

# ILLUSTRATED PARTS BREAKDOWN

# VT05 ALPHANUMERIC DISPLAY TERMINAL

## HOW TO USE THE IPB

### GENERAL

This IPB is compiled following the organization and nomenclature of the engineering drawing structure.

### MAJOR ASSEMBLY LOCATOR

The Major Assembly Locator (first illustration) is an index that provides a description and a figure reference for all illustrations used in this manual.

### INDENTED PARTS LIST

This manual identifies each assembly being broken down (figure reference callout), and all parts of that assembly. Further breakdown of an assembly is shown by an asterisk (\*) preceding the item callouts in the Description Column. The number of asterisks preceding an item is used to denote the subordination of that item with respect to the Major Assembly. A single asterisk preceding an item description indicates that the item is part of the major assembly being illustrated. Items that are subordinate to single asterisks items, are denoted by two asterisks (\*\*) and immediately follow the related single asterisk item. Additional asterisks are used, as required, to denote further subordination. This system of part identification, provides a means for the user to identify the next higher assembly item and make alternate selections for parts when the required replacement part or assembly is not immediately available.

### COLUMN CALLOUT DESCRIPTION

**Figure & Item** — Indicates the figure number and item number of each part.

**Description** — Lists the name of the part and pertinent specifications (when required). Asterisks preceding the description denote the subordination of the part to the next higher assembly.

**DEC Part No.** — Lists the DEC part ordering number. A blank in this column indicates a DEC part number was not assigned at the time of publication.

**ECO Cut-In** — The notation at the top of this column indicates the ECO level of the system (option), at which the IPB was initially prepared. Subsequent ECO level designations, that modify existing parts or add new parts to the device, are inserted in the ECO Cut-In column next to the part that is added or modified. A bracket ([]) preceding the item description is used to indicate the parts affected by ECO's.

**Vendor Code/Part No.** — Indicates vendor parts that are not stocked by DEC. Refer to the Field Service Spares Catalog (vendor part number to DEC part number) for the vendor code cross-reference.

**Used On Code** — Letters in this column correspond to the variation codes assigned in Figure 1. Parts with an Alpha notation(s) are used only in those option variations. A blank indicates that the part is used on all option variations.

**Ref Fig No.** — A cross reference between illustrations. For each Major Assembly, the number in this column denotes the figure of the next higher assembly. For all subassemblies, the number in this column denotes the figure showing additional detailed breakdown.

### SYMBOL USAGE

**Hardware Designators** — Alpha designators for screws (S), washers (W), nuts (N), and retaining rings (R) are inserted after the item number callouts on the illustration when stacked item numbers are used.

**Attaching Hardware** — The @ symbol is inserted before any part that is used as attaching hardware. Attaching hardware is denoted as those parts that are not an integral part of the referenced assembly.

**(NFR) Not Field Repairable** — The (NFR) symbol is inserted after any assembly that is not to be field dismantled.

**Other Symbols** — Any other symbols that are required for kits, accessories, etc., will be explained and appear as part of the item description.

