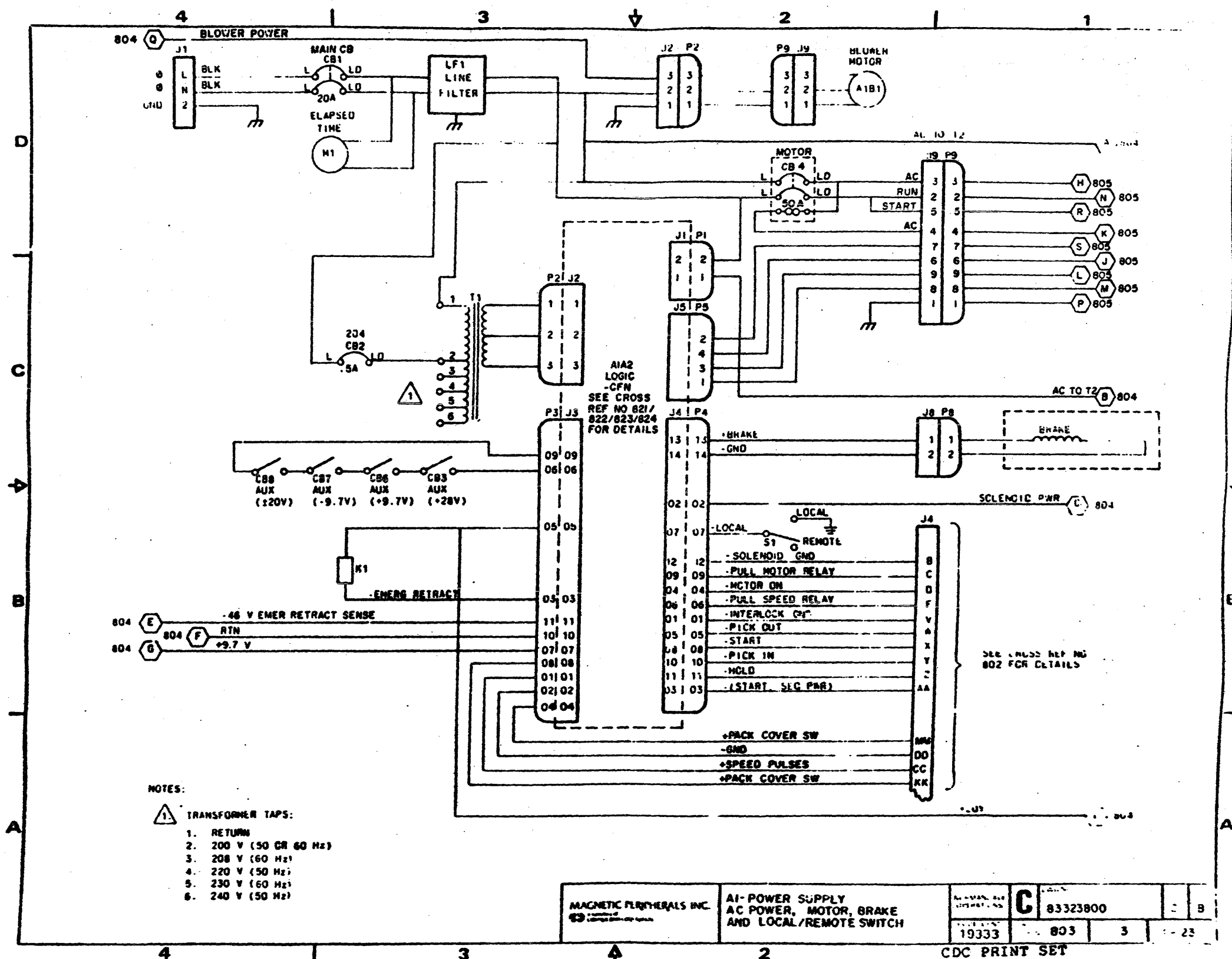
CDC PRINT SET
 B-SP-RM05-0-BK78
 SHEET 117 OF 180

REV B



19333	C	83323800	E	B
802	2			

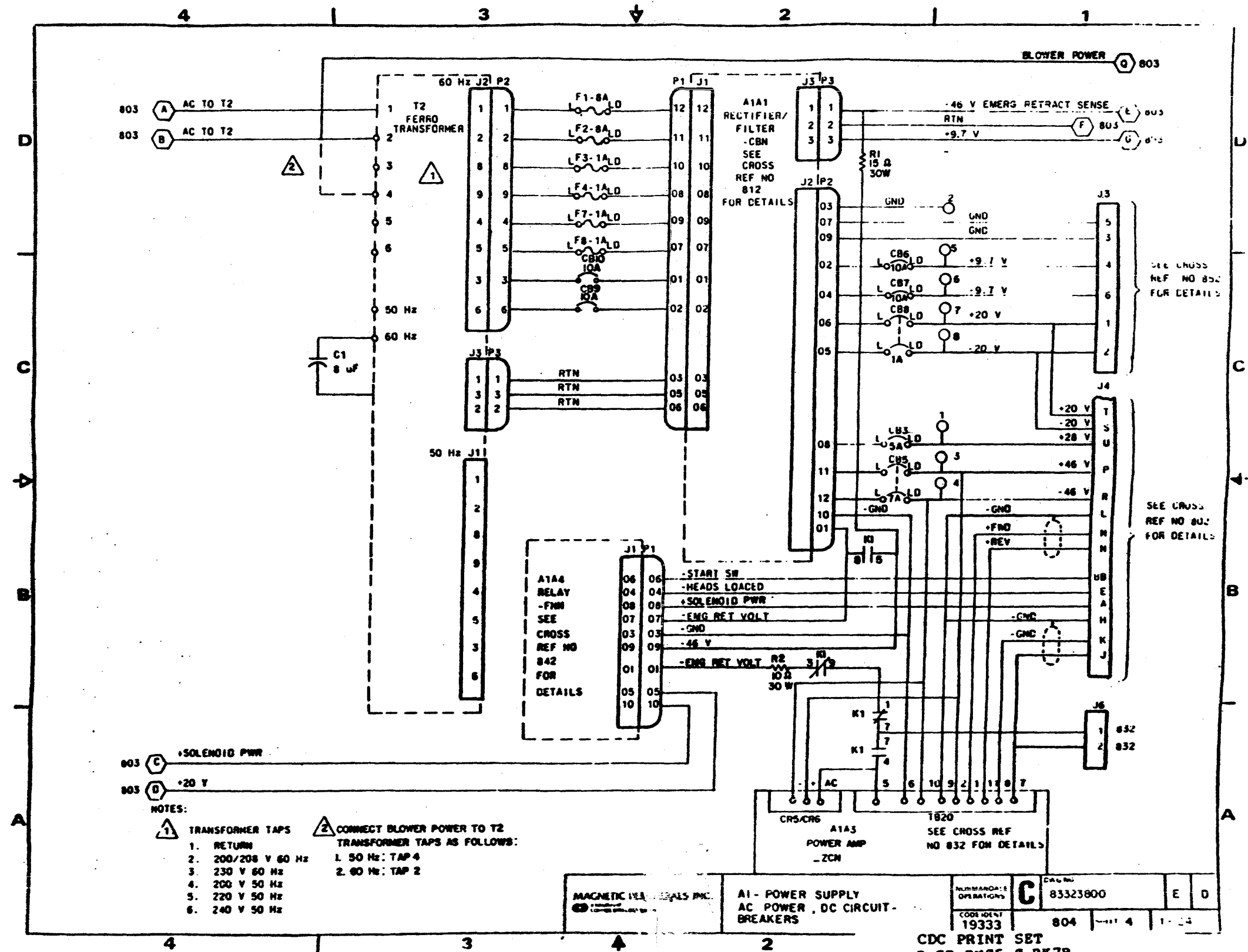
CDC PRINT SET
 S-SP-RM05-0-BK7B
 SHEET 118 OF 180
 REV 9



- NOTES:
- ⚠ TRANSFORMER TAPS:
1. RETURN
 2. 200 V (50 OR 60 Hz)
 3. 208 V (60 Hz)
 4. 220 V (50 Hz)
 5. 230 V (60 Hz)
 6. 240 V (50 Hz)

MAGNETIC PERIPHERALS INC. CORPORATION	AI- POWER SUPPLY AC POWER, MOTOR, BRAKE AND LOCAL/REMOTE SWITCH	REV. 19333	83323800	3	23
			803		

CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 119 of 180
REV B

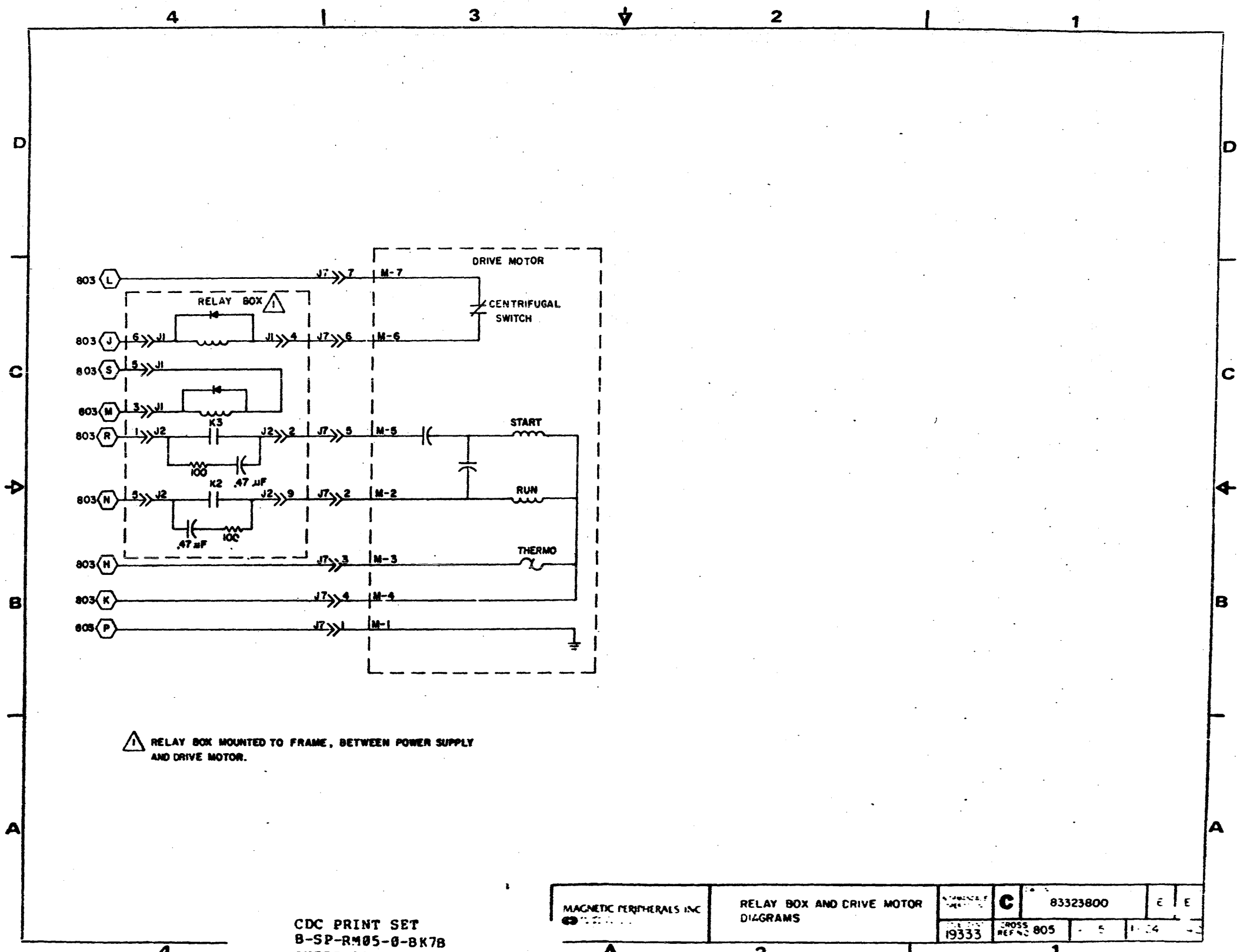


MAGNETIC HEADS INC.

A1 - POWER SUPPLY
 AC POWER, DC CIRCUIT-
 BREAKERS

NUMERICAL OPERATIONS	C	83323800	E	D
CODE IDENT	19333	804	4	1-23

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 120 of 180
 REV B

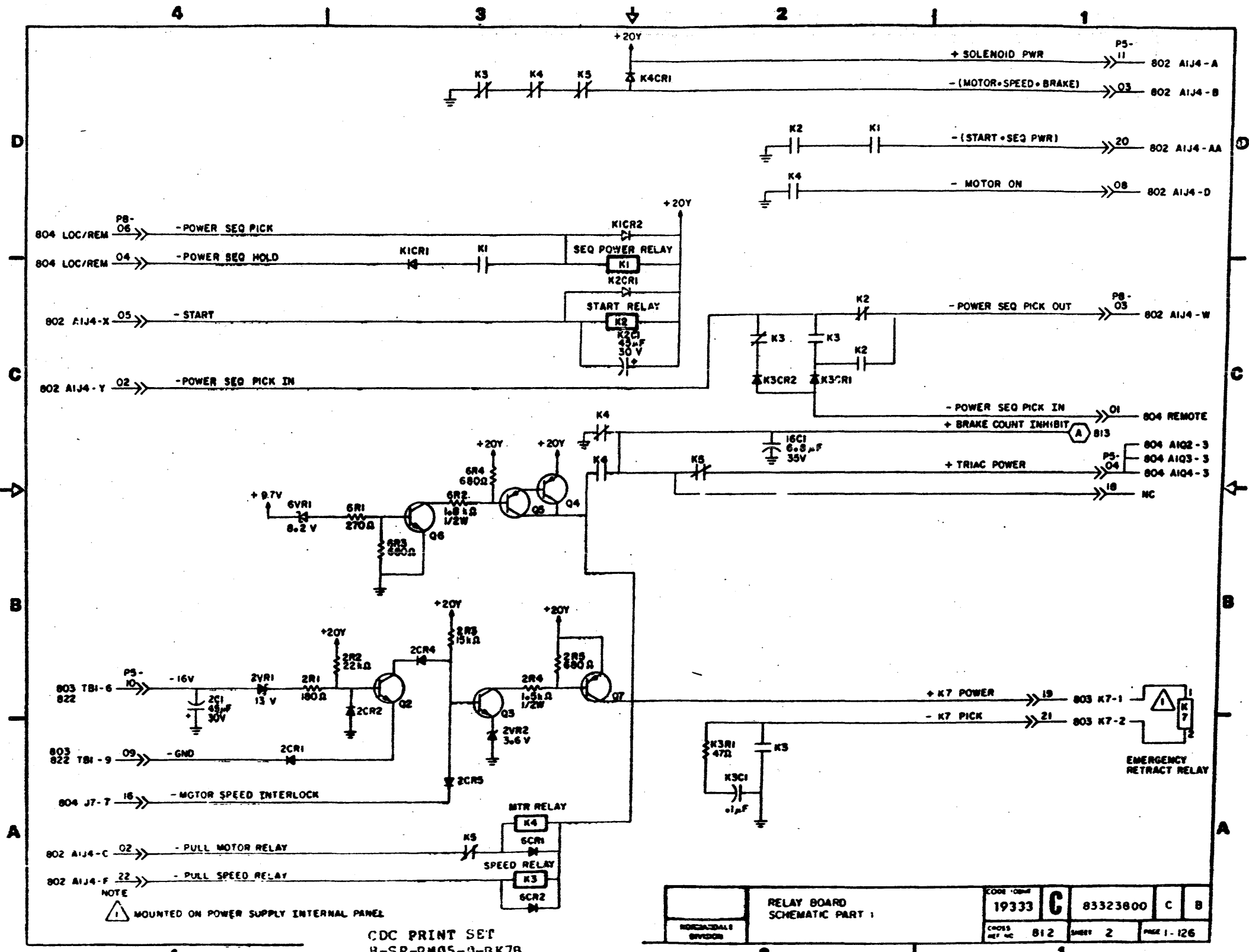


RELAY BOX MOUNTED TO FRAME, BETWEEN POWER SUPPLY AND DRIVE MOTOR.

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 121 of 180

REV B

MAGNETIC PERIPHERALS INC	RELAY BOX AND DRIVE MOTOR DIAGRAMS	19333	C	83323800	E	E
		CROSS REF NO 805	5	1-24		

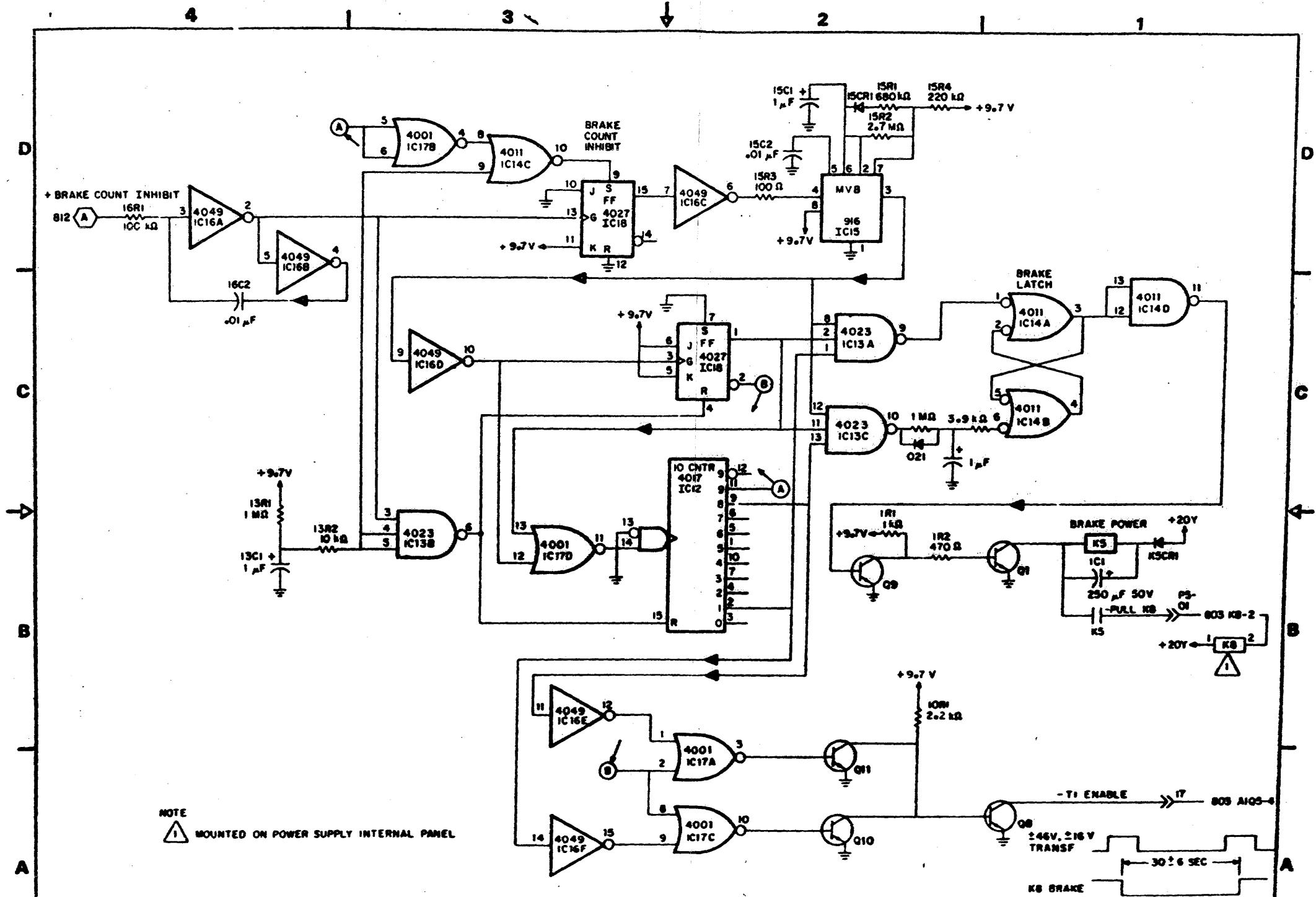


NOTE
 ⚠ MOUNTED ON POWER SUPPLY INTERNAL PANEL

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 123 of 130

REV B

RELAY BOARD SCHEMATIC PART 1		CODE 19333	83323800	C	B
CROSS REF. NO.	812	SHEET 2	PAGE 1-126		

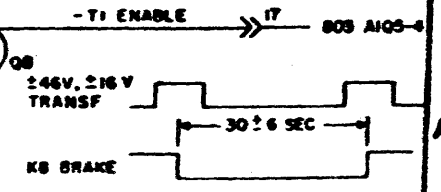


NOTE
 1 MOUNTED ON POWER SUPPLY INTERNAL PANEL

CDC PRINT SET
 3-SP-RM05-0-BK7B
 SHEET 124 OF 180

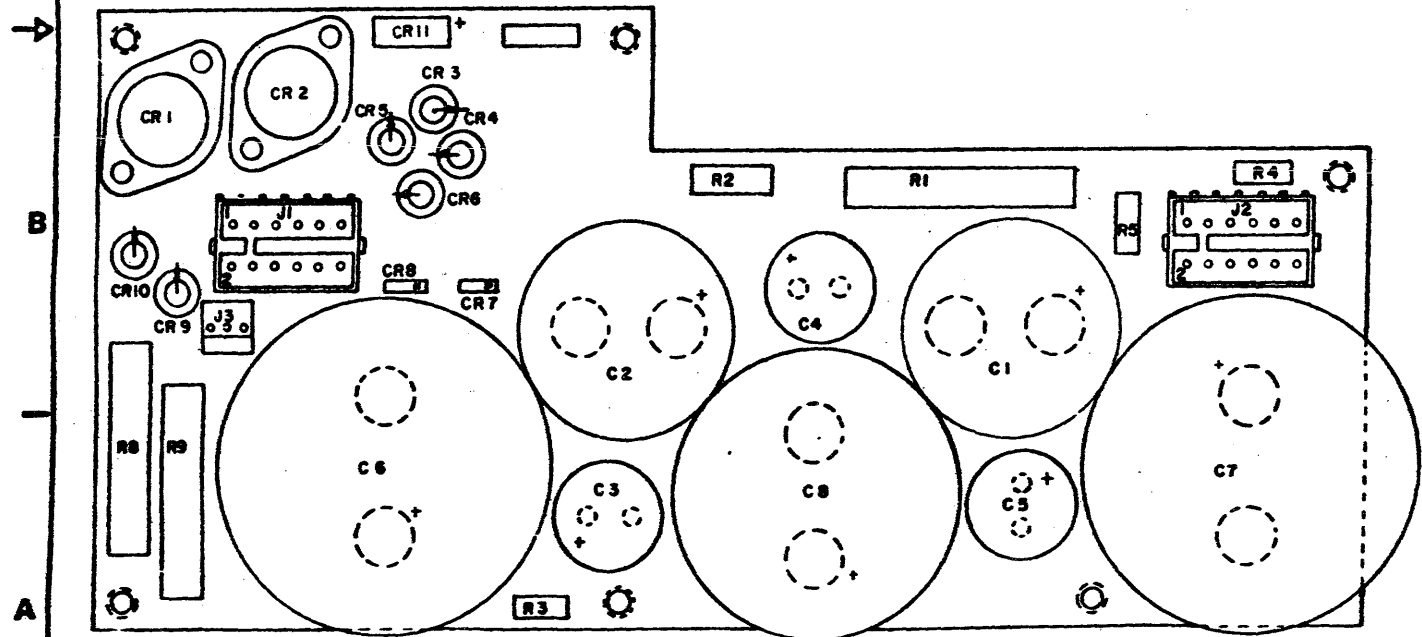
REV B

RELAY BOARD SCHEMATIC PART 2		COORD. NO. 19333	C	83323800	C	B
CROSS REF. NO.	813	REV.	3	DATE	1-127/128	



REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A																		
B	B																		
C	C																		
D	D																		

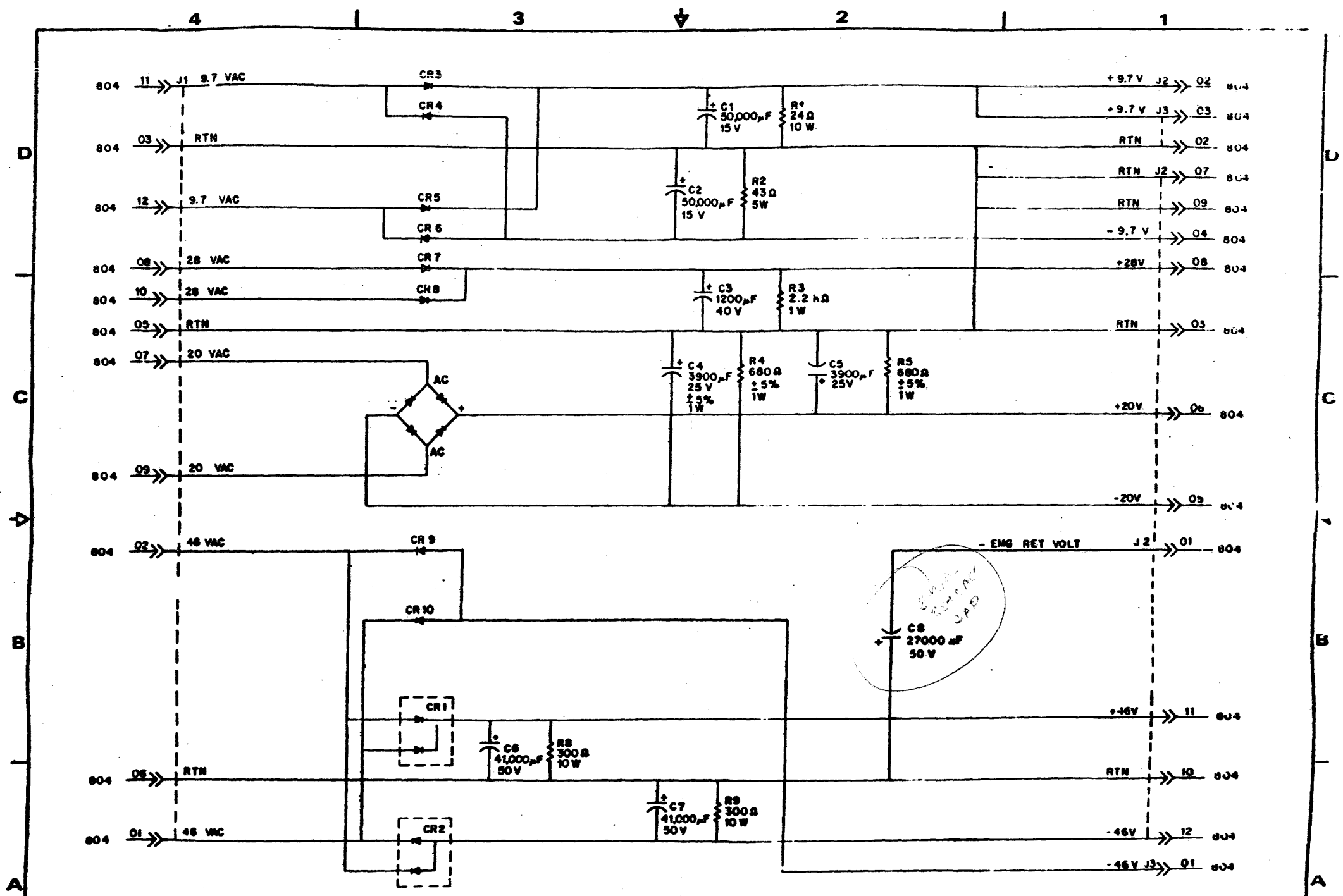
REV.	NO.	DESCRIPTION	DATE	BY
A		RELEASED		
B	57535	CORRECT DIAGRAM		
C	PE64097	CHG ACBM TO CCBM		CLM
D	PE15035	REWORK CFB B-CBM		OLM



DESIGNED	<i>F. Long</i>	DATE	7/1/70	MAGNETIC PERIPHERALS INC.	RECTIFIER / FILTER BOARD (A1A1)	PART NUMBER	C	83323800	REV	E	0
CHECKED											
ENGINEER											
APPROVED											
					TYPE: CCBM	LOC					
						19333		811	1	2	1-129

CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 125 of 180
 REV B

REF B120037

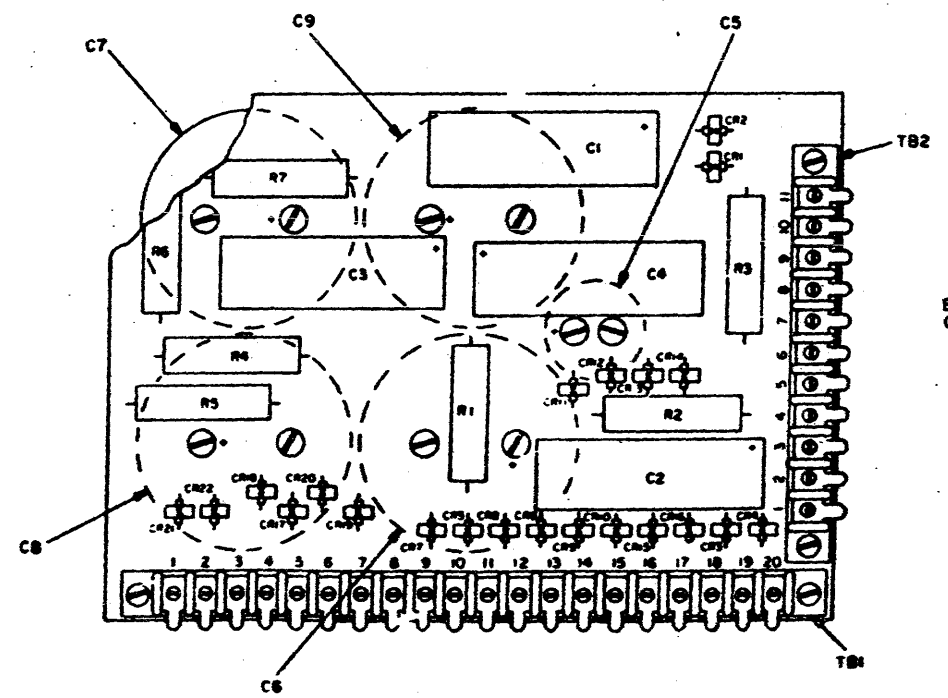


CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 126 of 180
 REV B

MACOM TECHNOLOGICALS INC. <small>1000 WASHINGTON BLVD FALLS CHURCH, VA 22046</small>	RECTIFIER / FILTER BOARD (A1A1) TYPE: CCBN		PART NO. C 83323800	REV. NO. E C
	DATE 19333	QTY 812	LOT 2	1-130

REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A																			
B	B																			
C	C																			

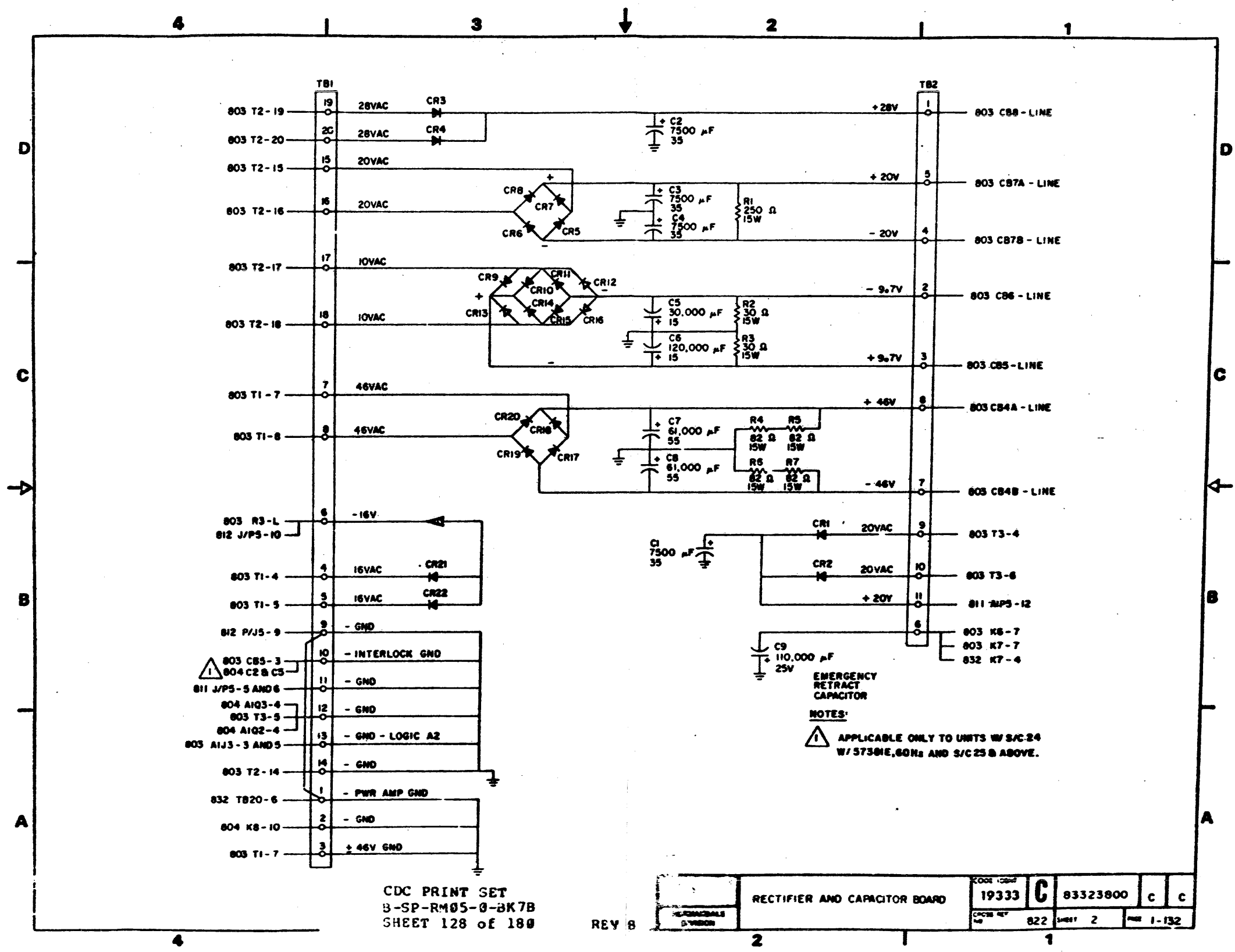
REVISIONS					
REV	ECO	DESCRIPTION	CHK'D	DATE	CHK'D
A	193000	RELEASED			
B	57453	ADD VDE			
C	5738 E	CAP NO SEC CAPS			



BOARD IS MOUNTED ON TO CAPACITORS C5, C6, C7, C8, C9

DRAWN: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DESIGNED: <i>[Signature]</i> APPROVED: <i>[Signature]</i>	NON-VDE ONLY RECTIFIER AND CAPACITOR BOARD COMPONENT LAYOUT AND DIAGRAMS TYPE 57EN	CODE 19333 83323800 821	C E C 1 of 2 1-131
--	---	-------------------------------	--------------------------------

CDC PRINT SET
 B-SP-RM05-0-9K7B
 SHEET 127 of 180
 REV B



CDC PRINT SET
 B-SP-RM05-0-2K7B
 SHEET 128 of 180

REV B

RECTIFIER AND CAPACITOR BOARD		CODE 19333	C	83323800	C	C
		822	2	1-132		

REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A																	
B	B	B	B																	
C	C	C	C																	
D	D	D	D																	
E	E	E	E																	
F	F	E	D																	
G	G	G	G																	

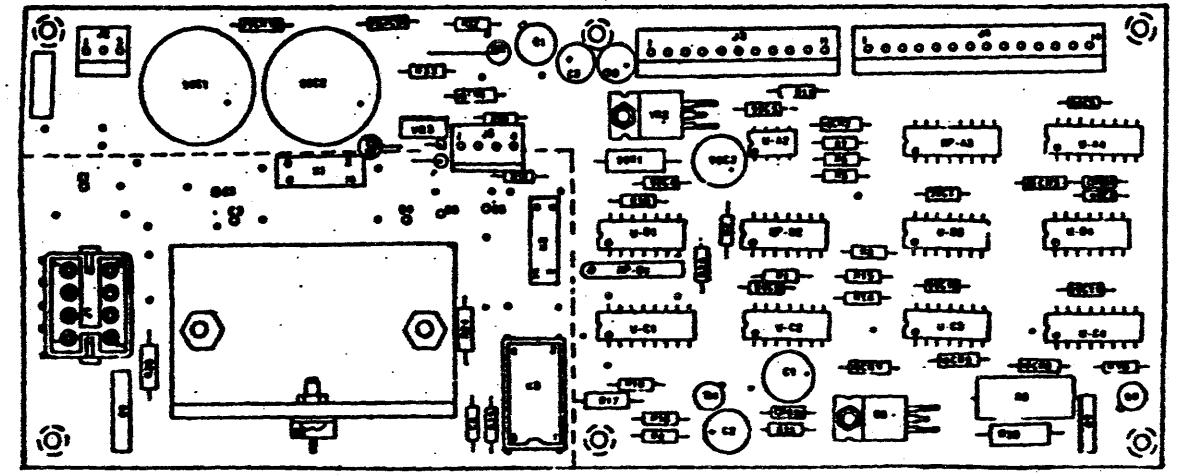
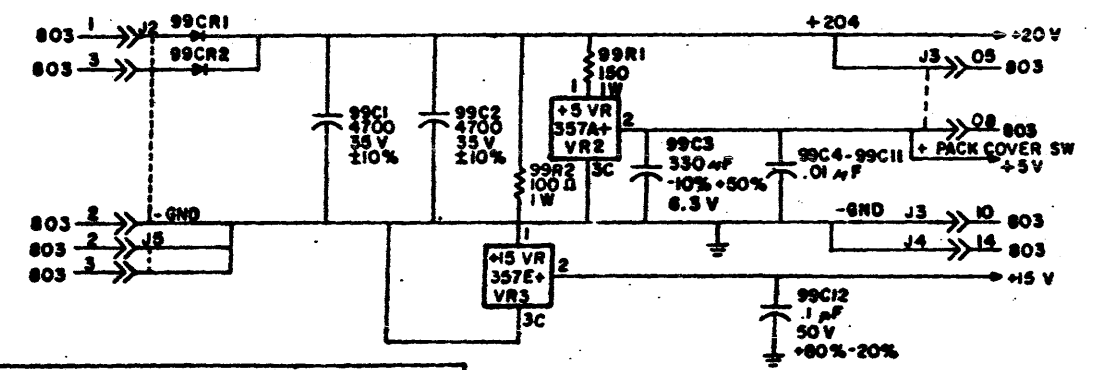
UNUSED RESISTOR PACKS

LOCATION	PINS
RP-A3	9, 15
RP-B1	4, 5, 6

UNUSED LOGIC ELEMENTS

ELEMENT	LOCATION	OUTPUT PINS
148LS	U-C3	4, 10
341	U-B1	13
MC1413	U-C1	10

PL	ECU	REVISION
A	45703	RELEASED
B	57335	CORRECT DIAGRAM
C	84040	CHANGE TO ECFM COMP ASSY
D	84088	CHANGE TO ECFM COMP ASSY
E	87578	CHANGE TO ECFM COMP ASSY
F	84089	CHANGE TO ECFM COMP ASSY
G	PC6427	REWORK ECFM PC BOARD



CDC PRINT SET
B-SP-RM05-0-BK7B
SHEET 129 of 180

REV B

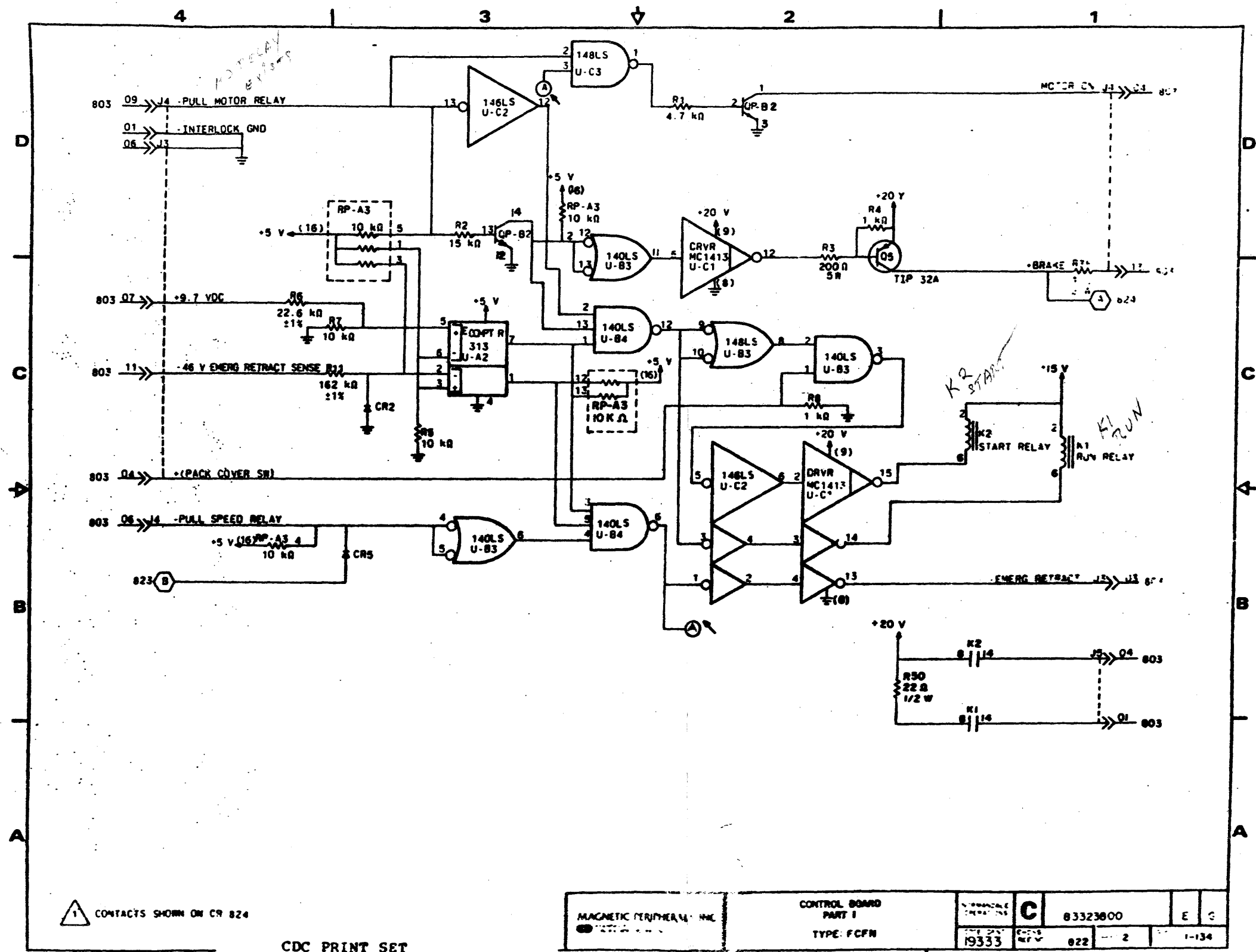
DESIGN	T. Manning	11/15/68
CHECKED		
ENG. DES.	JTS	11/22/68
APPROVED		

MAGNETIC PERIPHERALS INC.