## REVISION HISTORY

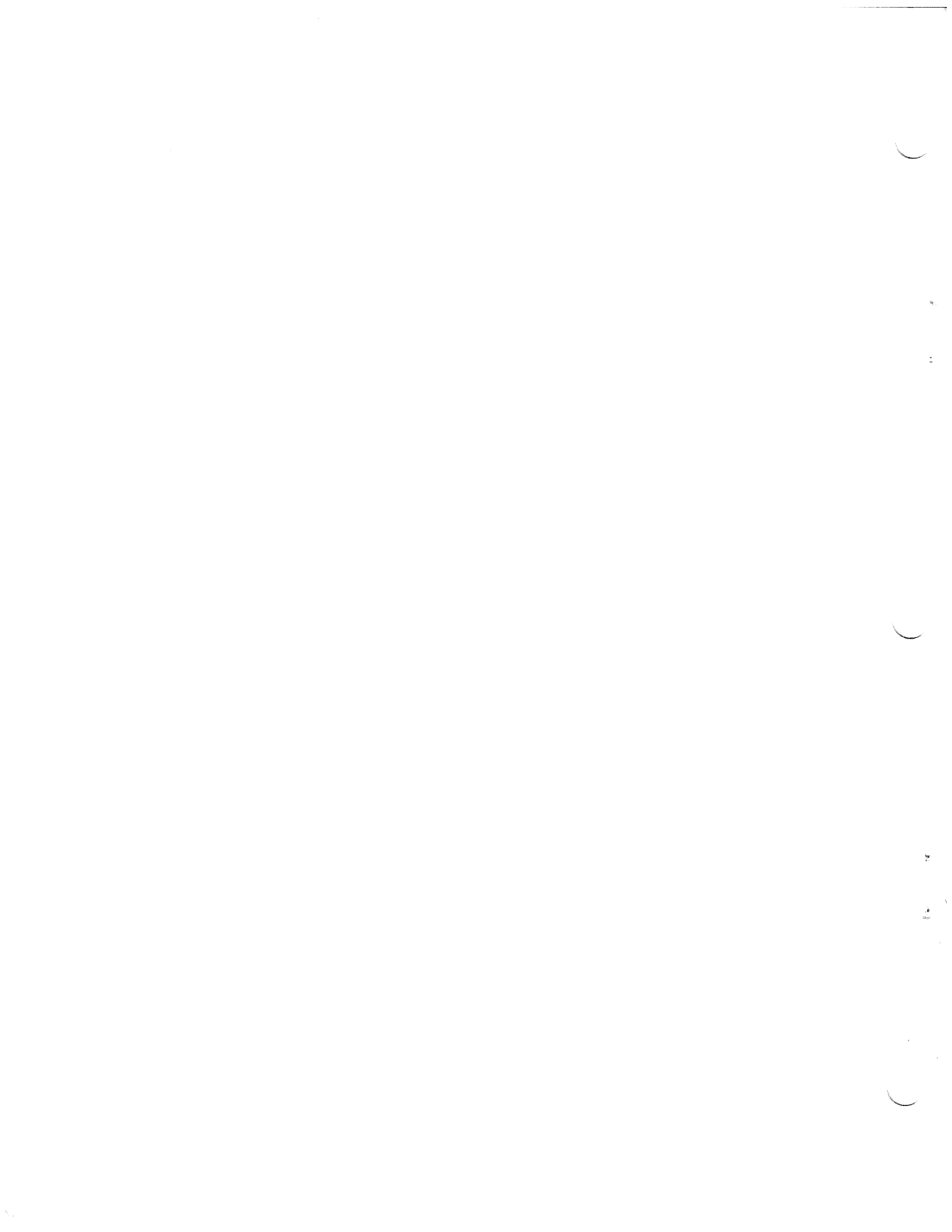
PRINTING	ECO LEVEL	DATE	PAGES AFFECTED
1st Printing	VT05 00015-00066	5-14-73	N/A
1st Printing	54-09945-00003-00003		N/A