VDE ONLY

CONTROL BOARD DIAGRAMS
(A1 A2)
TYPE: ECFM

DATE	19333	REV	821	1	4	1-193
CONTROL BOARD	83323800					
TYPE	E G					

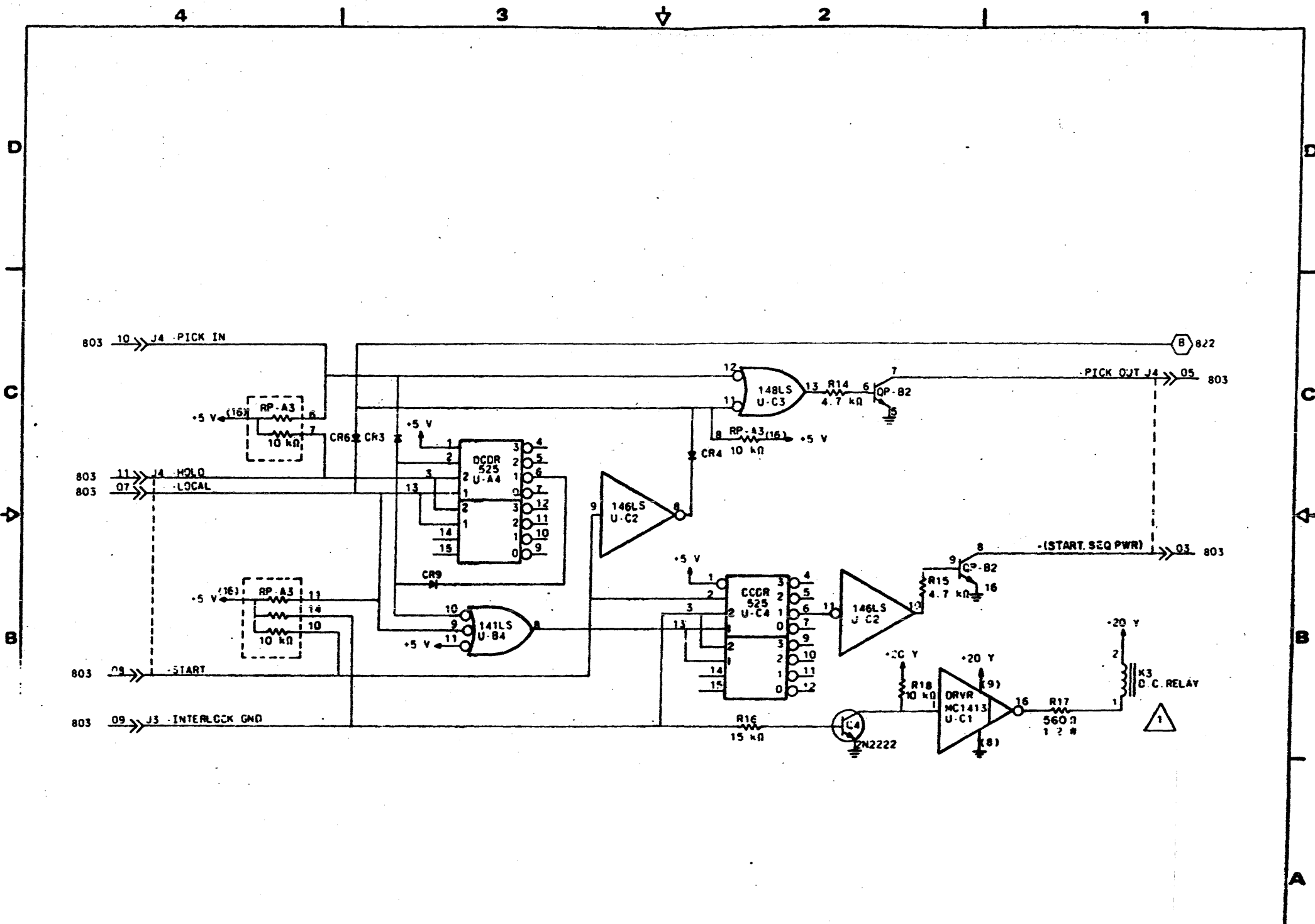


CONTACTS SHOWN ON CR 824

CDC PRINT SET
 S-SP-RM05-0-3K7B
 SHEET 130 of 180

REV B

MAGNETIC PERIPHERALS, INC.	CONTROL BOARD PART I	DATE 19333	C	83323600	E 3
	TYPE: FCFN	CONS REV	022	2	1-134

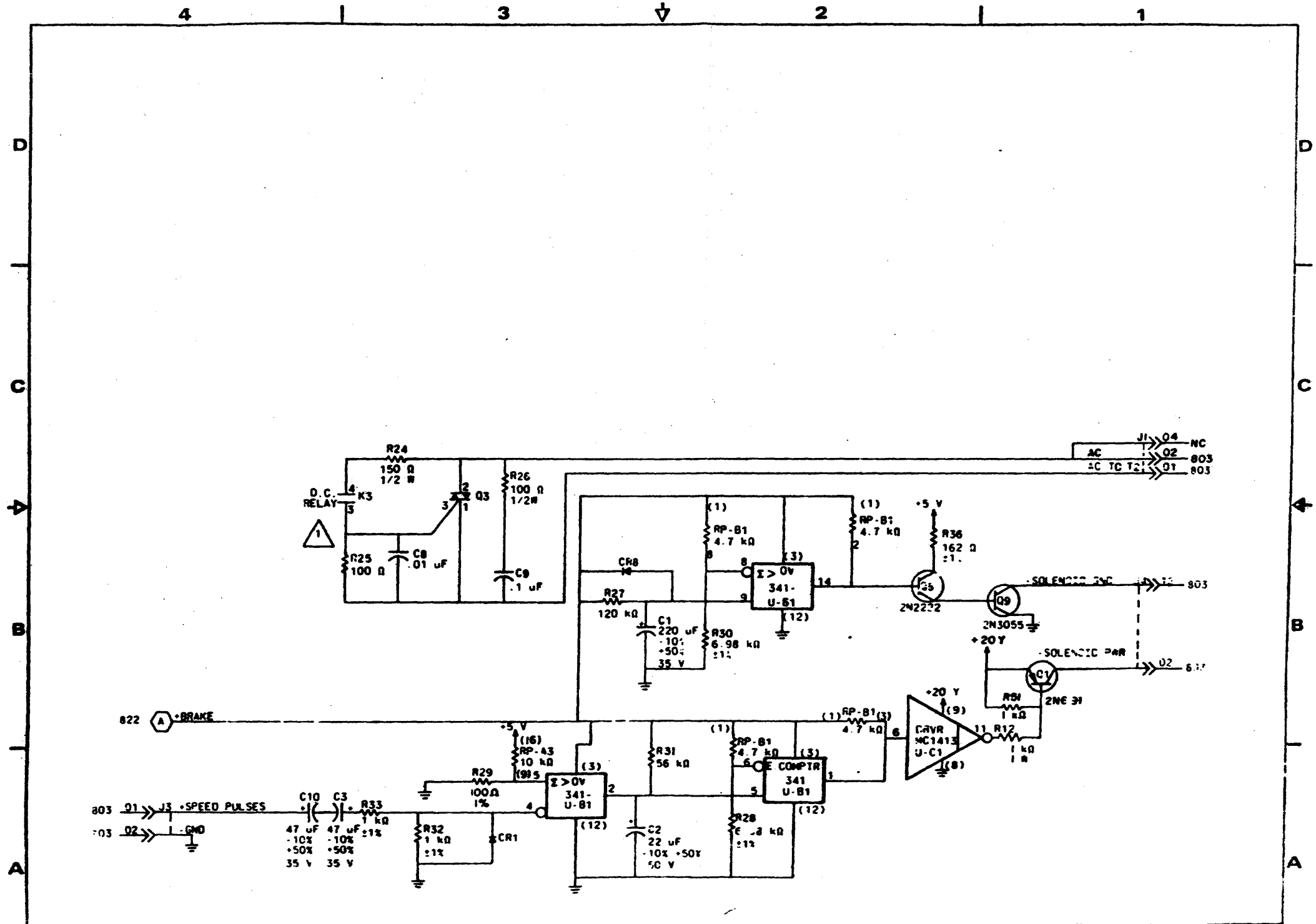


CONTACTS SHOWN ON CR R74

CDC PRINT SET
 B-SP-RM05-U-BK7B
 SHEET 131 of 180

REV B

MAGNETIC PERIPHERALS INC.	PART 2	NORMAL C	83323800	E	G
		CODE YEAR 19333			



1 RELAY COIL SHOWN ON CR 822-823

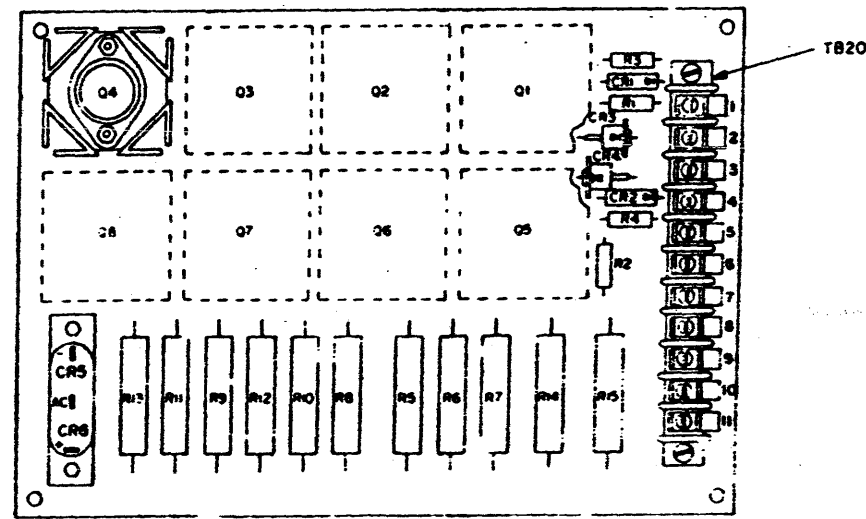
CDC PRINT SET
 B-SP-RM05-0-BK7B
 SHEET 132 of 180

REV B

MAGNETIC PERFORM	REV B	PART 3	19333	C	83323900	E	G
			824	4			136

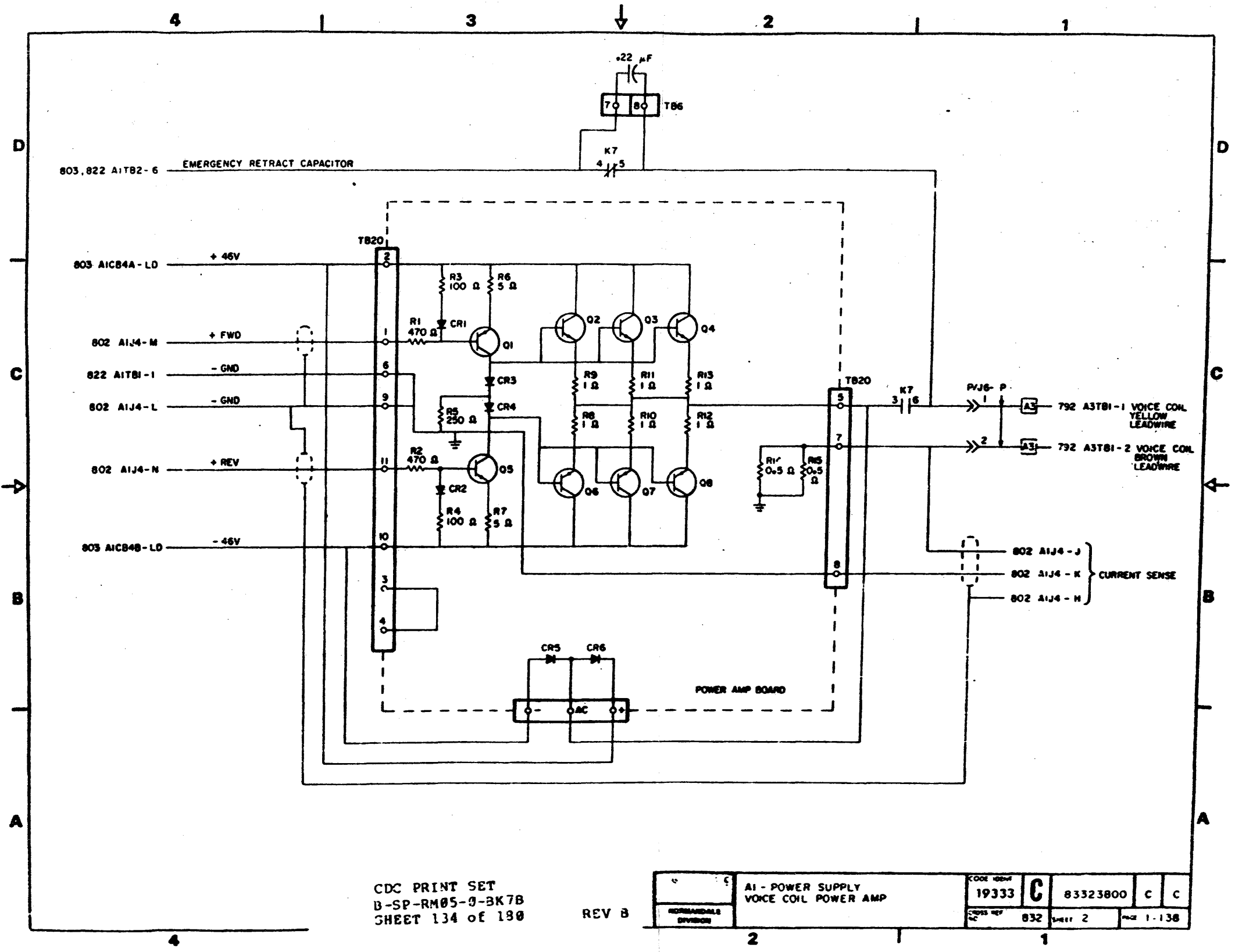
REVISION STATUS OF SHEETS																				
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A	A																			
B	B																			
C	C																			

REVISIONS					
REV	ECO	DESCRIPTION	DRFT	DATE	CHK
B	57453	ADD VDE		5 6 78	JR
C	57453	ADD VDE		5 6 78	JR



CDC PRINT SET
 B-SP-RM05-U-3K7B
 SHEET 133 OF 180

REV 3	DESIGNER MANCERSON	CHECKED D-Z-7	APPROVED DALE BRUCE	NON-VDE ONLY	DATE 1933	C	SHEET 1 OF 2	PAGE 1-137
	VOICE COIL POWER AMP DIAGRAMS TYPE AZCN			831	REF 83 5233			



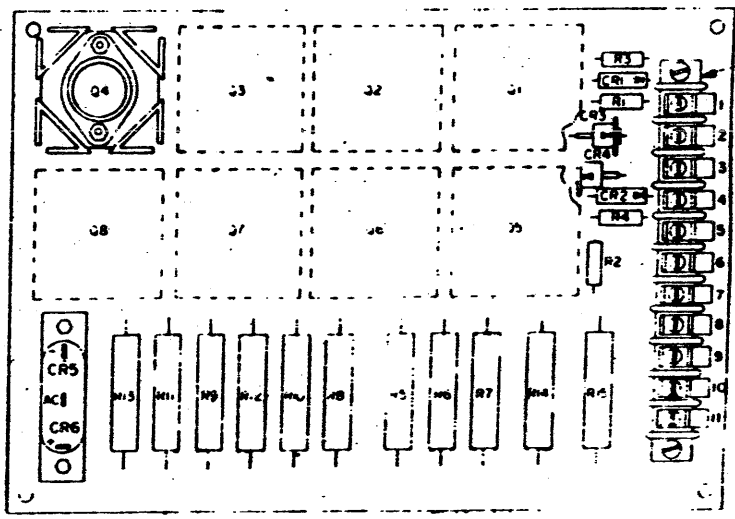
CDC PRINT SET
 B-SP-RM05-9-3K7B
 SHEET 134 of 138

REV B

NORMANDALE DIVISION	A1 - POWER SUPPLY VOICE COIL POWER AMP		CODE 1004 19333	C	83323800	C	C
	CROSS REF AC	832	SHEET 2	PAGE 1-138			

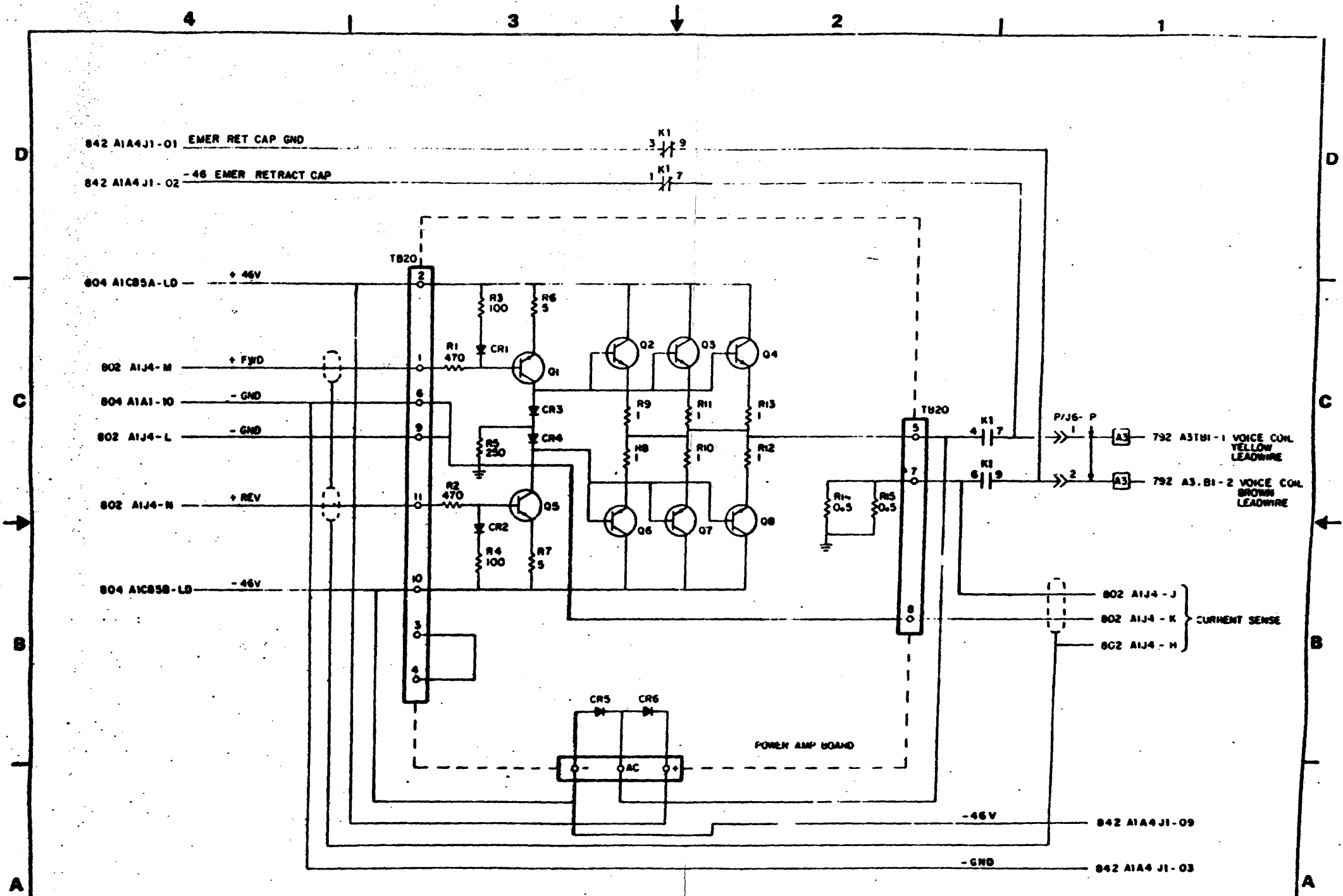
REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A																		
B	B																		

REV. S ONS				DATE	CHG'D
REV.	BY	DESCRIPTION	DATE	CHG'D	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					



CDC PRINT SET
 B-SP-R405-0-BK78
 SHEET 135 of 180
 REV B

DRAWN		CHECKED		ENGINEER		APPROVED		DATE		SHEET		PAGE	
[Signature]		[Signature]		[Signature]		[Signature]		19333		C		93323800	
[Signature]		[Signature]		[Signature]		[Signature]		231		1 of 2		1-139	
VDE ONLY VOICE COIL POWER AMP DIAGRAMS (A1A3) TYPE AZCN				19333 C 93323800		231 1 of 2 1-139							



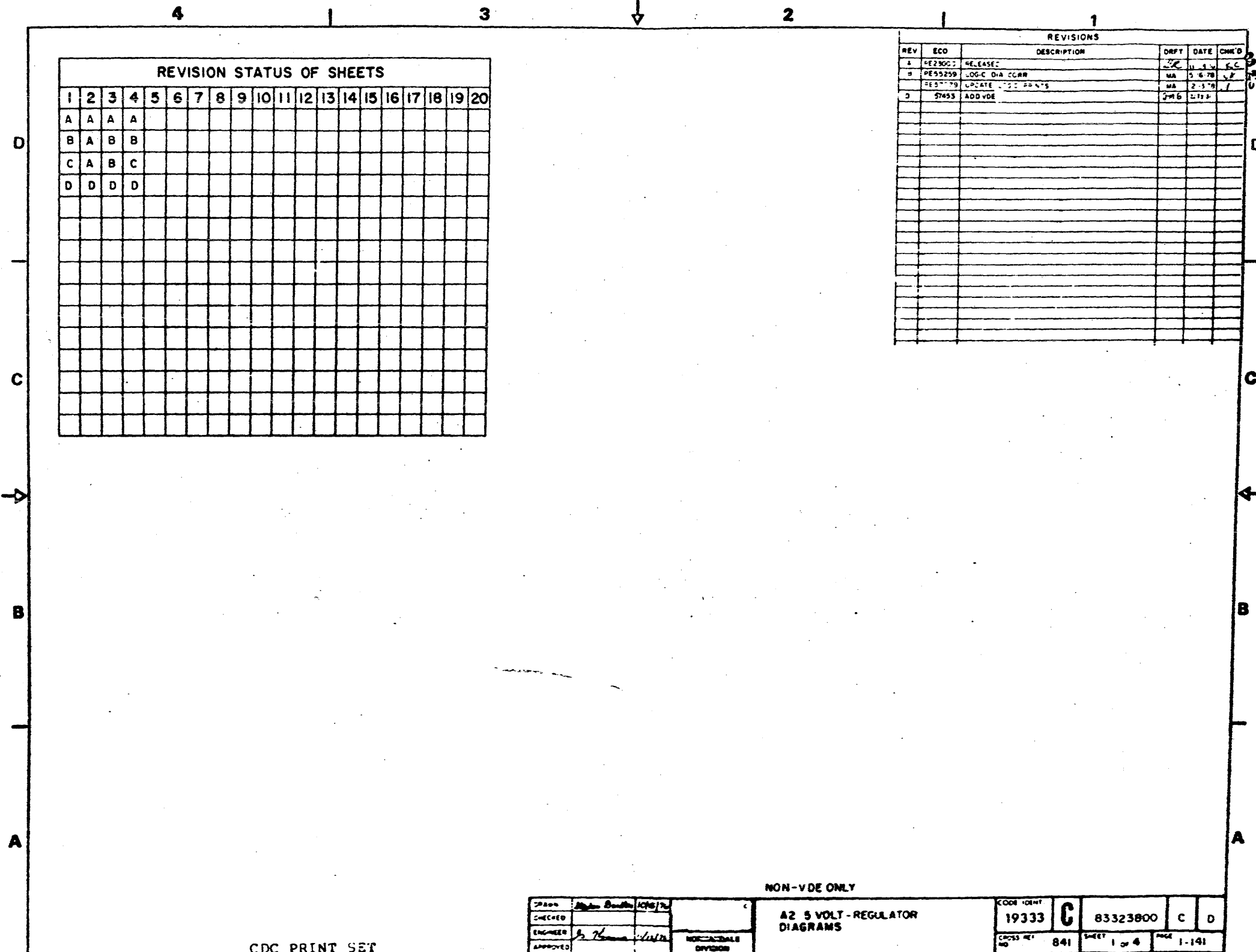
CDC PRINT SET
 B-SP-RM85-8-BK7B
 SHEET 136 of 130

REV 9

CONTROL DATA	A1 - POWER SUPPLY VOICE COIL POWER AMP	DATE 1933	C	83323800	C	B
	WORMHOLE DIVISION	NO 832	SHEET 2	REF 1-140	REF 8-20039	

REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A																	
B	A	B	B																	
C	A	B	C																	
D	D	D	D																	

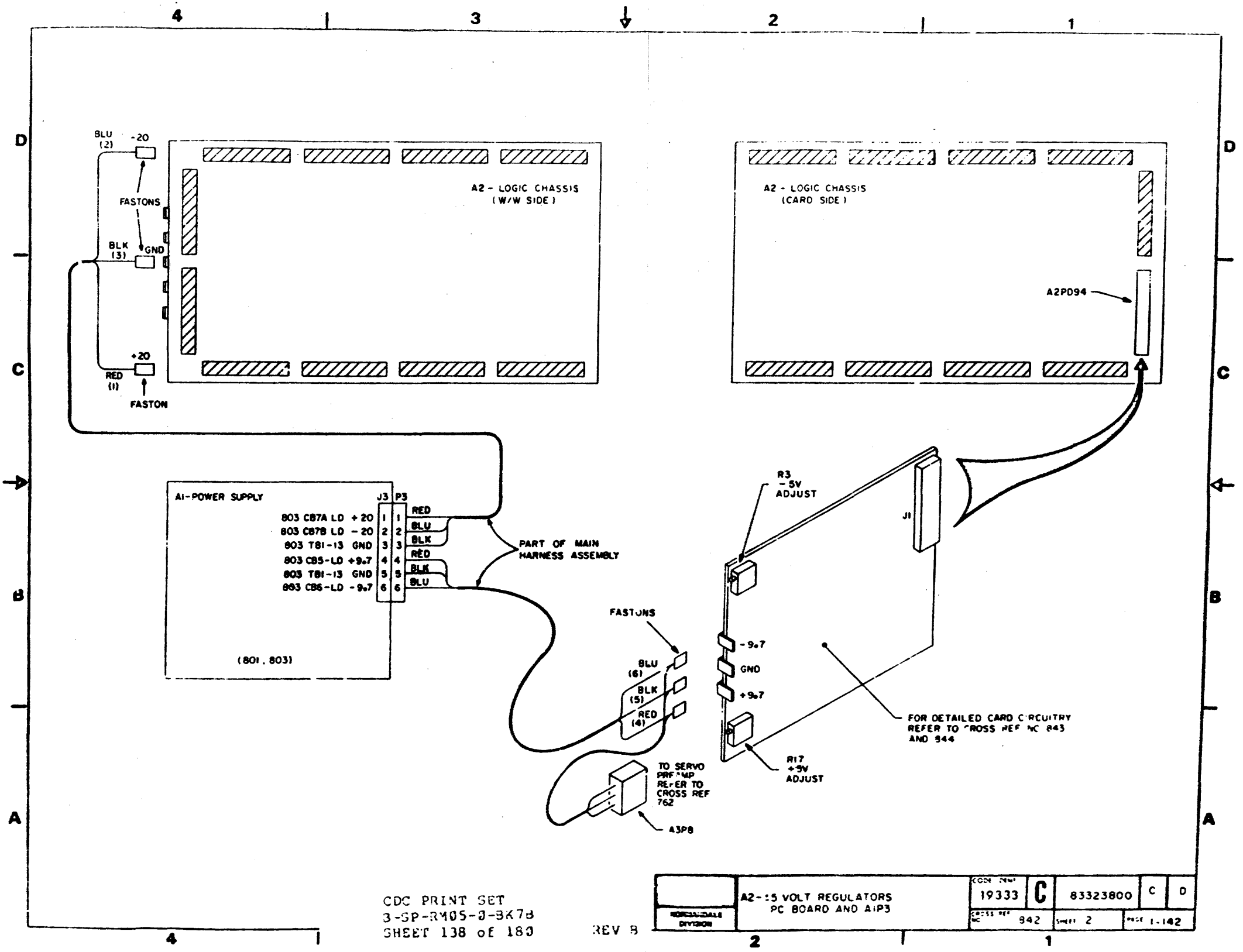
REVISIONS					
REV	ECO	DESCRIPTION	DRFT	DATE	CHK'D
1	FE23007	RELEASE		11-5-78	EC
2	FE55259	LOGIC DIA CORR	MA	5-6-78	VP
3	FE55259	UPDATE LOGIC DIAGS	MA	2-1-79	
4	57453	ADD VDE	JMG	2-1-79	



CDC PRINT SET
 B-SP-RM05-0-3K7B
 SHEET 137 of 190
 REV B

NON-VDE ONLY																									
<table border="1"> <tr> <td>DRAWN</td> <td><i>John Smith</i></td> <td>DATE</td> <td>10/2/78</td> </tr> <tr> <td>CHECKED</td> <td></td> <td></td> <td></td> </tr> <tr> <td>ENGINEER</td> <td><i>J. H. ...</i></td> <td></td> <td></td> </tr> <tr> <td>APPROVED</td> <td></td> <td></td> <td></td> </tr> </table>	DRAWN	<i>John Smith</i>	DATE	10/2/78	CHECKED				ENGINEER	<i>J. H. ...</i>			APPROVED				<table border="1"> <tr> <td>CODE IDENT</td> <td>19333</td> <td>C</td> <td>D</td> </tr> <tr> <td>CROSS REF NO</td> <td>841</td> <td>SHEET 1 of 4</td> <td>PAGE 1-141</td> </tr> </table>	CODE IDENT	19333	C	D	CROSS REF NO	841	SHEET 1 of 4	PAGE 1-141
DRAWN	<i>John Smith</i>	DATE	10/2/78																						
CHECKED																									
ENGINEER	<i>J. H. ...</i>																								
APPROVED																									
CODE IDENT	19333	C	D																						
CROSS REF NO	841	SHEET 1 of 4	PAGE 1-141																						
A2 5 VOLT - REGULATOR DIAGRAMS		83323800																							

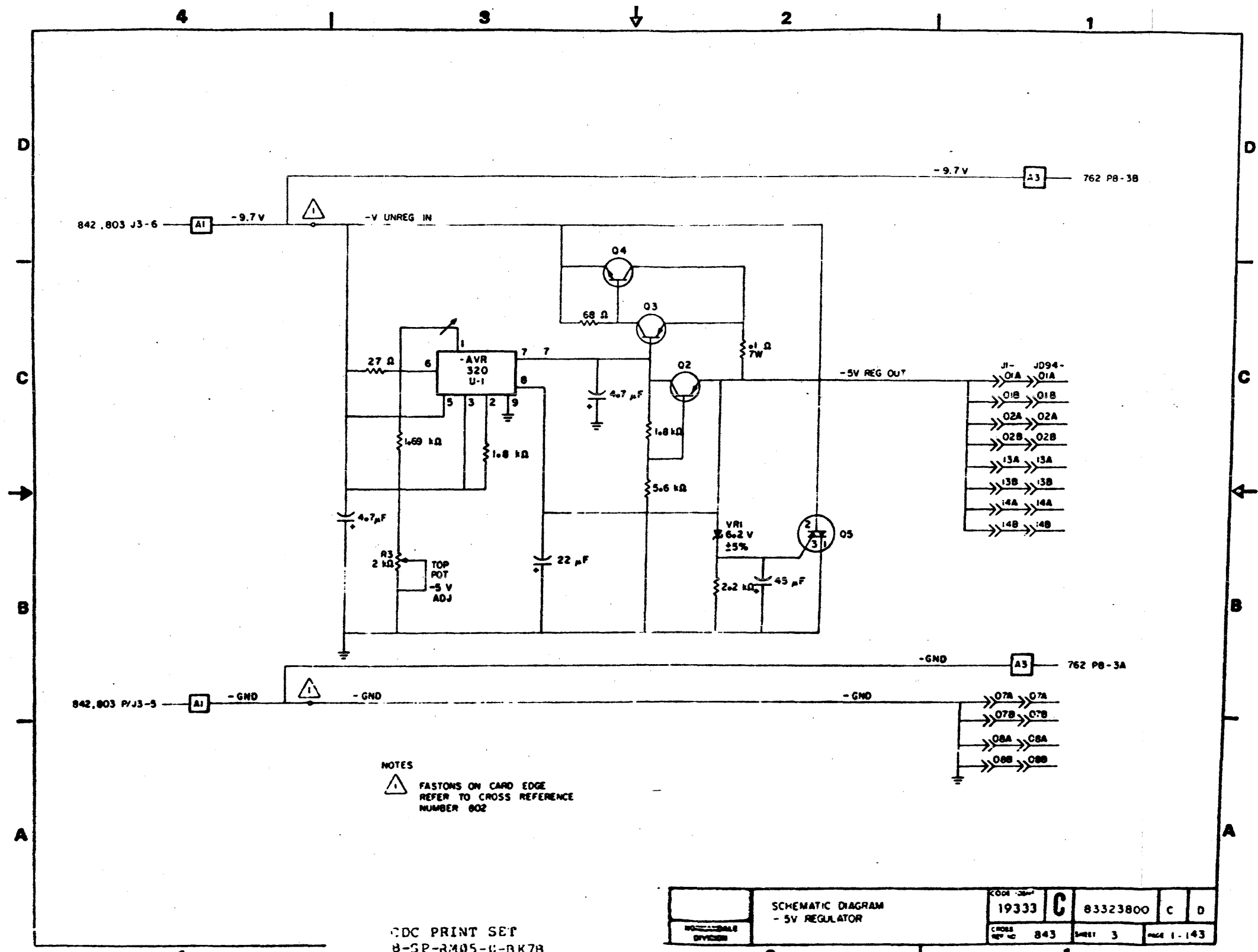
REF 832 5234



CDC PRINT SET
3-SP-R405-0-3K78
SHEET 138 OF 180

REV B

RESEARCH DIVISION	A2-15 VOLT REGULATORS PC BOARD AND AIP3	CDR No 19333	C	83323800	C	D
		CDR REF 942	SHEET 2	PAGE 1-142		

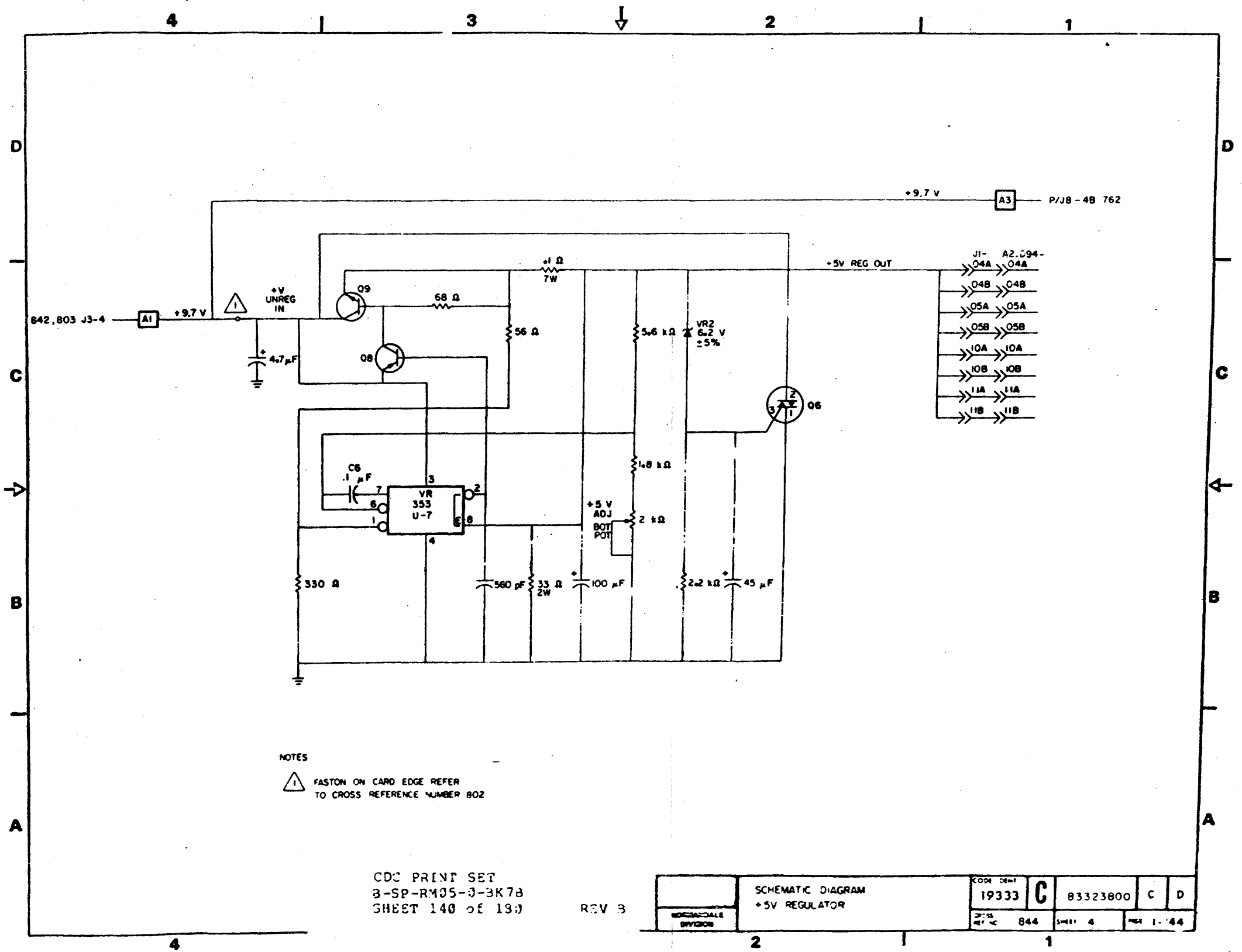


NOTES
 ⚠ FASTONS ON CARD EDGE
 REFER TO CROSS REFERENCE
 NUMBER 802

CDC PRINT SET
 8-SP-RM05-U-BK7B
 SHEET 139 of 180

REV B

SCHEMATIC DIAGRAM - 5V REGULATOR	CODE	19333	C	83323800	C	D
	CROSS REF ID	843	SHEET	3	PAGE	1-143



NOTES
⚠ FASTEN ON CARD EDGE REFER TO CROSS REFERENCE NUMBER 802

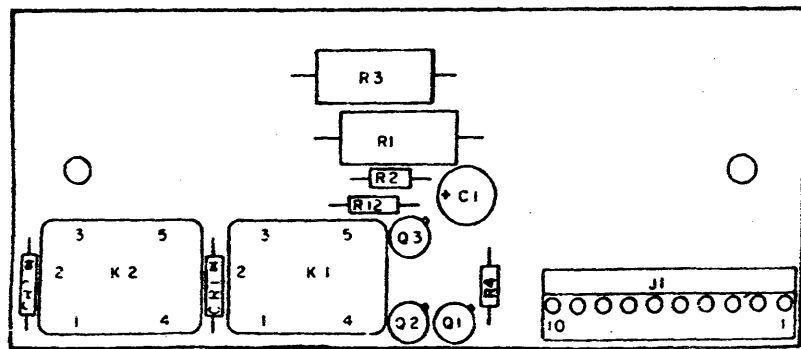
CDC PRINT SET
3-SP-RM05-3-3K78
SHEET 140 OF 130

REV B

SCHEMATIC DIAGRAM		COO DESI 19333	C	83323800	C	D
+5V REGULATOR		DES REF NC 844	SHEET 4	MAR 1-44		

REVISION STATUS OF SHEETS																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A																			
B	B																			
C	C																			

REV.	DATE	DESCRIPTION
A	PE 23000	RELEASE
B	PE 57535	CHANGE TO CFNN COMP ASSY
C	PE 64073	CHANGE TO CFNN COMP ASSY



DESIGNED	FILED	DATE	BY

MAGNETIC PERIPHERALS INC

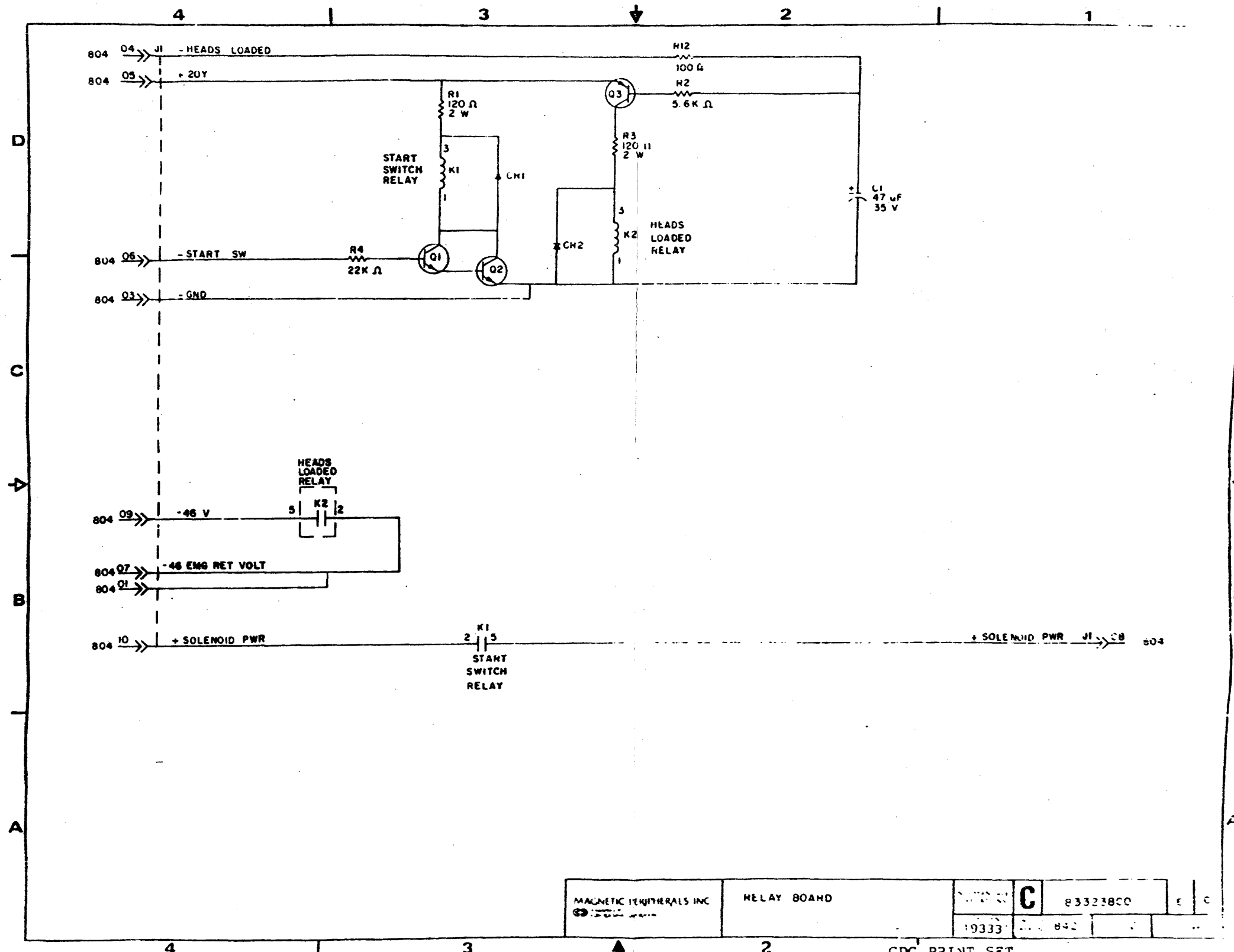
VDE ONLY

RELAY BOARD
DIAGRAMS (A1A4)
TYPE: CFNN

REV. C	83323800
10333	841

CDC PRINT SET
B-SP-RM25-3-BK79
SHEET 141 of 133

REV 9



MAGNETIC PERIPHERALS INC
 6250 WILSON AVENUE
 BOSTON, MASSACHUSETTS 02118

RELAY BOARD

10333	C	83323800	E	C
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CDC PRINT SET
 9-5P-RM05-0-3K7B
 SHEET 142 of 180 REV 3

REVISION STATUS OF SHEETS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	A	A																
B	B	B	B																

REVISIONS					
REV	ECO	DESCRIPTION	DWY	DATE	CHK'D
A	PE 25000	HL. EASEC.			
B	57453	CORRECTED C DIAGRAMS			

DRAWN	<i>[Signature]</i>	CONTROL: 0505
CHECKED	<i>[Signature]</i>	
ENGINEER	<i>[Signature]</i>	NORMAN DALE DIVISION
APPROVED	<i>[Signature]</i>	