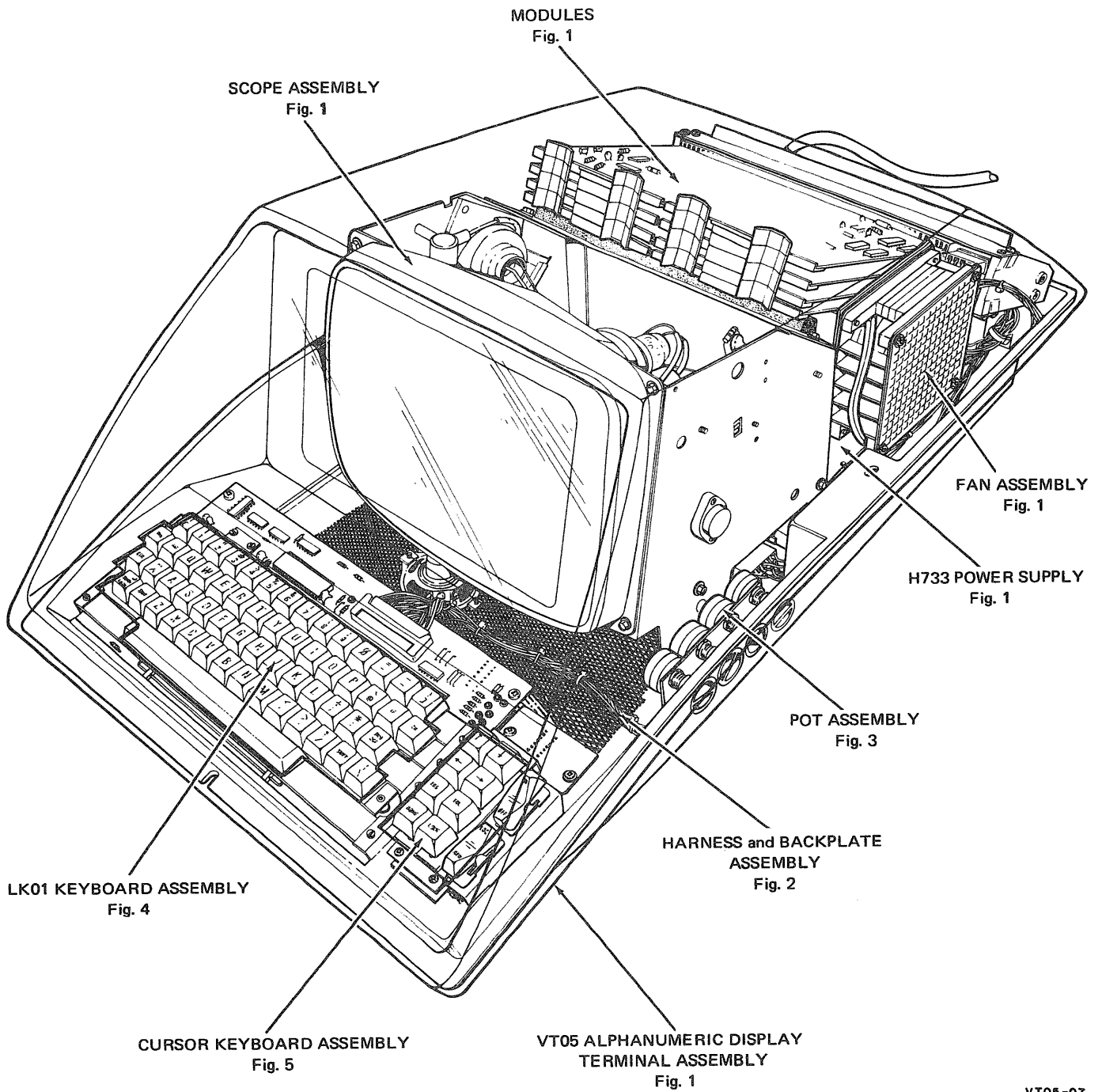
Copyright © 1973, by Digital Equipment Corporation

DEC reserves the right, without notice, to make substitutions and modifications in the specifications of products documented in this manual and further reserves the right to withdraw any of these products from the market without notice.

DEC is not responsible for errors which may appear in the technical description (including illustrations and photographs) of the products covered by this manual.

None of the descriptions contained in this manual imply the granting of any license whatsoever to make, use or sell equipment constructed in accordance therewith.





VT05-07

*Major Assembly Locator, VT05 Alphanumeric Display Terminal*



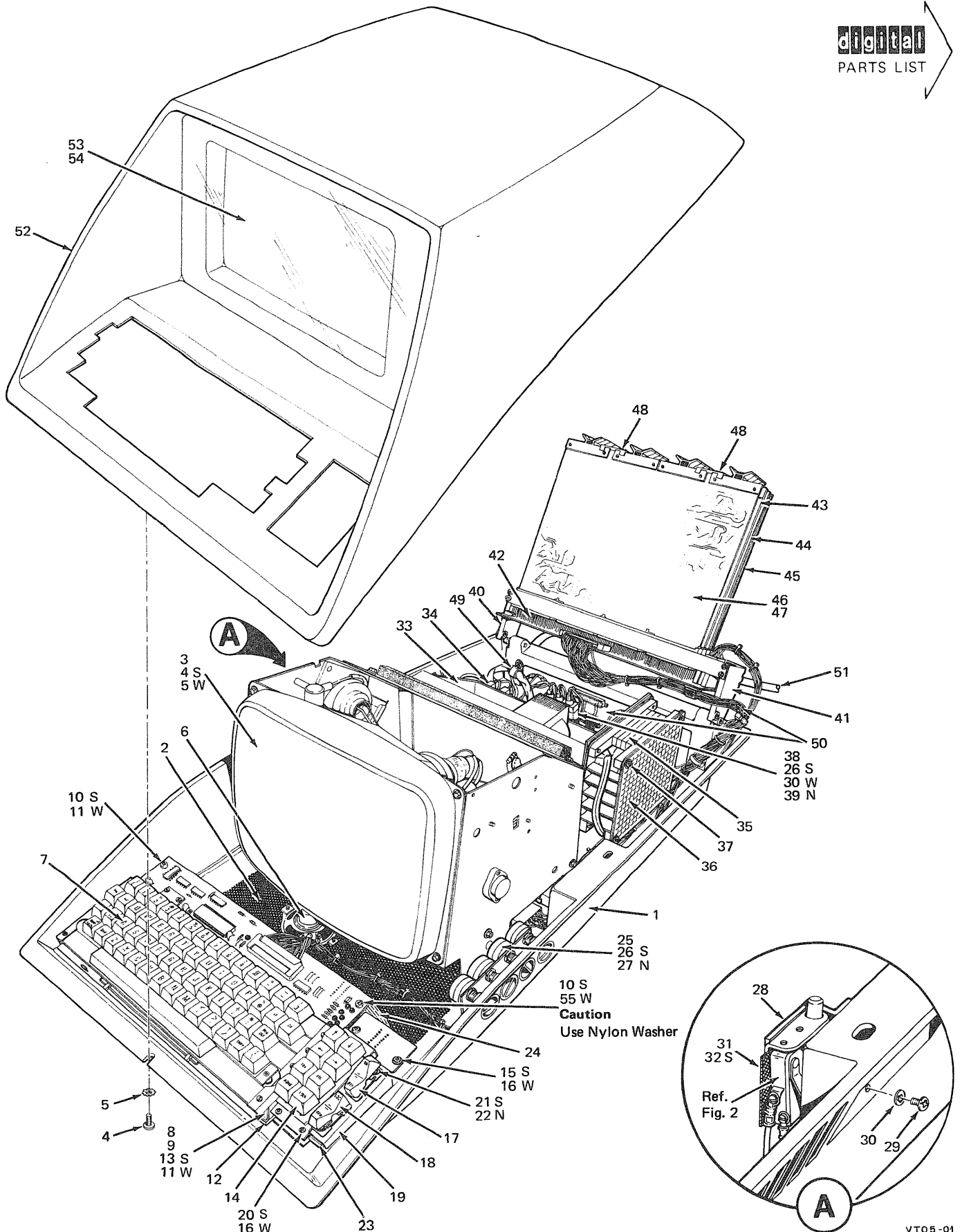


Figure 1. VT05 Alphanumeric Display Terminal

FIG & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN VT05 00015	USED ON CODE	VENDOR		REF FIG NO.
					CODE	PART NO.	
1-	VT05 ALPHANUMERIC DISPLAY TERMINAL ASSEMBLY	VT05-00					
1	*Base, Plastic	12-10913-00					
2	*Screen, Protective	74-08891-00					
3	*SCOPE ASSEMBLY	30-10326-00					
4	*Screw, Phi Pan Hd No. 10-32 x .62 Lg	90-06074-01					
5	*Washer, Lock No. 10 Int. Tooth	90-06636-00					
6	*Speaker, 16 Ohm, 1/4W	12-10299-00					
7	*LK01 KEYBOARD ASSEMBLY (128 Characters)	54-09945-00					4
8	*Bracket, Large Keyboard (R.H.)	74-08638-01					
9	*Bracket, Large Keyboard (L.H.)	74-08638-02					
10	*Screw, Phi Pan Hd No. 8-32 x .50 Lg	90-06039-01					
11	*Washer, Lock No. 8 Int Tooth	90-06634-01					
12	*Plate, Shim (Large Keyboard)(added)	74-10760-00	00063				
13	*Screw, Phi Pan Hd No. 8-32 x .62 Lg	90-06040-01					
14	*CURSOR BOARD ASSEMBLY (8 Keys)	54-10224-00					5
15	*Screw, Phi Pan Hd No. 4-40 x .38 Lg	90-06011-01					
16	*Washer, Lock No. 4 Int Tooth	90-06632-00					
17	*Button, Rocker Switch (ON-OFF)	12-10348-00					
18	*Button, Rocker Switch (LOC-REM)	12-10349-00					
19	*Bracket, Small Keyboard	74-08852-00					
20	*Screw, Phi Pan Hd No. 4-40 x .25 Lg	90-08301-01					
21	*Screw, Phi Pan Hd No. 4-40 x .31 Lg	90-06010-01					
22	*Nut, Kep No. 4-40 Hex	90-06557-00					
23	*Plate, Shim, (Small Keyboard)(added)	74-10759-00	00063				
24	*Cable, Keyboard Interconnecting (added)	70-08612-00	00038				