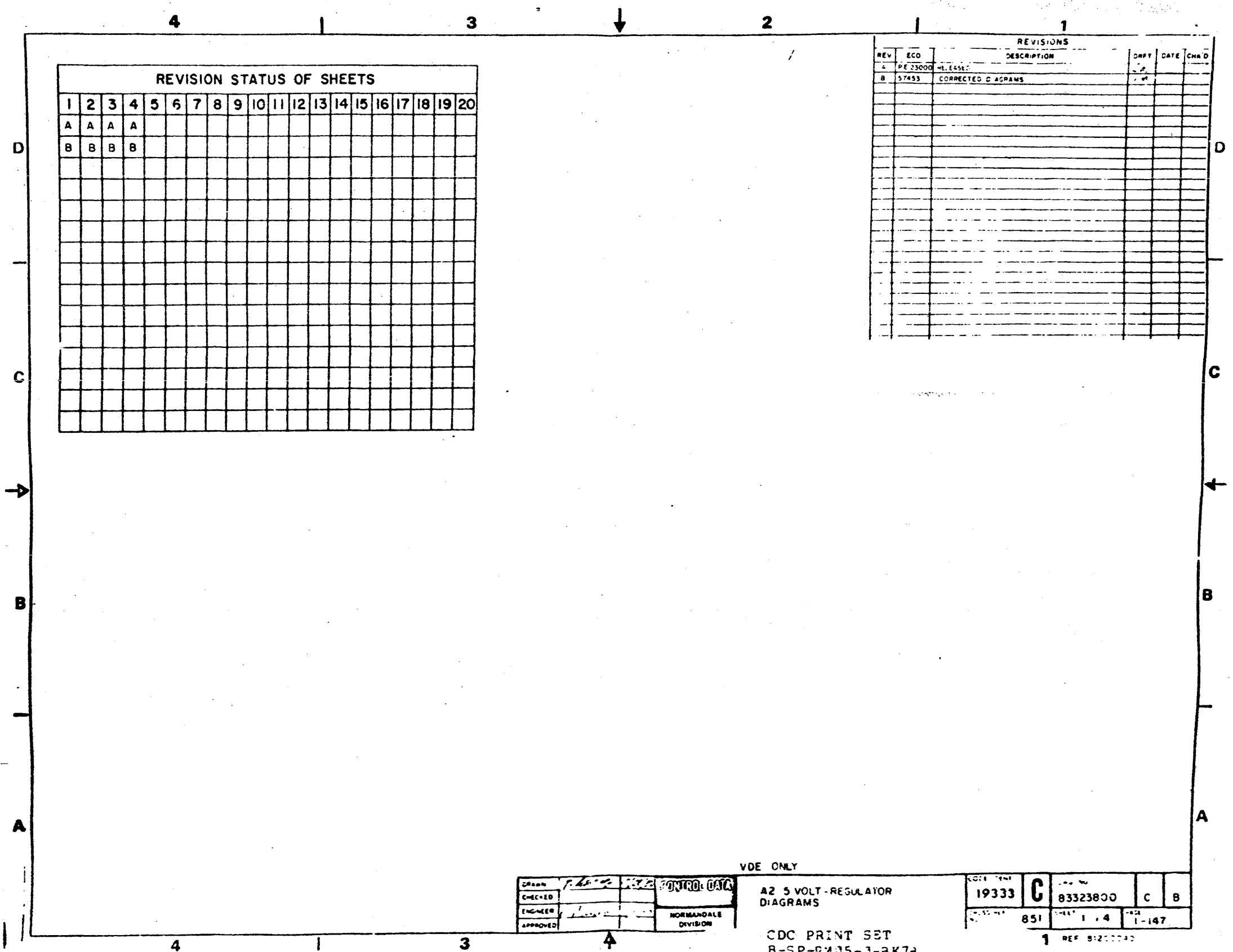
VDE ONLY

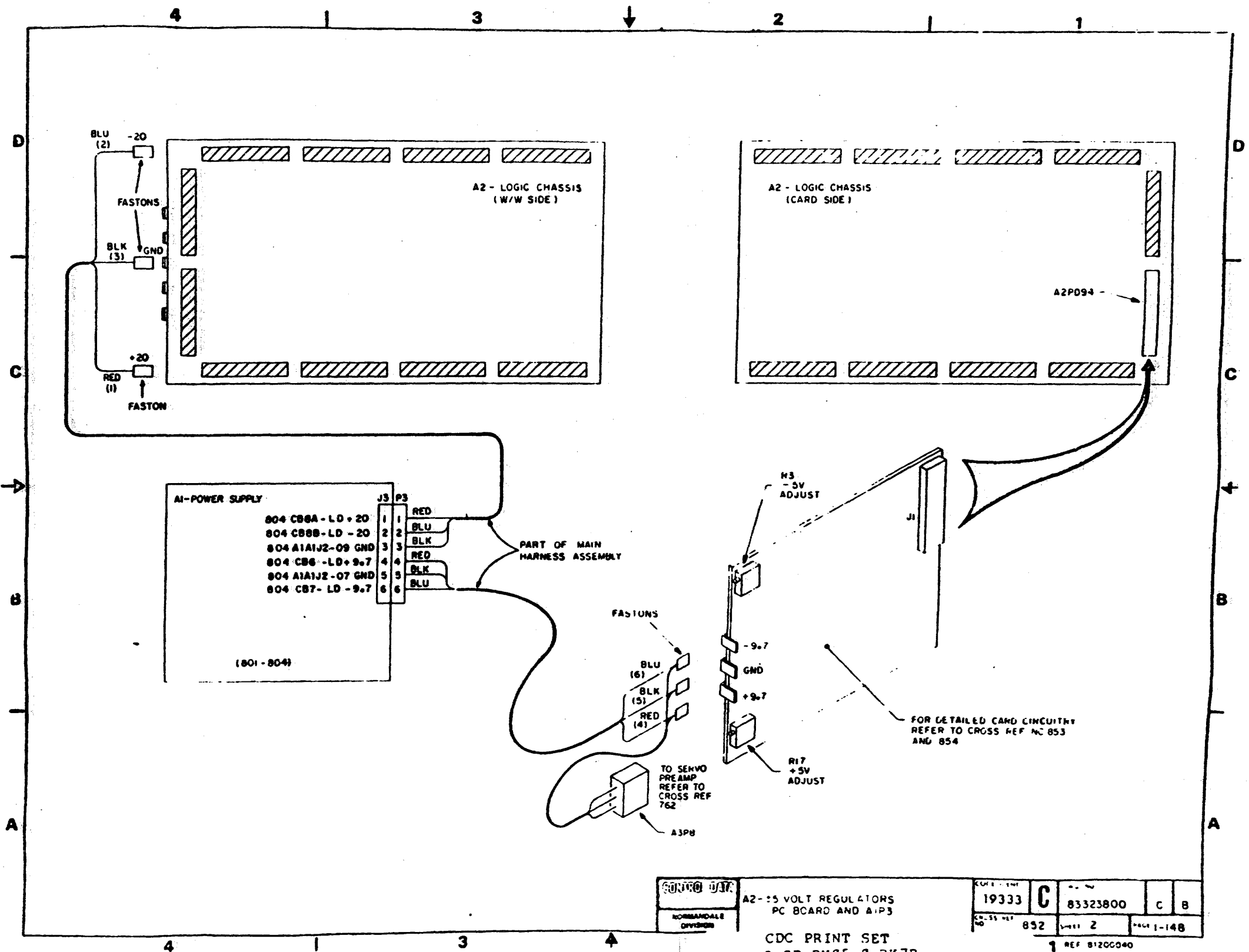
A2 5 VOLT - REGULATOR
DIAGRAMS

NOTE NO	19333	C	83323800	C	B
ISSUE NO	851	1	4	1-147	

CDC PRINT SET
B-SP-RM05-J-3K78
SHEET 143 of 180

REV B





CONRAD ELECTRONICS
 NORMANVILLE
 DIVISION

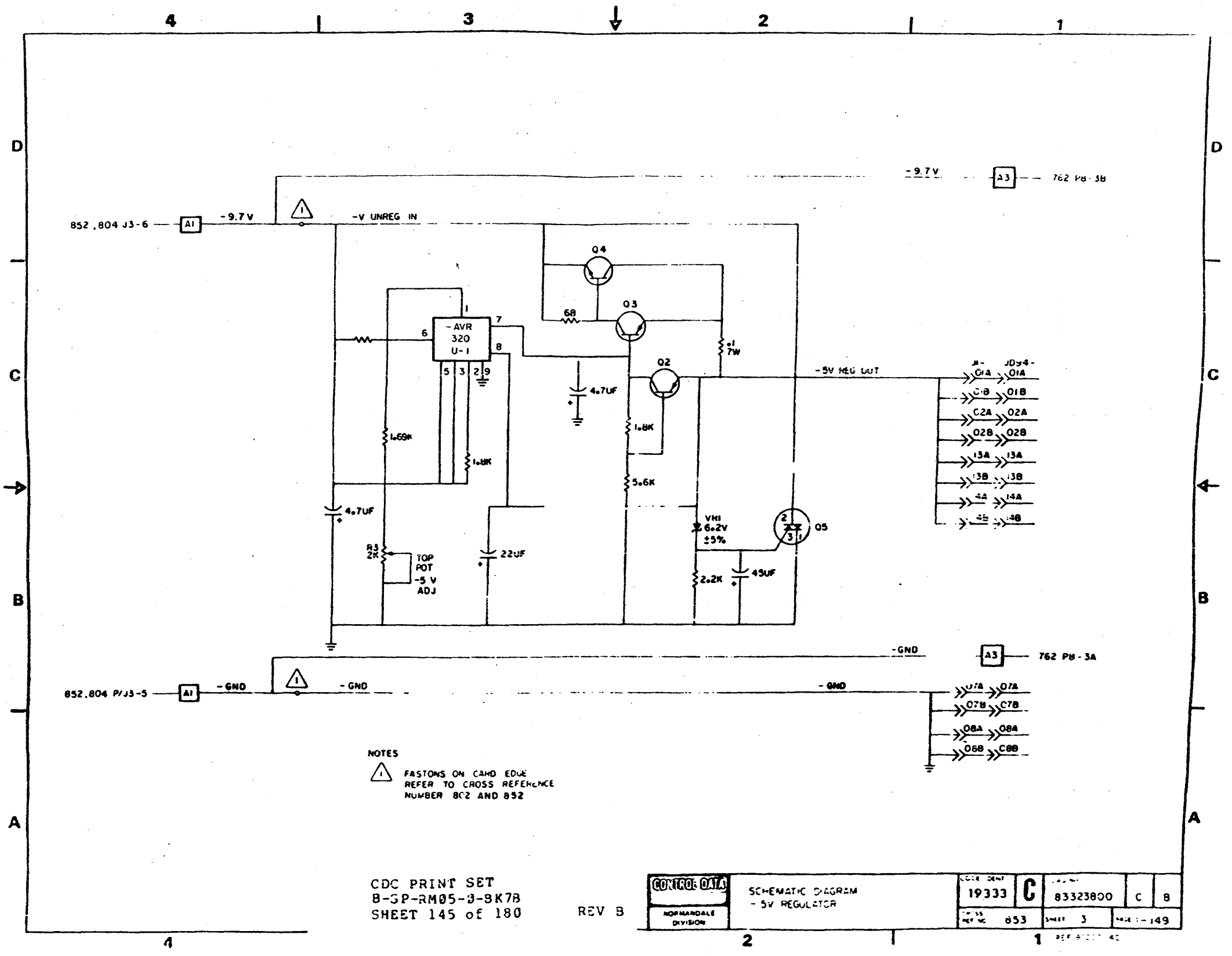
A2-5V VOLT REGULATORS
 PC BOARD AND AIP3

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19333	C	83323800	C	B
852	2	1-148		

REF B120040

REV B

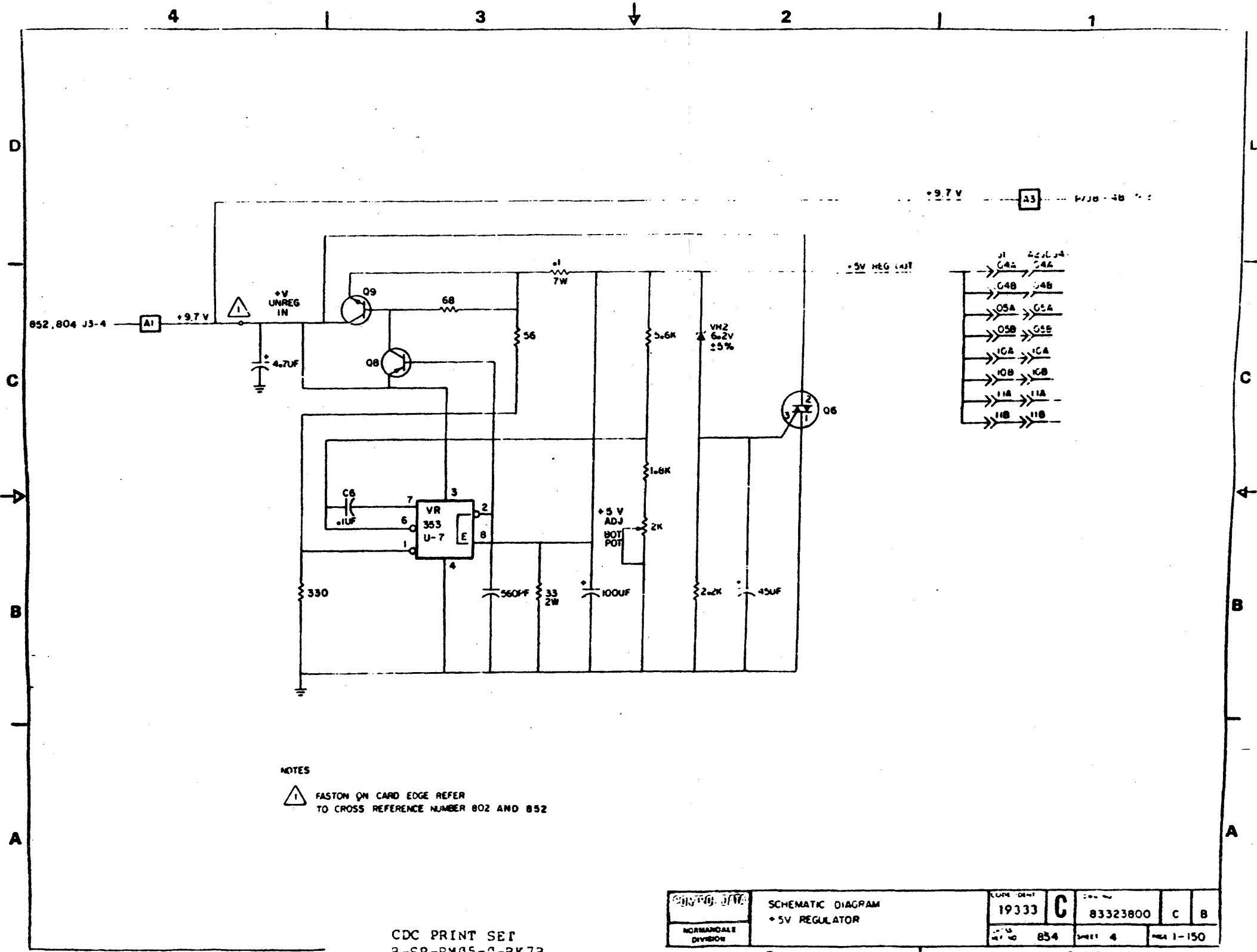


NOTES
 ⚠ FASTONS ON CAMD EDGE
 REFER TO CROSS REFERENCE
 NUMBER 8C2 AND 852

CDC PRINT SET
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REV B

CONTROL DATA NORMAN DALE DIVISION	SCHEMATIC DIAGRAM - 5V REGULATOR	19333	C	83323800	C	B
		853	3	149		



NOTES
 ⚠ FASTON ON CARD EDGE REFER TO CROSS REFERENCE NUMBER 802 AND 852

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REV B

NORMANDELL DIVISION	SCHEMATIC DIAGRAM +5V REGULATOR	FORM DESIG	C	DESIGN NO	C	B
		19333		83323800		
		REV NO		SHEET		
		854		4		1-150

REF 81200043

SECTION 2

WIRE LISTS

INTRODUCTION

This section contains the wire list for the logic chassis wire-wrap. This list is useful when making repairs to the logic chassis wirewrap panel.

LOGIC WIREWRAP**General**

This list shows the origin, destination, and Z level of all wirewrap connections on the logic chassis backpanel.

The wires are listed in order of card location and pin number. The lowest card location is listed first and the highest last. Following the listing of connections between card locations is a list of connections between the pins at the card locations and the pins on the auxiliary connectors (JA80 - JA84 and JD90 and JD94). The pins at each card location or auxiliary jack also are listed from lowest to highest.

This list is a double ended type listing. This means that each wire is listed twice, first by the lowest card or jack it is wired to and then by the highest.

The following explains each of the columns in the wire list (refer to figure 2-1).

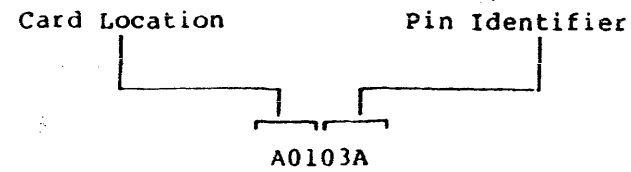
Signal Name or Number Identification

Contains a number which is for factory use only.

Origin/Destination

These columns list both ends of each connection. The terms are defined in the following example:

Example:



The Key to Diagrams in the Diagrams section of this manual has additional information on card and pin locations.

TITLE		WL	DOCUMENT NO.	SHEET NO.	REV.
WIREWRAP LIST			LOGIC W/W	1 of 12	A
SIGNAL NAME OR NUMBER IDENTIFICATION	ORIGIN	DESTINATION	Z LEVEL	NOTES	
102111	A0101B	A0102A	1		
102111	A0102A	A0101B	1		
100108	A0102B	A1708A	1		
100211	A0103A	A0231A	1		
100206	A0230A	A1712A	1		
100205	A0230B	A0612B	1		
100203	A0231A	A1326B	2		
100211	A0231A	A0103A	1		

A diagram showing two wire connections on a surface. The first is labeled "Z LEVEL 2" and the second is labeled "Z LEVEL J".

9E02

Figure 2-1. Example of Logic Wirewrap List

Z Level

Each pin may contain either one or two wires. If it contains two wires, they must be separated vertically (refer to figure 2-1). The Z level refers to whether the wire wrapped connection is on the level closest to the wirewrap panel surface (level 1) or farthest from it (level 2). If the pin contains only one wire, it is always 1 wrap. In either case the same Z level is maintained at both ends of the wire.

Notes

Contains signal names, history or other information pertaining to wire list.

TITLE		WL	DOCUMENT NO.	SHEET NO.	REV.
Wire Wrap Wire List			REF	1 of 13	REF
SIGNAL NAME OR NUMBER IDENTIFICATION	ORIG	DESTINATION	Z LEVEL	NOTES	
A0102A	A19268		1	REF.	
A0102B	A02278		2	1. VDE 77446347 REV. AY	
A0103A	JA00098		1	2. NON-VDE 77446323 REV. AF	
A0103B	A0817A		1		
A0104A	A06138		2		
A0104B	A06218		1		
A0107A	A17068		1		
A0107B	A0711A		1		
A0110A	A13108		1		
A0110B	A13238		1		
A0113A	A06318		1		
A0113B	A06248		1		
A0116A	A0220A		1		
A0116B	A0224A		1		
A0117A	A0804A		1		
A0117B	A0202A		1		
A0121A	A02248		1		
A0121B	A14278		1		
A0122A	A0134A		1		
A0122B	A0227A		1		
A0123A	A0630A		1		
A0123B	A10128		1		
A0124A	A0703A		1		
A0124B	A17268		1		
A0131A	A15278		1		
A0131B	A15268		1		
A0132A	A0022A		1		
A0132B	A00218		1		
A0133B	A0821A		1		
A0134A	A0122A		1		
A0201A	JA82078		1		
A0202A	A01178		1		
A0202A	A00048		2		
A0202B	A12168		1		
A0203A	A06338		1		
A0204A	A06308		1		
A0204B	A0629A		1		
A0224A	A01168		1		
A0224A	A06328		2		
A0224B	A0121A		1		
A0224B	A06238		2		
A0225A	A06118		2		
A0225B	A0626A		2		
A0226A	A06268		2		
A0226B	A0622A		2		
A0227A	AJ1228		1		
A0227A	A0625A		2		
A0227B	JA8207A		1		
A0227B	AJ1028		2		
A0228A	A0116A		1		
A0228A	A0623A		2		

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REV B

TITLE		WL	DOCUMENT NO.	SHEET NO.	REV
Wire Wrap Wire List				2	
SYMBOL NAME OR NUMBER IDENTIFICATION	ORIGIN	DESTINATION	Z LEVEL	NOTES	
A0228B	A1923A		1		
A0229A	A1431B		1		
A0229B	A1923B		1		
A0230A	A1712A		1		
A0230B	A0612B		1		
A0231B	A1504B		1		
A0232A	A1206B		2		
A0232B	A0632A		2		
A0233A	A1503B		1		
A0504A	A1723B		1		
A0504B	A1723A		1		
A0505A	A1730A		1		
A0505B	A1730B		1		
A0506A	A1921B		1		
A0506B	A1921A		1		
A0507A	A1731A		1		
A0507B	A1731B		1		
A0508B	JD9309B		1		
A0509A	A1727B		1		
A0509B	A1727A		1		
A0510A	A1729A		1		
A0510B	A1729B		1		
A0511A	A1721A		1		
A0511B	A1721B		1		
A0514B	JD9310B		1		
A0602A	A0602B		2		
A0602A	A0603B		1		
A0602B	A0602A		2		
A0603A	A0609B		1		
A0603A	A0614A		2		
A0603B	A0603A		2		
A0603B	A0602A		1		
A0604A	A1811B		1		
A0604B	A0721B		1		
A0605A	A0609A		1		
A0605B	A1832A		1		
A0606A	A0711B		1		
A0606B	A0724A		1		
A0607A	A0732B		1		
A0607B	A1926A		1		
A0608A	A0605A		1		
A0608A	A0603B		2		
A0608B	A0609B		2		
A0609A	A0613A		2		
A0609A	A1724A		1		
A0609B	A0608B		2		
A0609B	A0603A		1		
A0610A	A1905A		1		
A0610B	A1910B		1		
A0611A	A0725A		1		

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REV 3

TITLE		WL	DOCUMENT NO.	SHEET NO.	REV.
Wire Wrap Wire List				3	
SIGNA. NAME OR NUMBER IDENTIFICATION	ORIGIN	DESTI NATION	Z LEVEL	NOTES	
A06118		A0225A	2		
A06118		A12268	1		
A0612A		A07138	1		
A06128		A1232A	2		
A06128		A02308	1		
A0613A		A06148	1		
A0613A		A0609A	2		
A06138		A1705A	1		
A06138		A0104A	2		
A0614A		A0603A	2		
A0614A		A06158	1		
A06148		A0613A	1		
A0615A		A10268	1		
A06158		A0634A	2		
A06158		A0614A	1		
A0616A		A1904A	1		
A06168		A0702A	1		
A0617A		A07068	1		
A0617A		A1226A	2		
A06178		A07078	1		
A0621A		A0717A	1		
A06218		A01048	1		
A0622A		A02268	2		
A0622A		A0803A	1		
A06228		A10048	2		
A0623A		A0228A	2		
A0623A		A1230A	1		
A06238		A12288	1		
A06238		A02248	2		
A06248		A01138	1		
A0625A		A1233A	1		
A0625A		A0227A	2		
A0626A		A1224A	1		
A0626A		A02258	2		
A06268		A0226A	2		
A06268		A12228	1		
A0627A		A0733A	1		
A06278		A07058	1		
A06288		A19158	1		
A0629A		A02048	1		
A0630A		A0123A	1		
A06308		A0204A	1		
A0631A		A10138	1		
A06318		A0113A	1		
A0632A		A1221A	1		
A0632A		A02328	2		
A06328		A0224A	2		
A06328		A1231A	1		
A0633A		A0724A	1		

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REV B

TITLE		WL	DOCUMENT NO.	SHEET NO.	REV.
Wire Wrap Wire List				4	
SIGNAL NAME OR NUMBER IDENTIFICATION	ORIGIN	DEST. NATION	Z LEVEL	NOTES	
A0633B		A0203A	1		
A0633B		A1225A	2		
A0634A		A0615B	2		
A0701A		JA8305A	1		
A0702A		A0616B	1		
A0702B		A0705B	2		
A0702B		A1207A	1		
A0703A		A1205B	2		
A0703A		A0124A	1		
A0703B		A1710A	1		
A0704A		A1213B	1		
A0704B		A1907B	1		
A0705A		A0829B	2		
A0705B		A0627B	1		
A0705B		A0702B	2		
A0706A		A0831A	1		
A0706B		A08J4A	2		
A0706B		A0617A	1		
A0707A		A2012A	1		
A0707B		A0617B	1		
A0707B		A1725B	2		
A0708A		A2009B	1		
A0709A		A0716A	2		
A0710A		A1232B	1		
A0710B		A1205A	1		
A0711A		AU107B	1		
A0711B		A0606A	1		
A0712A		A0825A	1		
A0712B		A2026B	1		
A0713A		A2029B	1		
A0713B		A0612A	1		
A0713B		A0832A	2		
A0714A		A1203B	1		
A0714B		A0811B	2		
A0715A		A0831B	1		
A0715B		A1225B	1		
A0716A		A1928A	1		
A0716A		A0709A	2		
A0716B		A1927B	1		
A0717A		A0621A	1		
AC717B		A1206A	1		
A0721B		AJ833A	2		
A0721B		A0604B	1		
A0722A		A1910A	1		
A0722B		A1207B	1		
AC723A		AU734A	1		
A0723B		A0825B	1		
A0724A		A0606B	1		
A0724B		JA8304A	1		

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REV 3

TITLE		WL	DOCUMENT NO.	SHEET NO.	REV.
Wire Wrap Wire List				5	
SIGNAL NAME OR NUMBER IDENTIFICATION	ORIGIN	DESTI NATION	Z LEVEL	NOTES	
A0725A		A0611A	1		
A0725B		A1214B	1		
A0726A		A1905B	1		
A0726B		A0809B	1		
A0727A		A1907A	1		
A0727B		A1808B	1		
A0729B		A1807B	1		
A0729A		A0633A	1		
A0729B		A2027B	1		
A0730A		A1916B	1		
A0731A		A0803B	1		
A0731B		A1714A	1		
A0732B		A0607A	1		
A0733A		A0627A	1		
A0733B		JA8001A	1		
A0733B		A0802A	2		
A0734A		A0723A	1		
A08J1A		JA8101B	1		
A0801A		JA8103B	2		
A08J2A		A0733B	2		
A08J2A		A1711B	1		
A08J3A		A0622A	1		
A0803A		A1229B	2		
A0803B		A0731A	1		
A08J4A		A07J6B	2		
A0804A		A0117A	1		
A0804B		A0202A	2		
A0805A		A1724B	1		
A08J5B		A0726B	1		
A08J7A		JA8303B	1		
A0807B		JA8303A	1		
A08J9A		A2004A	1		
A08J9B		A2006A	1		
A0810A		A20J5A	1		
A0810B		A2004B	1		
A0811A		A1202A	1		
A0811B		A0714B	2		
A0811B		A1217A	1		
A0812A		A12J4A	1		
A0812B		A1203A	1		
A0813A		A1209B	1		
A0813B		A1209A	1		
A0814A		A2003B	1		
A0814B		A1210A	1		
A0815A		A2006B	1		
A0815B		A20J5B	1		
A0816A		JA8103A	1		
A0816B		JA9101A	1		
A0817A		A0103B	1		

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REV B

TITLE Wire Wrap Wire List		WL	DOCUMENT NO.	SHEET NO. 6	REV.
SIGNAL NAME OR NUMBER IDENTIFICATION	ORIGIN	DESTI NATION	Z LEVEL	NOTES	
A0817B	JA8102A		1		
A0821A	A0133B		1		
A0821B	A0132B		1		
A0822A	A0132A		1		
A0822B	A1211B		1		
A0823A	JA8105A		1		
A0824A	A1716B		1		
A0824B	JA8106A		1		
A0825A	A0712A		1		
A0825B	A1924B		2		
A0825B	A0723B		1		
A0826A	JD9311B		1		
A0826B	JD9314A		1		
A0827A	JD9309A		1		
A0827B	JD9311A		1		
A0828A	A1712B		2		
A0829B	A0705A		2		
A0829B	A2013B		1		
AG830A	A2012B		1		
A0830B	A2014A		1		
A0831A	A0706A		1		
A0831B	A2032A		2		
A0831E	A0715A		1		
A0832A	A1827B		1		
A0832A	A0713B		2		
A0832B	A1931B		1		
A0833A	A2028B		1		
AG833A	AJ721B		2		
A0833B	JD9307A		1		
A0834A	JA8105B		1		
A0834A	JA8106B		2		
AG901A	JA8102B		1		
A1001B	A1021B		1		
A1002B	A1502B		1		
A1002B	JD97J3A		2		
A1004B	A1633A		1		
A1004B	AG622B		2		
A1012B	A1027B		2		
A1012B	A0123B		1		
A1C13B	AG631A		1		
A1014B	JD9404A		2		
A1014B	A1034B		1		
A1021B	A1001B		1		
A1021B	JD9401B		2		
A1022B	A1812B		1		
A1023B	A1523B		1		
A1024B	A1524B		1		
A1026B	A0617A		1		