25	*POT ASSEMBLY	70-07232-00					3
26	*Screw, Phi Pan Hd No. 6-32 x .50 Lg	90-06024-01					
27	*Nut, Kep No. 6-32 Hex	90-06560-00					
28	*Bracket, Mtg Switch	74-08894-00					
29	*Screw, Phi Pan Hd No. 6-32 x .38 Lg	90-06022-01					
30	*Washer, Lock No. 6 Int Tooth	90-06633-00					
31	*Insulator	74-09285-00	00038				
32	*Screw, Nylon No. 6-32 x 1/4	90-09041-02	00038				
33	*H733 POWER SUPPLY ASSEMBLY	H733-00					
34	*POWER SUPPLY JUMPER ASSEMBLY	70-08425-01					
35	*Fan (Obsolete)	12-0533-02					
	*Fan	12-09942-01	00048				
36	*Screen, Fan	74-04881-00					
37	*Screw, Fill Hd No. 8-32 x .38 Lg	90-06121-00					
38	*Capacitor 2 x .1 MFD 1000 VDC	10-00034-00					
39	*Nut, Speed Tinn	90-06584-00					
40	*Retainer, Connector Block	74-08580-01					
41	*Retainer, Connector Block	74-08580-02					
42	*BUS BOARD (VT05)	E020-00					
43	*CURSOR CONTROL MODULE	M7000-00					
44	*CHARACTER GENERATOR and TIMING MODULE	M7001-00					
45	*MEMORY and MEMORY TIMING MODULE	M7002-00					
46	*INTERFACE MODULE (VT05A ONLY)	M7003-00					
47	*INTERFACE MODULE (VT05B ONLY)	M7004-00					
48	*Holder, Module	12-09856-01					
49	*Clamp, Cable Nylon 3/8	90-07083-00					
50	*HARNESS and BACK PLATE ASSEMBLY	70-07231-00					2
51	*Cord, Power	70-08502-09					
52	*Cover, Rework	74-08900-00					
53	*Shield, Scope	74-08585-00					
54	*Mask, Scope	12-10479-00					
55	*Washer, Nylon No. 8	90-06708-00					
	ACCESSORY LIST						
	†Washer, Nylon (Feet)	12-10581-00					
	†Screw, Nylon (Feet)	12-10852-00					
	†Interface Cable	70-08519-00	00031				