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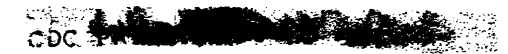
REV B

TITLE		WL	DOCUMENT NO.	SHEET NO.	REV.
Wire Wrap Wire List				7	
ORIGIN NAME OR NUMBER IDENTIFICATION	ORIGIN	DESTI NATION	Z LEVEL	NOTES	
A1027B		A1012B	2		
A1030B		A1309A	1		
A1033B		JD9203B	2		
A1033B		A1533B	1		
A1034B		A1014B	1		
A1101A		JA8104A	1		
A1201A		JA8206B	2		
A1201A		JA8204B	1		
A1202A		A0811A	1		
A1203A		A0812B	1		
A1203B		A1916A	2		
A1203B		A0714A	1		
A1204A		A0812A	1		
A1205A		A0710B	1		
A1205B		A0703A	2		
A1206A		A0717B	1		
A1206B		A0232A	1		
A1207A		A0702B	1		
A1207B		A0722B	1		
A1209A		A0813B	1		
A1209B		A0813A	1		
A1210A		A0814B	1		
A1211B		A0822B	1		
A1213A		JA8204A	1		
A1213B		A0704A	1		
A1214B		A0725B	1		
A1215A		A1925A	1		
A1216A		A1908B	1		
A1216B		A0202B	1		
A1216B		A1710B	2		
A1217A		A0811B	1		
A1221A		A0632A	1		
A1222B		A0626B	1		
A1223B		JA8205A	1		
A1224A		A0626A	1		
A1224B		JA8206A	1		
A1225A		A0633B	2		
A1225B		A0715B	1		
A1226A		A1917A	1		
A1226A		A0617A	2		
A1226B		A0611B	1		
A1228B		A0623B	1		
A1229B		A0803A	2		
A1230A		A0623A	1		
A1231A		A0632B	1		
A1232A		A0612B	2		
A1232B		A0710A	1		
A1233A		A0625A	1		

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REV 3

TITLE		WL	DOCUMENT NO.	SHEET NO.	REV
Wire Wrap Wire List				8	
SIGNAL NAME OR NUMBER IDENTIFICATION	ORIGIN	DESTINATION	Z LEVEL	NOTES	
A1233B		A1908A	1		
A1234A		JA8205B	1		
A1301A		A1305A	1		
A1305A		A1301A	1		
A1309A		A1030B	1		
A1310B		A0110A	1		
A1312B		JA8207A	2		
A1312B		A1713A	1		
A1323B		A0110B	1		
A1331A		A1709B	1		
A1331B		A1734A	1		
A1402B		JD9201A	2		
A1402B		A1602B	1		
A1403B		A1510B	1		
A1404B		A1509B	1		
A1410B		A1422B	1		
A1414B		A1421B	1		
A1421B		A1414B	1		
A1422B		A1410B	1		
A1427B		A0121B	1		
A1428B		A1707A	1		
A1430B		A1522B	1		
A1431B		A1512B	2		
A1431B		A0229A	1		
A1433B		A1633B	1		
A1433B		JD9201B	2		
A1502B		A1002B	1		
A1503B		A0233A	1		
A1504B		A0231B	1		
A1509B		A1404B	1		
A1510B		A1403B	1		
A1512B		A1713B	1		
A1512B		A1431B	2		
A1522B		A1430B	1		
A1523B		A1023B	1		
A1524B		A1024B	1		
A1526B		A0131B	1		
A1527B		A0131A	1		
A1533B		A1033B	1		
A1602B		A1402B	1		
A1613B		A1823B	1		
A1614B		A1926B	2		
A1614B		A1711A	1		
A1615B		A1825B	1		
A1633B		A1433B	1		
A1701A		JA8203B	1		
A1701A		JA8210B	2		
A1702B		JD9201A	1		
A1703B		JD9312B	1		


 CDC
 B-SP-RM85-J-3K78
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TITLE		WL	DOCUMENT NO.	SHEET NO. 9	REV.
WIRE NAME OR NUMBER IDENTIFICATION		ORIGIN	DESTI NATION	Z LEVEL	NOTES
A1705A	A0613B	1			
A1707A	A1428B	1			
A1708A	A1709B	2			
A1708B	A0107A	1			
A1708B	JA8210A	2			
A1709A	JA8002B	1			
A1709B	A1331A	1			
A1709B	A1708A	2			
A1710A	A0703B	1			
A1710B	A1216B	2			
A1711A	JA8208A	2			
A1711A	A1614B	1			
A1711B	A0802A	1			
A1712A	A0230A	1			
A1712B	A0828A	2			
A1712B	JA8013A	1			
A1713A	A1312B	1			
A1713B	A1512B	1			
A1714A	A0731B	1			
A1714B	JA8203A	1			
A1715A	JA8005A	2			
A1716A	A1728B	1			
A1716B	A0824A	1			
A1717A	JA8011B	1			
A1717B	JA8012A	1			
A1721A	A0511A	1			
A1721B	A0511B	1			
A1722B	JA8014A	1			
A1723A	A0504B	1			
A1723B	A0504A	1			
A1724A	A0609A	1			
A1724B	A0805A	1			
A1725B	A0707B	2			
A1726B	A0124B	1			
A1727A	A0509B	1			
A1727B	A0509A	1			
A1728A	JA8011A	1			
A1728B	A1716A	1			
A1729A	A0510A	1			
A1729B	A0510B	1			
A1730A	A0505A	1			
A1730B	A0505B	1			
A1731A	A0507A	1			
A1731B	A0507B	1			
A1732B	JD9312A	1			
A1733B	JD9201B	1			
A1734A	JA8208B	2			

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REV B

TITLE Wire Wrap Wire List		WL	DOCUMENT NO.	SHEET NO. 10	REV.
SIGNA. NAME OR NUMBER IDENTIFICATION	ORIGIN	DESTI NATION	Z LEVEL	NOTES	
A1734A		A13318	1		
A1801A		JA8305B	1		
A1802B		JD9203A	1		
A1807B		A07288	1		
A1808B		A0727B	1		
A1809B		A1911A	1		
A1811B		A06J4A	1		
A1812B		A1022B	1		
A1823B		A1613B	1		
A1825B		A1615B	1		
A1827B		A0832A	1		
A1832A		A0605B	1		
A1833A		A1004B	1		
A1833B		JD9203B	1		
A1904A		A0616A	1		
A1904B		A2015B	1		
A1905A		A0610A	1		
A1905B		A0726A	1		
A1907A		A0727A	1		
A1907B		A0704B	1		
A1908A		A1233B	1		
A1908B		A1216A	1		
A1910A		A0722A	1		
A1910B		A0610B	1		
A1911A		A1809B	1		
A1911B		A2014B	1		
A1915B		A0628B	1		
A1916A		A1203B	2		
A1916B		A0730A	1		
A1917A		A1226A	1		
A1921A		A0506B	1		
A1921B		A0506A	1		
A1922A		A2010B	1		
A1923A		A0228B	1		
A1923B		A0229B	1		
A1924A		A2011A	1		
A1924B		A1925B	1		
A1924B		A0825B	2		
A1925A		A1215A	1		
A1925B		A1924B	1		
A1926A		A0607B	1		
A1924B		A1614B	2		
A1926B		A0102A	1		
A1927A		A2010A	1		
A1927B		A0716B	1		
A1928A		A0716A	1		
A1931B		A0832A	1		
A2003B		A0814A	1		

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TITLE Wire Wrap Wire List		WL	DOCUMENT NO.	SHEET NO. 11	REV.
SERIAL NAME OR NUMBER IDENTIFICATION	ORIGIN	DEST. NATION	Z LEVEL	NOTES	
A2004A	A0809A		1		
A2004B	A0810B		1		
A2005A	A0810A		1		
A2005B	A0815B		1		
A2006A	A0809B		1		
A2006B	A0815A		1		
A2009B	A0708A		1		
A2010A	A1927A		1		
A2010B	A1922A		1		
A2011A	A1924A		1		
A2011B	JD93J5B		1		
A2012A	A0707A		1		
A2012B	A0830A		1		
A2013B	A0829B		1		
A2014A	A0830B		1		
A2014B	A1911B		1		
A2015A	JD93J5A		1		
A2015B	A1904B		1		
A2026B	A0712B		1		
A2027B	A0729B		1		
A2028B	A0833A		1		
A2029B	A0713A		1		
A2031B	JD9306B		1		
A2032A	A0831B		2		
A2032B	JD9306A		1		
A2034A	JD9304A		2		
A2034A	JD9304B		1		
JA8001A	A0733B		1		
JA8001B	JD9407B		2		
JA8001B	JD9407A		1		
JA8002B	A1709A		1		
JA8005A	JA83J6B		1		
JA8005A	A1715A		2		
JA8007A	JD93J3A		1		
JA8009B	A0103A		1		
JA8010A	JD9405A		1		
JA8010A	JD9405B		2		
JA8011A	A1728A		1		
JA8011B	A1717A		1		
JA8012A	A1717B		1		
JA8013A	A1712B		1		
JA8014A	A1722B		1		
JA8101A	A0816B		1		
JA8101B	A0801A		1		
JA8102A	A0817B		1		
JA8102B	A0901A		1		
JA8103A	A0816A		1		
JA8103B	A08J1A		2		

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REV 3

TITLE		WL	DOCUMENT NO.	SHEET NO.	REV.
Wire Wrap Wire List				12	
SKINA. NAME OR NUMBER IDENTIFICATION	ORIGIN	DESTI. NATION	Z LEVEL	NOTES	
JAB104A	A1101A		1		
JAB105A	A0823A		1		
JAB105B	A0834A		1		
JAB106A	A0824B		1		
JAB106B	A0834A		2		
JAB201B	JD9401B		1		
JAB201B	JD9401A		2		
JAB202B	JD9302B		1		
JAB203A	A1714B		1		
JAB203B	A1701A		1		
JAB2J4A	A1213A		1		
JAB204B	A1201A		1		
JAB205A	A1223B		1		
JAB205B	A1234A		1		
JAB206A	A1224B		1		
JAB206B	A1201A		2		
JAB207A	A1312B		2		
JAB207A	A0227B		1		
JAB207B	A0201A		1		
JAB208A	A1711A		2		
JAB208B	A1734A		2		
JAB210A	A1708B		2		
JAB210B	A1701A		2		
JAB212B	JD9301A		1		
JAB213B	JD9302A		1		
JAB214B	JD9404A		1		
JAB214B	JD9404B		2		
JAB303A	A0807B		1		
JAB303A	JD9303B		2	VDE ONLY	
JAB303B	A0807A		1		
JAB303B	JD9301B		2	VDE ONLY	
JAB304A	A0724B		1		
JAB304B	JD9308A		1		
JAB305A	A1701A		1		
JAB305B	A1801A		1		
JAB306A	JD9307B		1		
JAB306B	JAB005A		1		
JAB306B	JD9313A		2	VDE ONLY	
JD9201A	A1402B		2		
JD9201A	A1702B		1		
JD9201B	A1733B		1		
JD9201B	A1433B		2		
JD9203A	A1802B		1		
JD9203A	A1002B		2		
JD9203B	A1833B		1		
JD9203B	A1033B		2		
JD9301A	JAB212B		1		
JD9301B	JAB303B		2	VDE ONLY	
JD9302A	JAB213B		1		

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TITLE		WL	DOCUMENT NO.	SHEET NO.	REV.
Wire Wrap Wire List				13	
SIGNAL NAME OR NUMBER IDENTIFICATION	ORIGIN	DESTI NATION	Z LEVEL	NOTES	
JD93J2B	JA82J2B		1		
JD9303A	JA8007A		1		
JD9303B	JA8303A		2	VDE ONLY	
JD9304A	A2034A		2		
JD9304B	A2034A		1		
JD9305A	A2015A		1		
JD9305B	A2011B		1		
JD9306A	A2032B		1		
JD9306B	A2031B		1		
JD9307A	A0833B		1		
JD9307B	JA8306A		1		
JD9308A	JA8304B		1		
JD9309A	A0827A		1		
JD9309B	A0508B		1		
JD9310B	A0514B		1		
JD9311A	A0827B		1		
JD9311B	A0826A		1		
JD9312A	A1732B		1		
JD9312B	A1703B		1		
JD9313A	JA8306B		2	VDE ONLY	
JD9314A	AJ826B		1		
JD9401A	JA8201B		2		
JD9401B	JA8201B		1		
JD9401B	A1021B		2		
JD9404A	JA8214B		1		
JD9404A	A1014B		2		
JD9404B	JA8214B		2		
JD9405A	JA8010A		1		
JD9405B	JA8010A		2		
JD9407A	JA8001B		1		
JD9407B	JA8001B		2		

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REV 3

INTRODUCTION

This section contains a component layout diagram for each card used in the 7B1-E/F.

Each diagram is an exact picture of the component side of the card, showing locations and reference designators for all components. The reference designators shown here correspond to those shown in Section 1 -- Logic Diagrams.

This section is arranged according to the four-character code that identifies the logic card. The examples below explain the meaning of that code.

Example:

ALRV

The first character A stands for the mod level or revision of the card. This character changes whenever a functional change is made to the card.

Example:

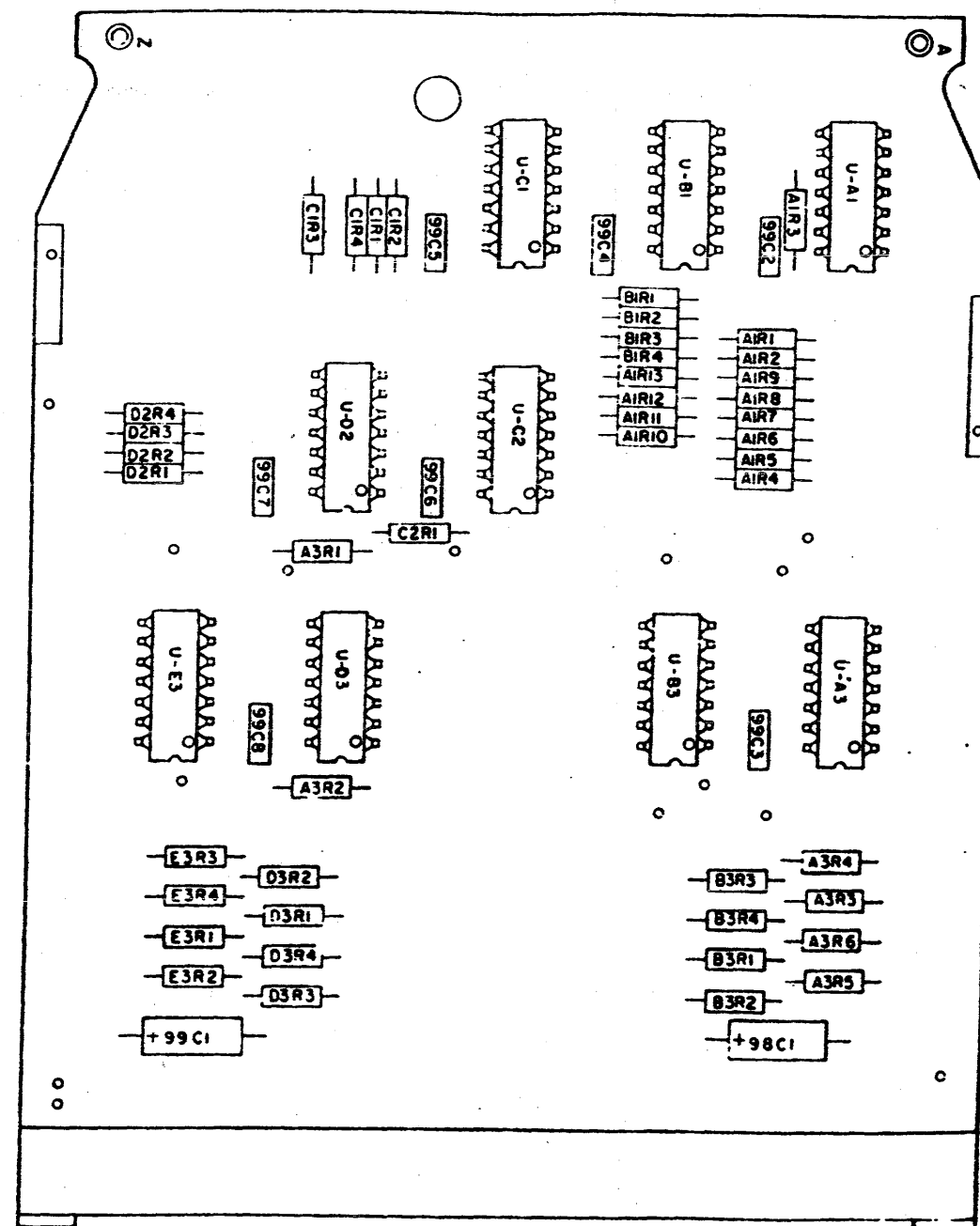
ALRV

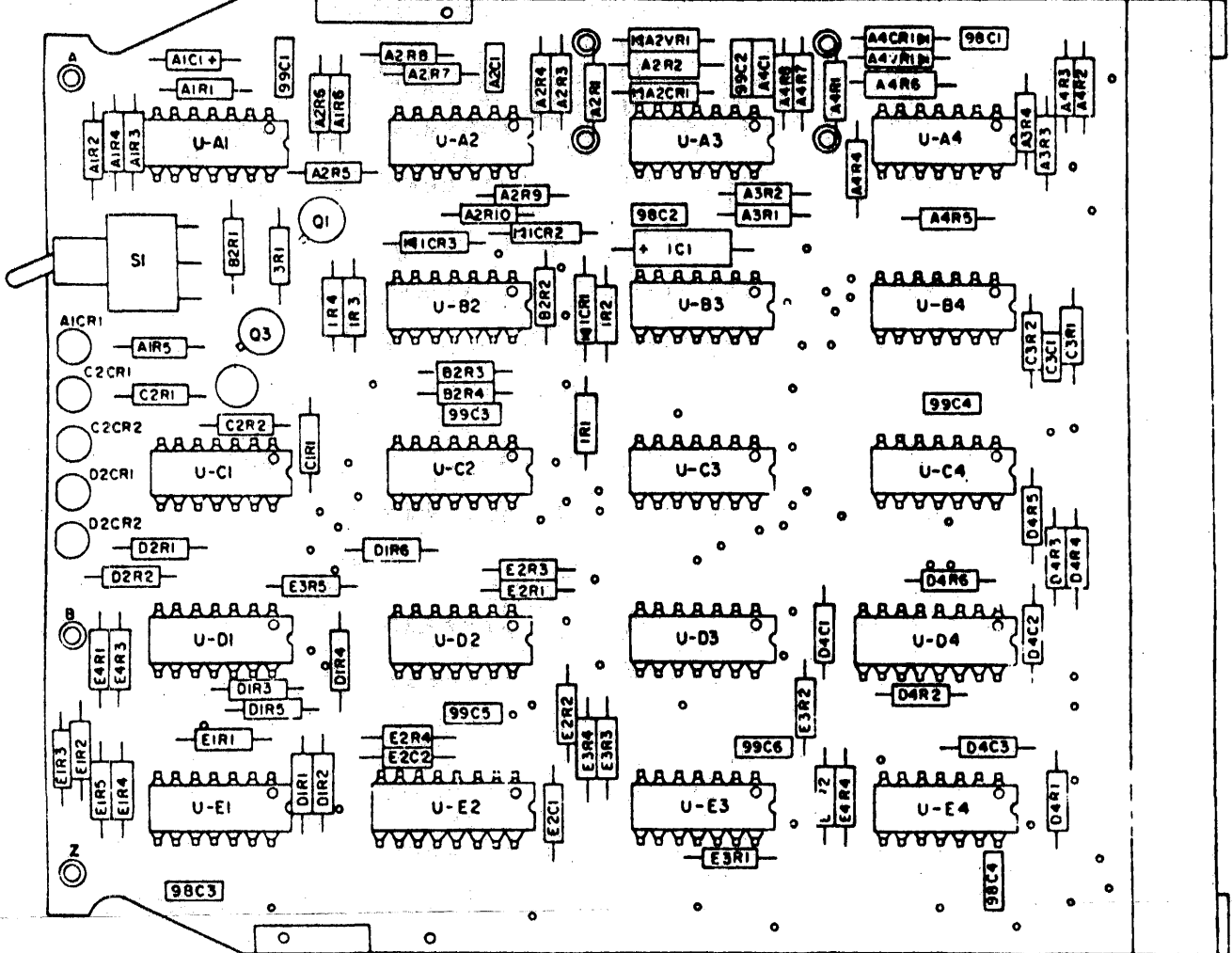
The last 3 characters LRV stand for the basic card type and never change.

The mod level may be either a letter or a number; the basic card type will always be letters.