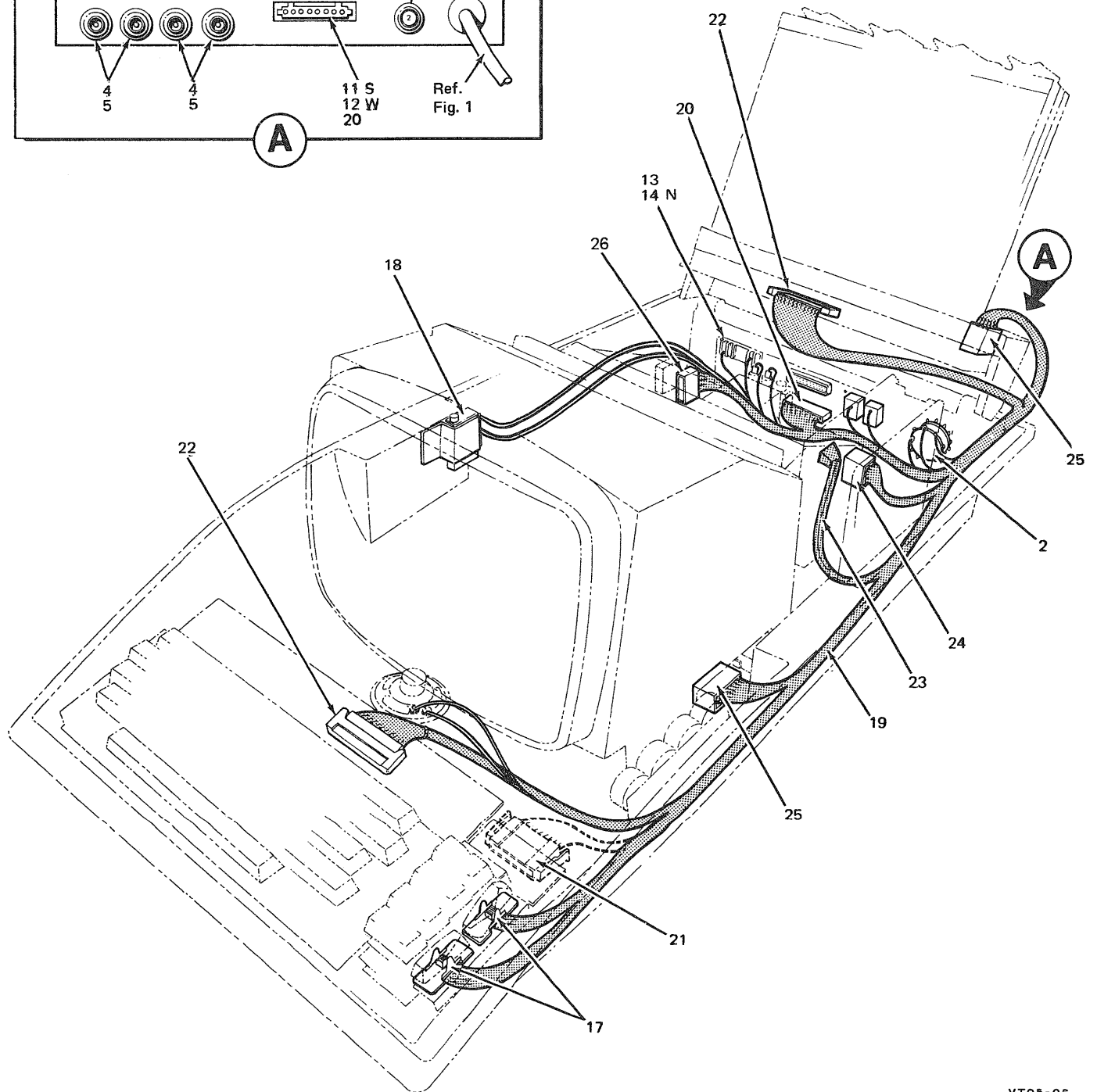
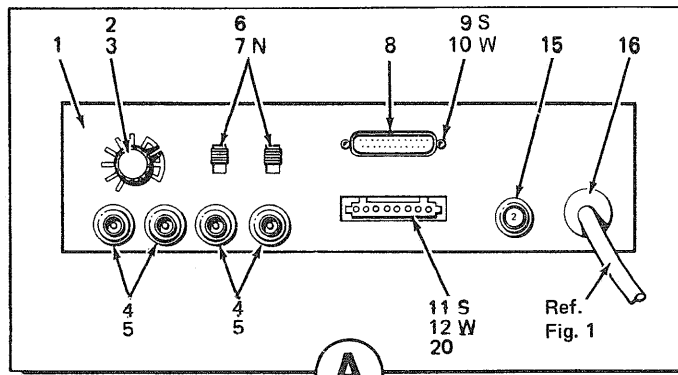