Card diagrams appear in alphanumeric order, first according to the basic card type and then according to mod level. For example, the card types AABC, ACBC, 4CBC, ABBC, 5CBC, BCBC, AD BC, and 3DBC would appear in this order:

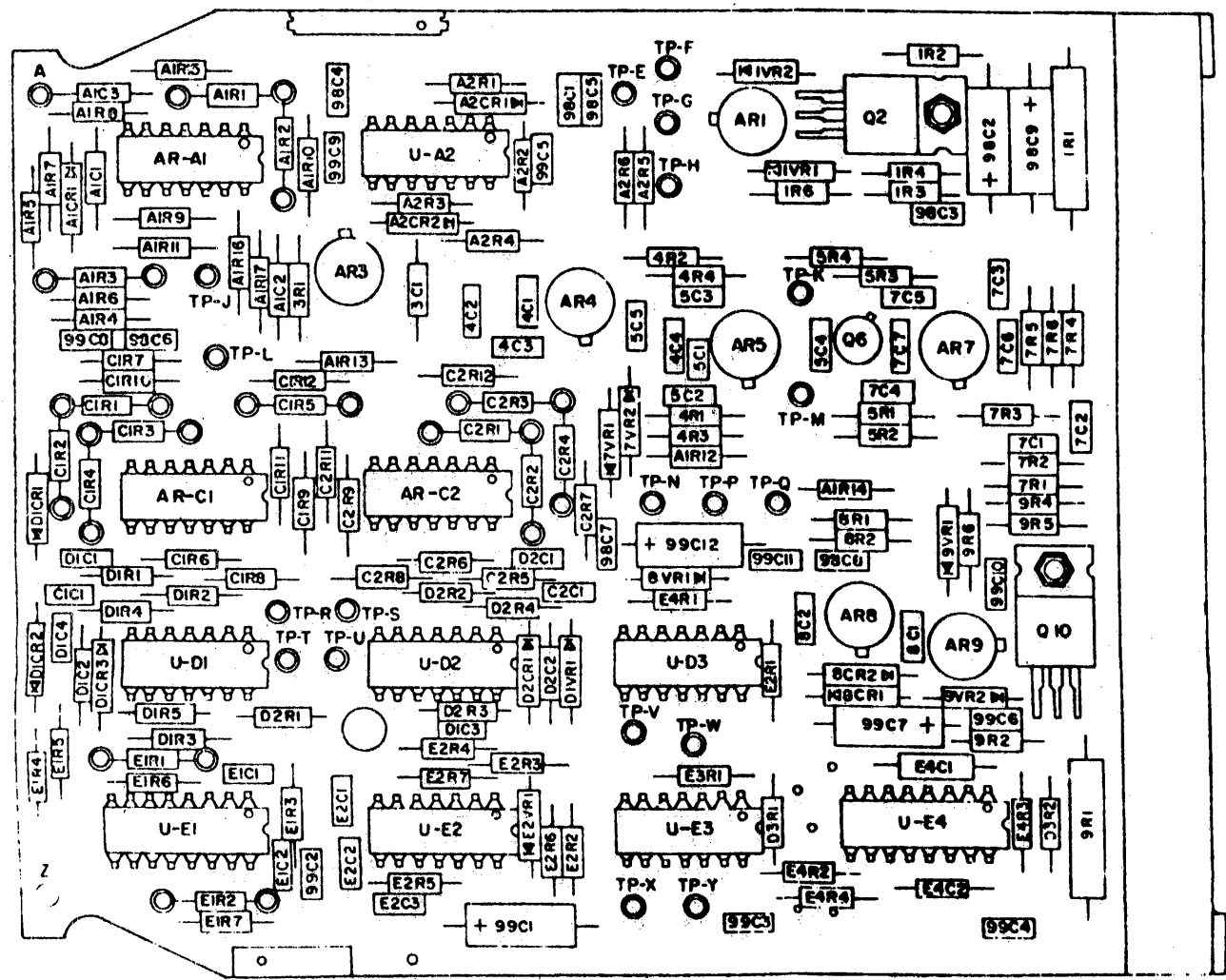
- AABC
- ABBC
- 4CBC
- BCBC
- 5CBC
- ACBC
- 4DBC
- ADBC





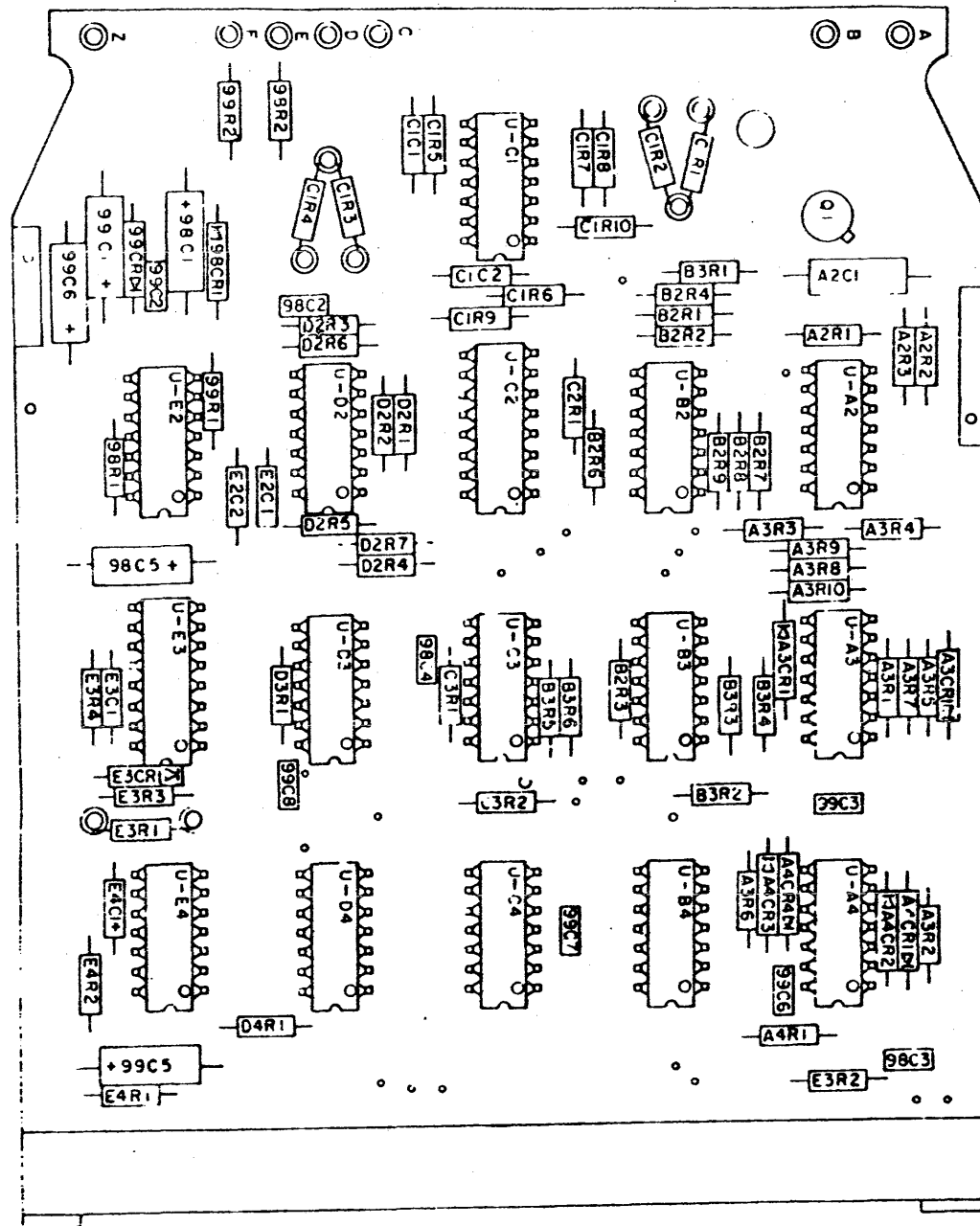
9W152
EKFV

83323800 A
3-3
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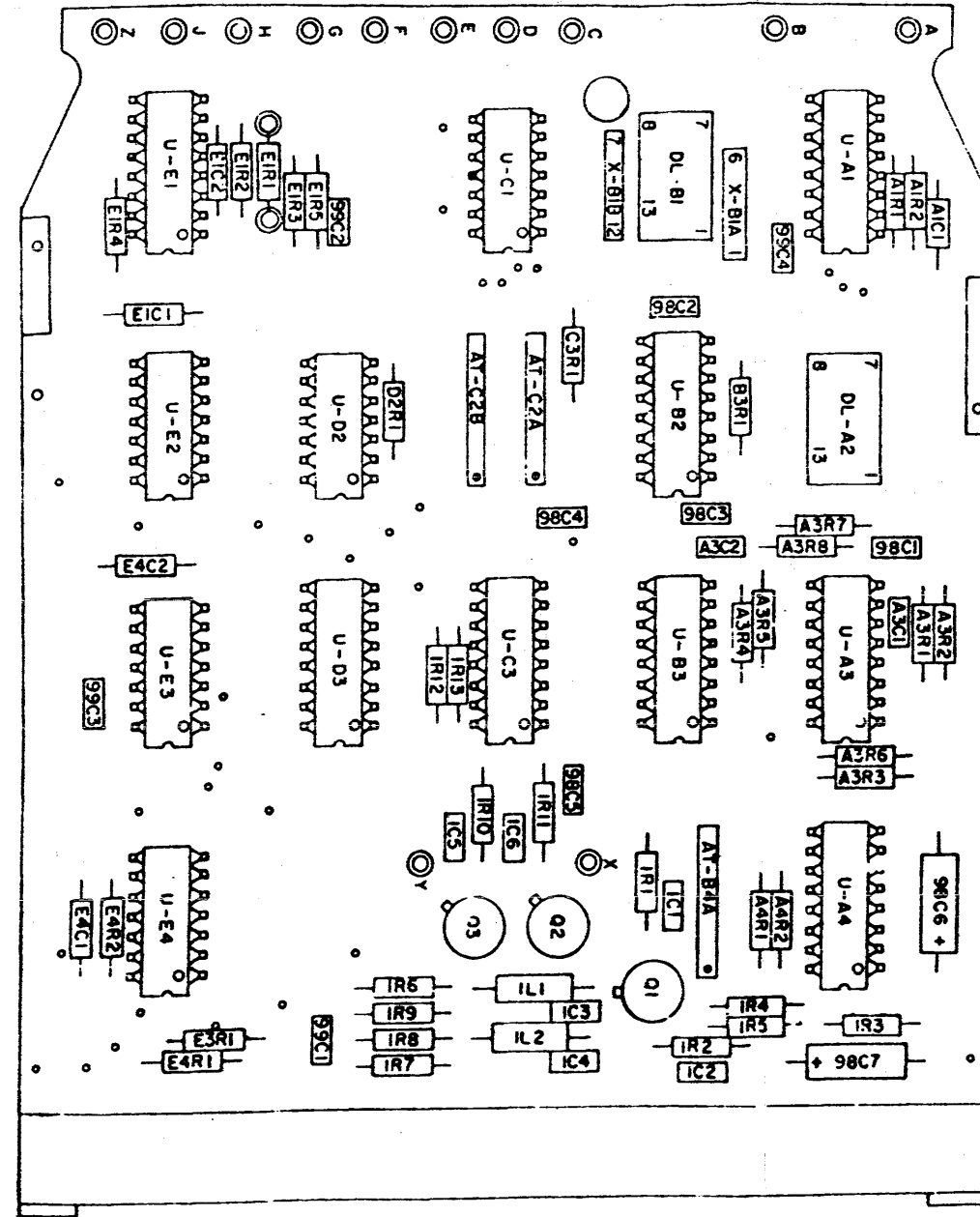
9W15
HFRV

83323800 A
3-2
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REV 5



AKGV

9W153



HLRV

9W154

93323800 A

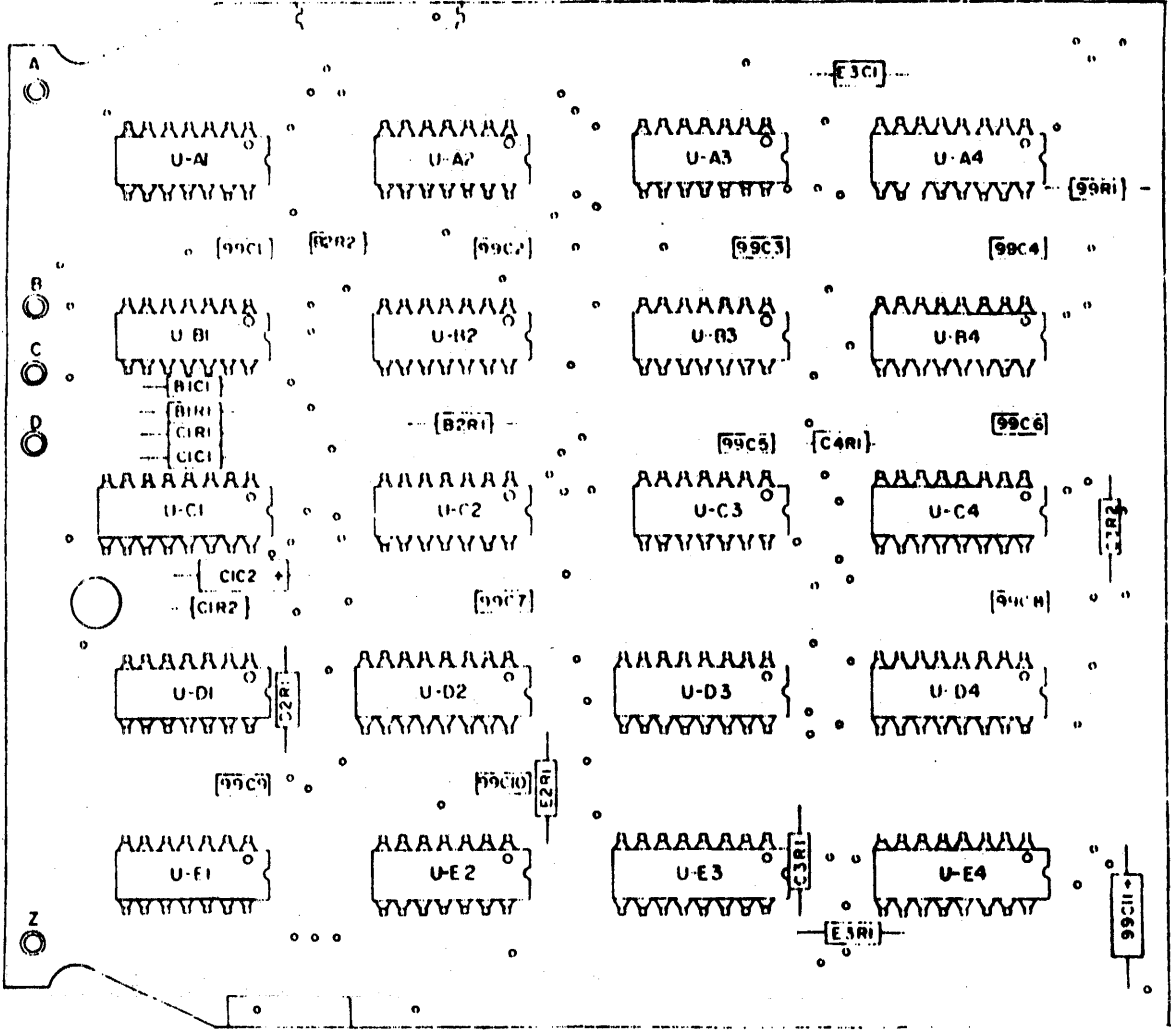
83323800 A

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REV 3



9W56

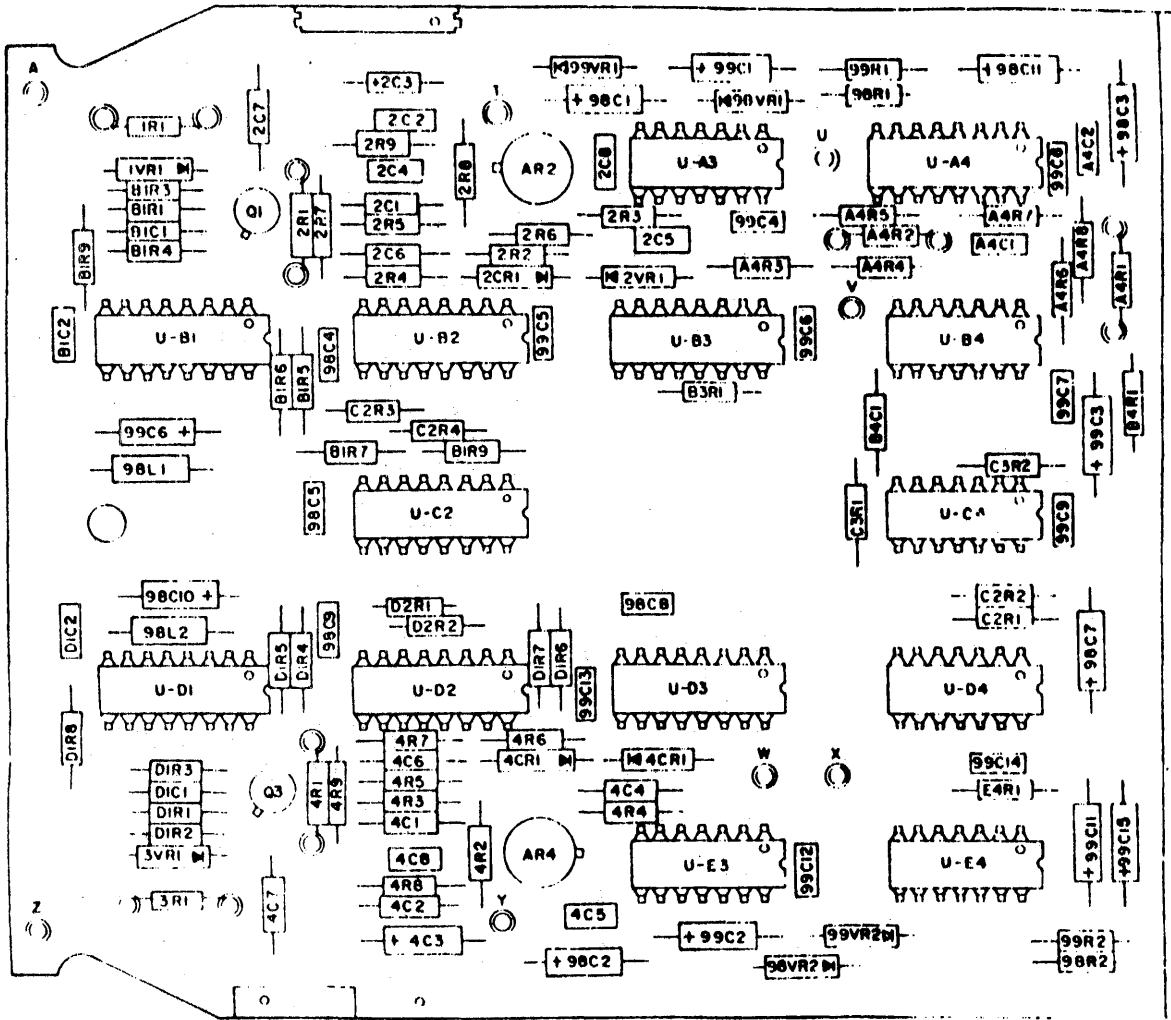
E-V

3-7

000 000000 000000
 000 000000 000000
 000 000000 000000
 000 000000 000000
 000 000000 000000

REV B

83323800 A



9W55

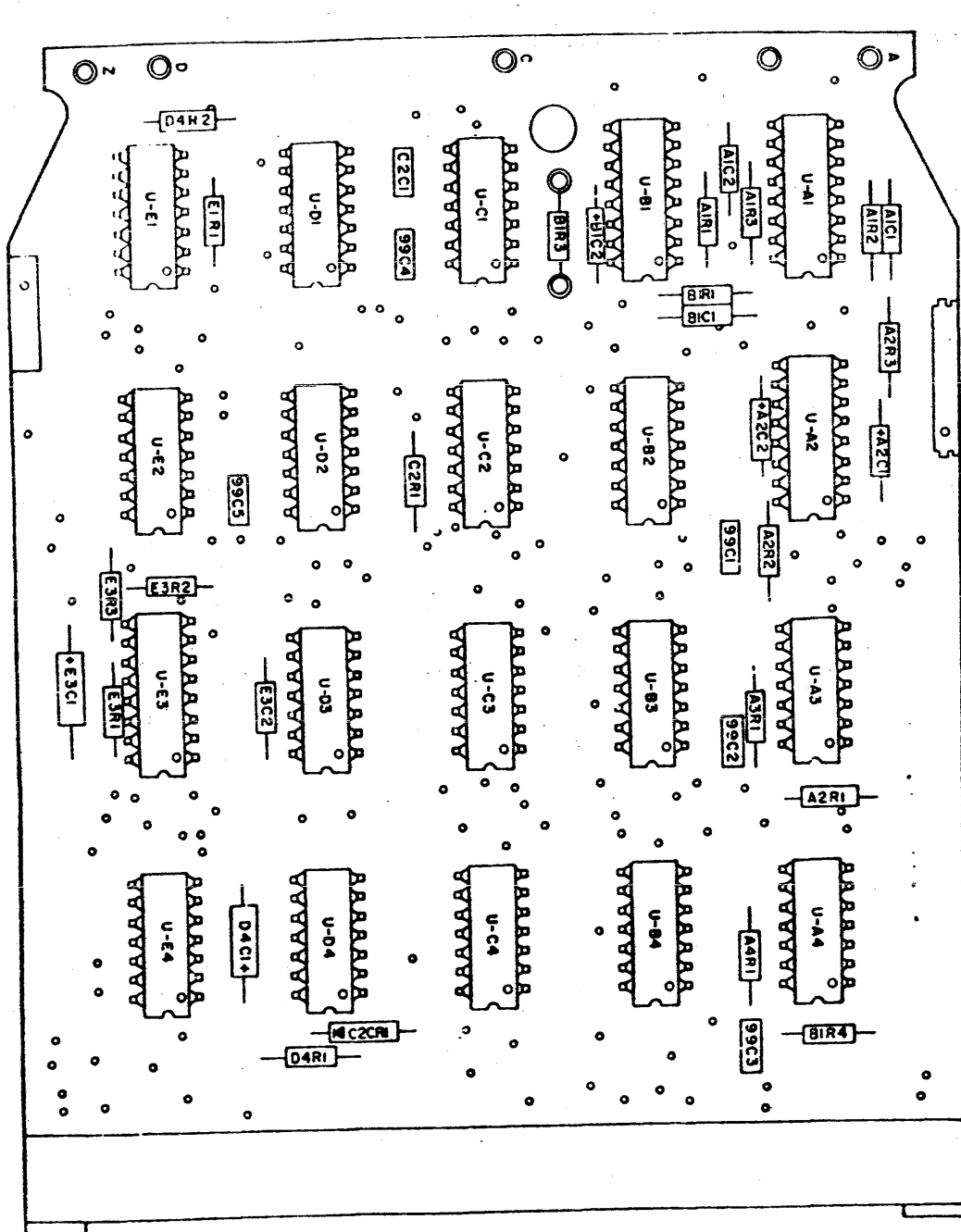
C-SV

3-6

83323800 A

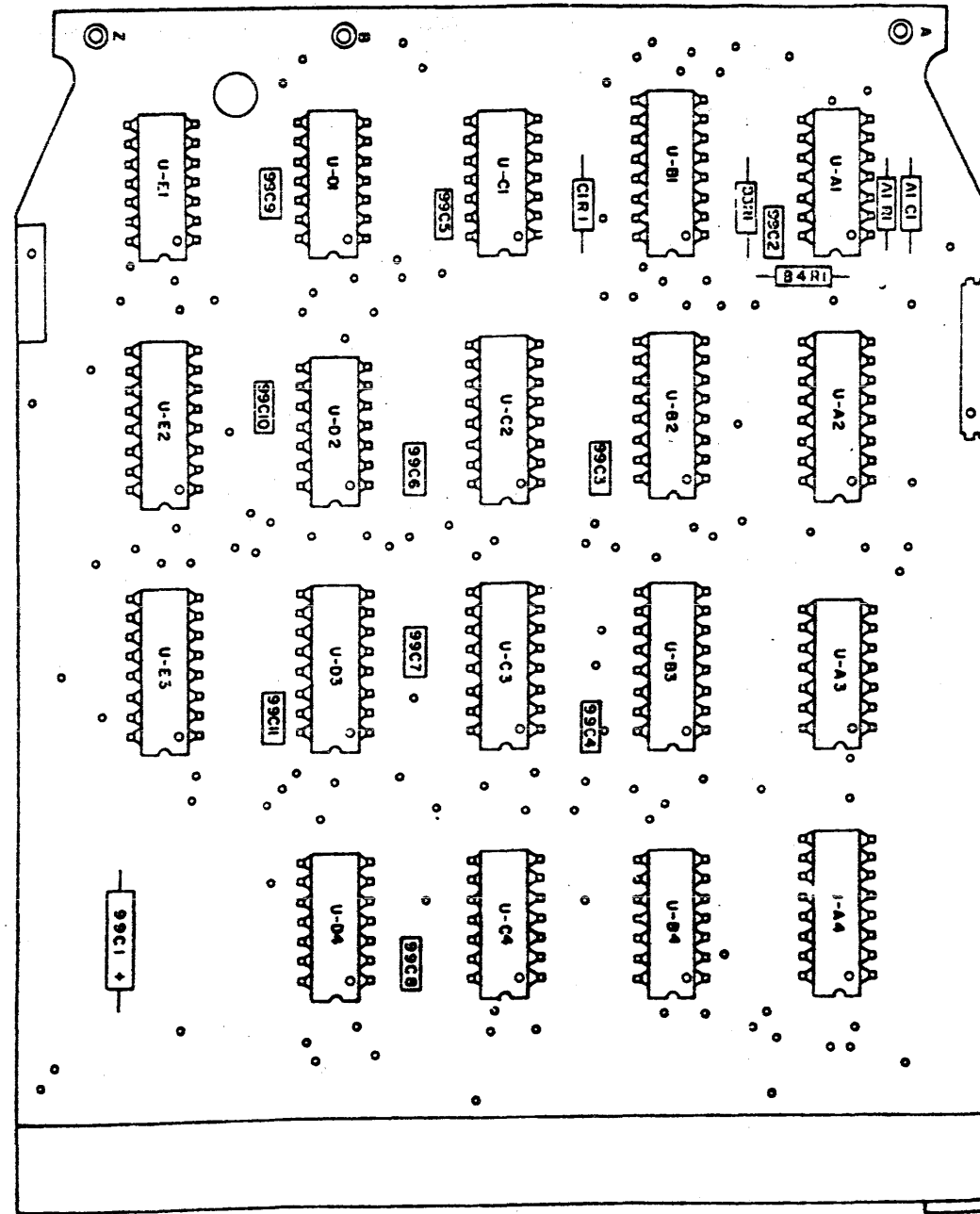
000 000000 000000
 000 000000 000000
 000 000000 000000
 000 000000 000000
 000 000000 000000