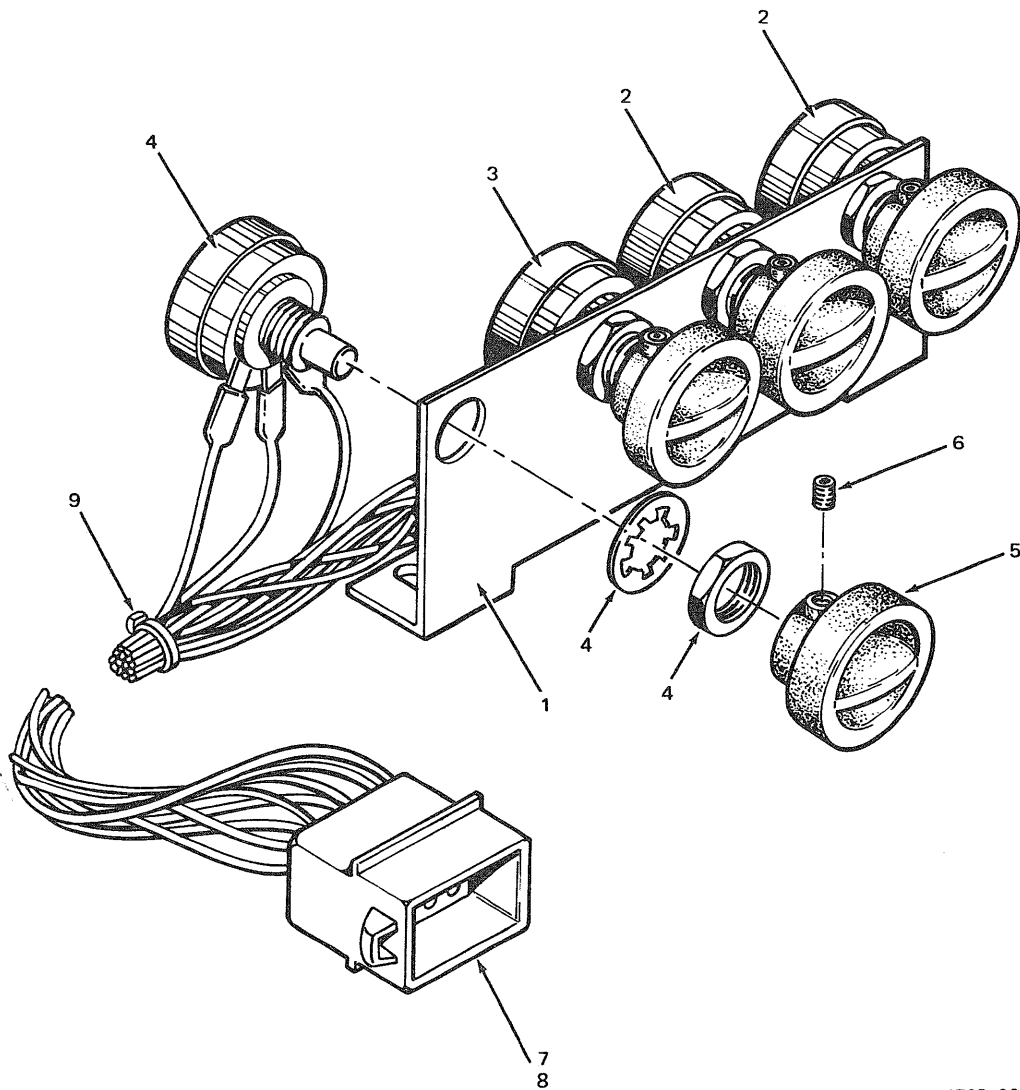