REV B



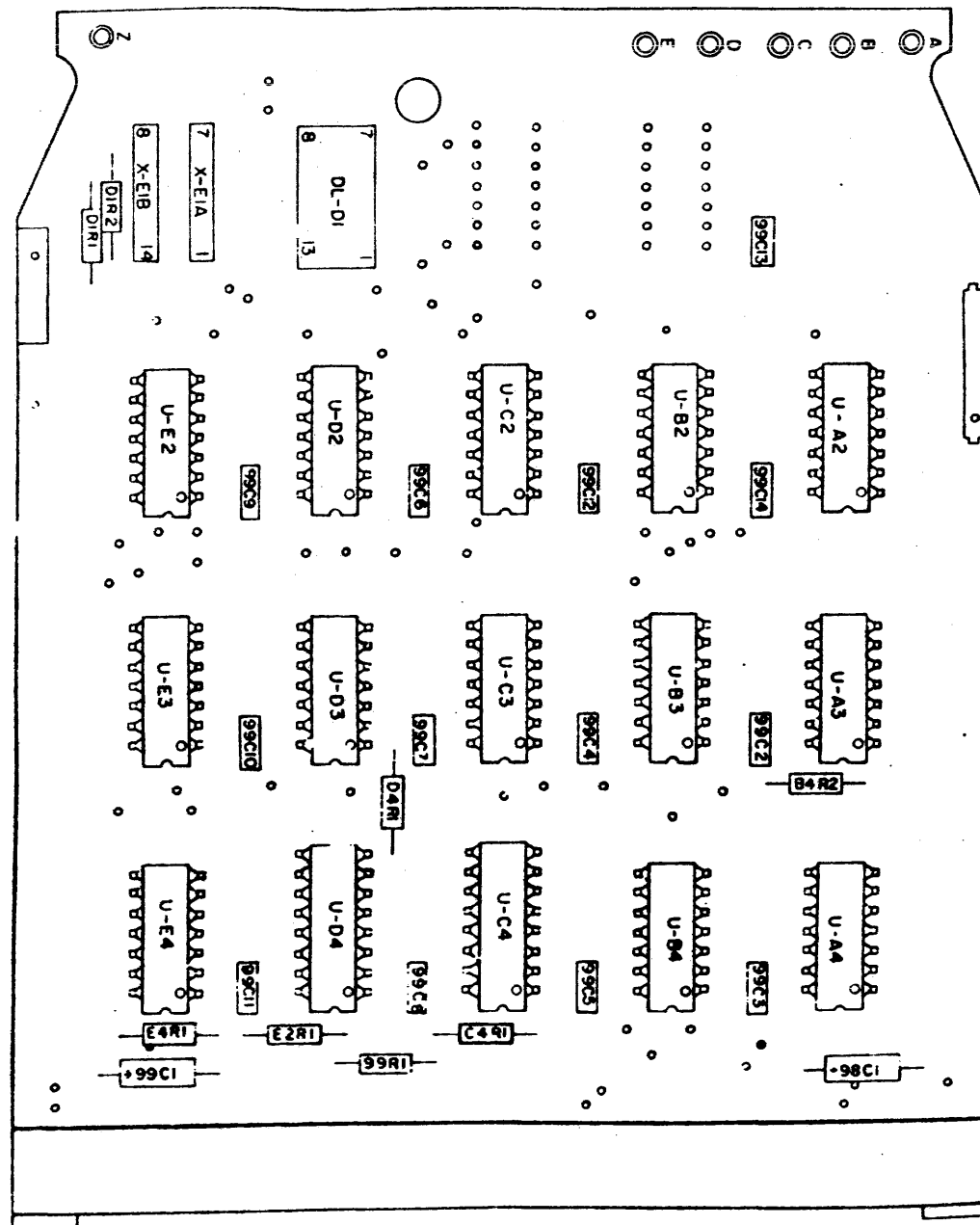
RLWV

9W157



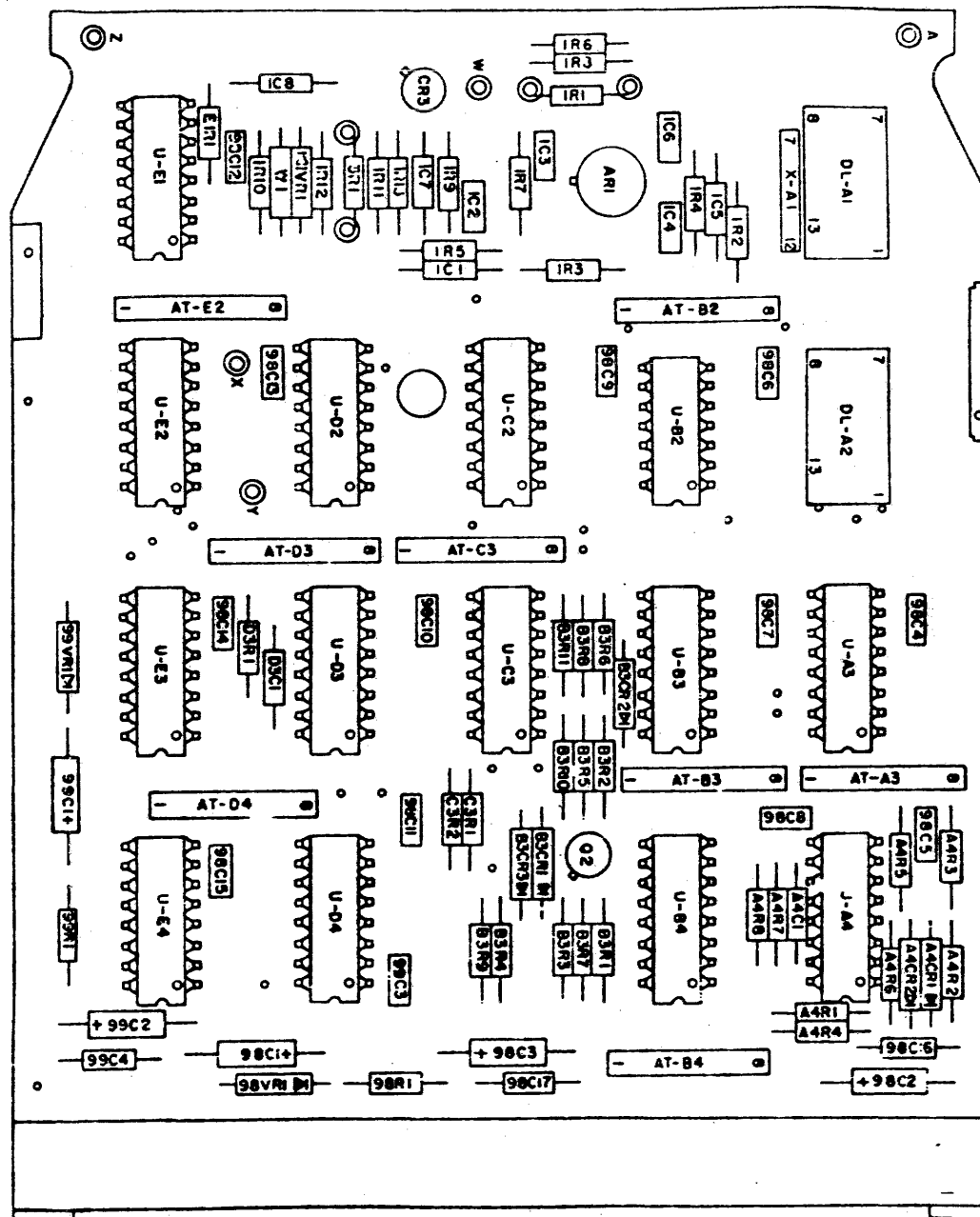
FLWV

9W158



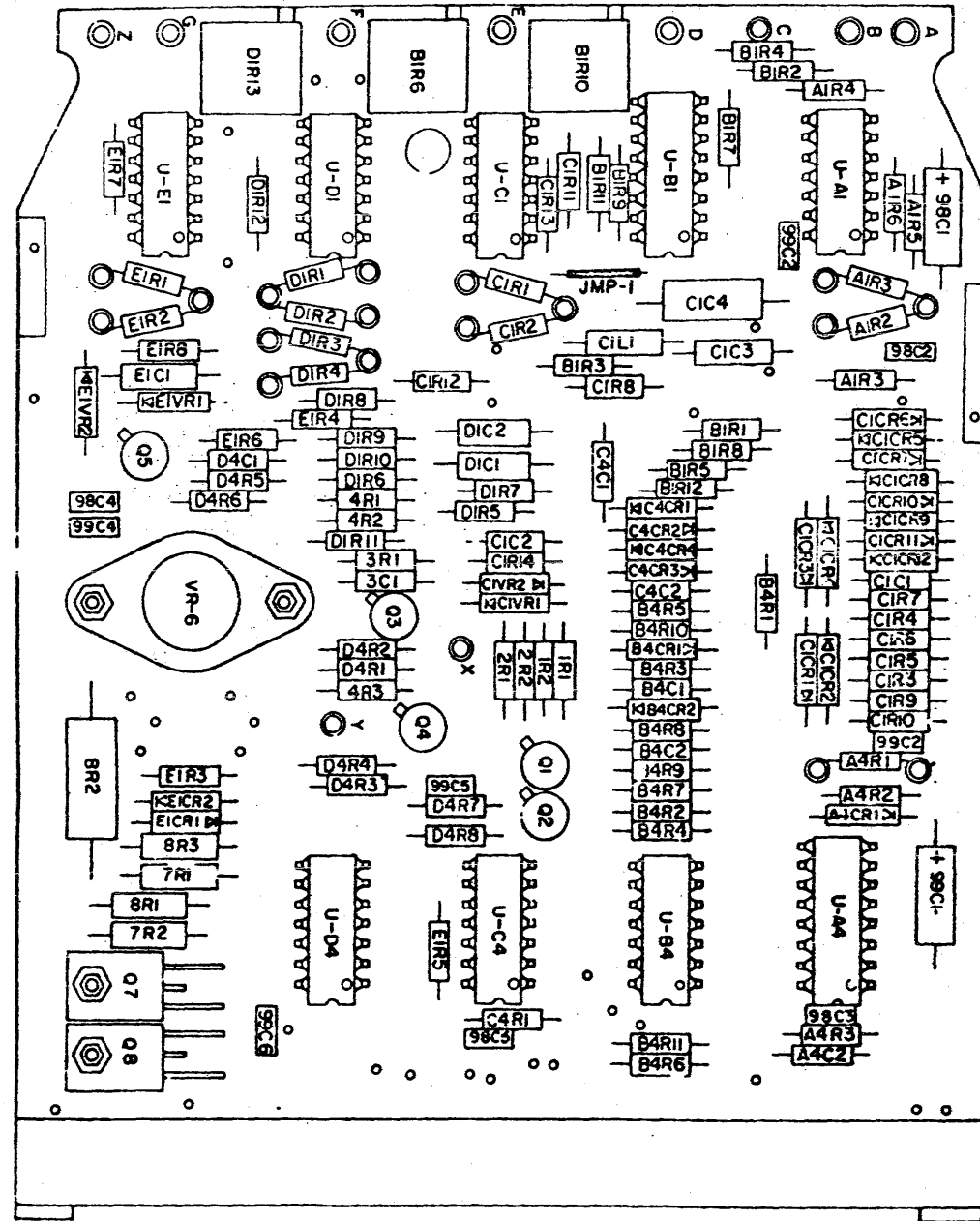
ELXV

9W159



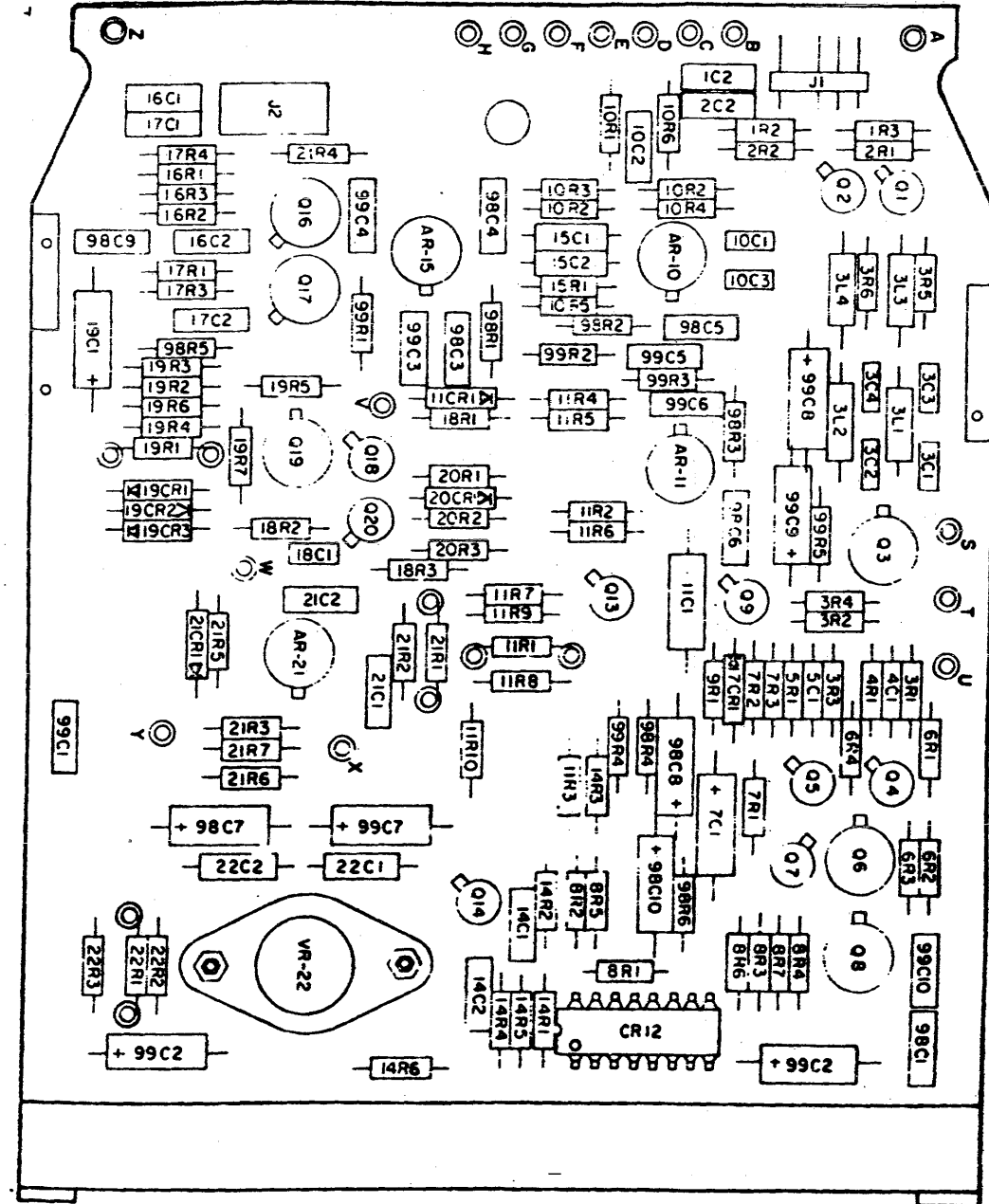
BLZV

9W160



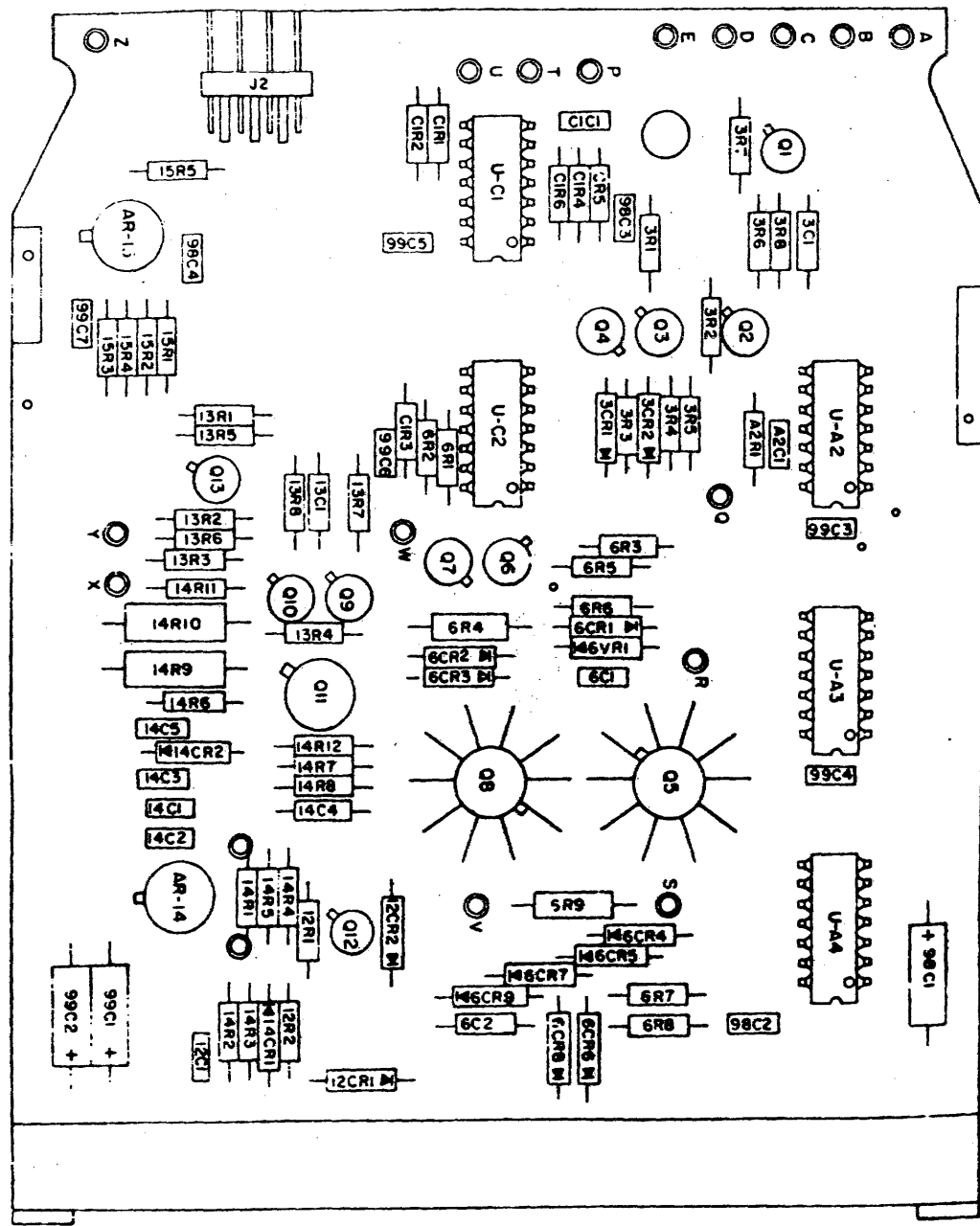
DMSV

9W161



4PHV

9W162



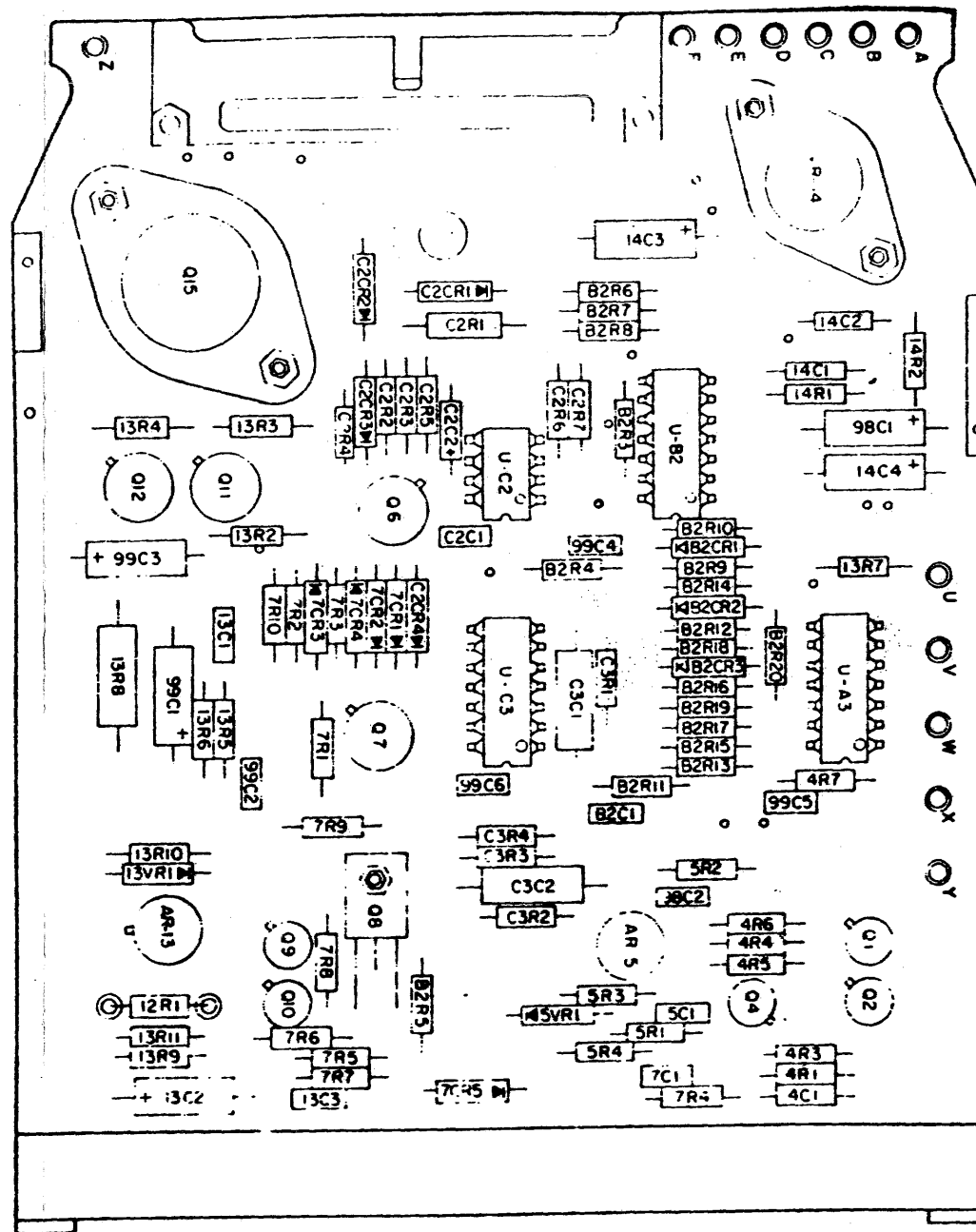
5PJV

9A-63

3-14

83323800 A
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REV B



4PKV

9W164

3-15

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REV B