Figure 2. Harness and Backplate Assembly

VT05-06

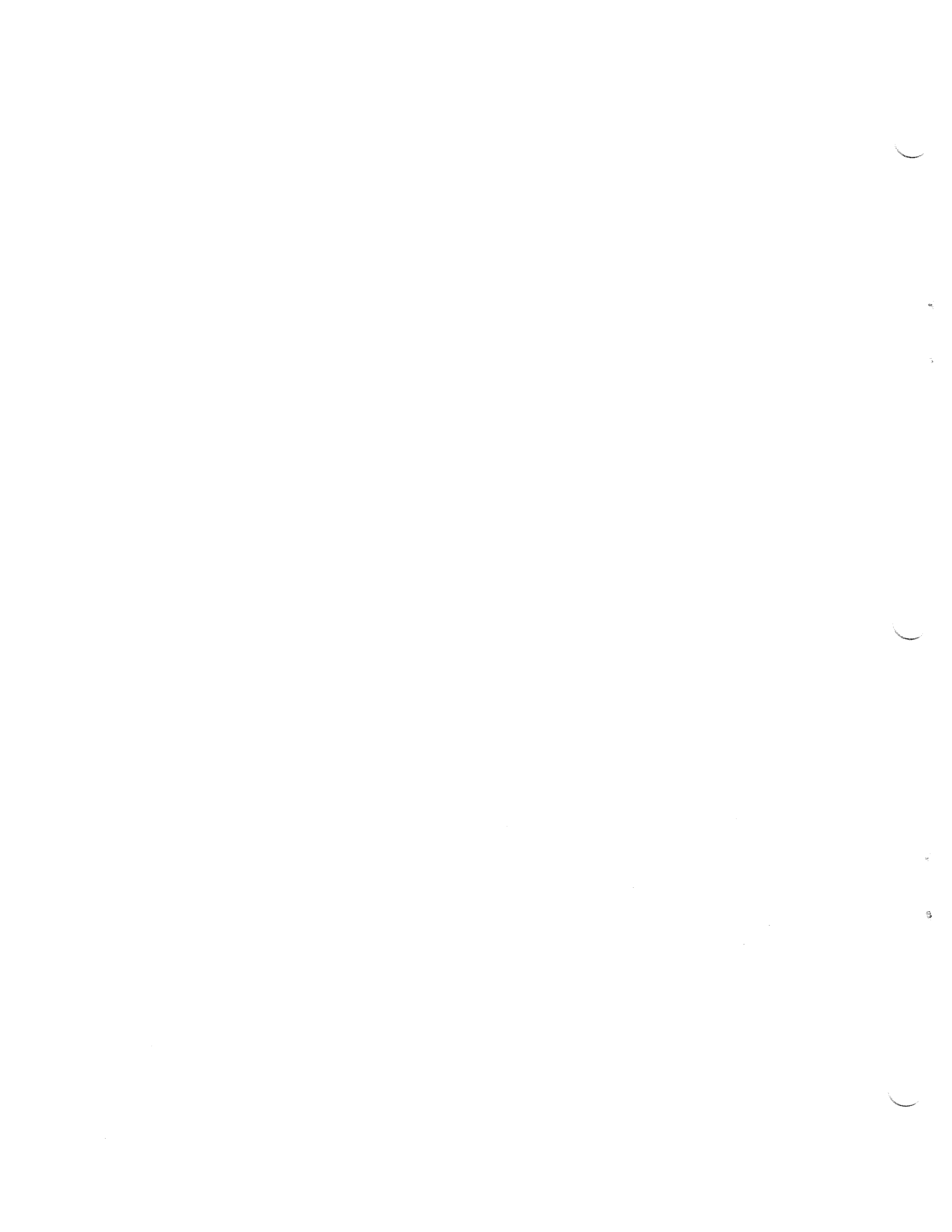
FIG & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN	USED ON CODE	VENDOR		REF FIG NO.
			VT05 00015		CODE	PART NO.	
2--	HARNESS and BACK PLATE ASSEMBLY	70-07231-00					1
1	*Back Plate	74-08565-00					
2	*Switch, Rotary (S1)(obsolete)	12-05792-00					
	*Switch, Rotary (S1)	12-10490-00	00018				
3	*Knob	12-10114-00					
4	*Connector, BNC (P1, P2, P3, P4)	12-01444-00					
5	*Ground, Terminal BNC	90-07612-00					
6	*Switch, Slide (S2, S3)	12-04709-00					
7	*Nut, Kep No. 4-40	90-06557-00					
8	*Plug, Cinch Jones (P5)	12-05886-00					
9	*Screw, Phi Pan Hd No. 4-40 x .25 Lg	90-08301-01					
10	*Washer, Lock Int Tooth No. 4	90-06632-00					
11	*Screw Phi Pan Hd No. 6-32 x .31 Lg (Used for fastening Item 20 to Back Plate Item 1)	90-06021-00					
12	*Washer, Lock Int Tooth No. 6 (Used for fastening Item 20 to Back Plate Item 1)	90-06633-00					
13	*Strip, Terminal (TB1) Cinch Jones 6-140	90-06906-00					
14	*Nut, Kep No. 6-32	90-06560-00					
15	*Circuit Breaker (CB1)	12-10242-00					
16	*Bushing, Snap SB875-6	90-08112-00					
17	*Switch, Slide (S4, S5)	12-05941-00					
18	*Switch, Interlock (S6)	12-03566-00					
19	*POWER HARNESS ASSEMBLY	70-08369-00					
20	**Connector (P8) Mate-N-Lok	12-09340-01					
21	**Connector (P5) Mate-N-Lok (Obsolete— Used on Datametics Keyboard only)	12-09340-00					
22	**Housing (P2, P6) No. 20283 Berg	12-10090-00					
23	**Plug-Cord	12-10283-00					
24	**Connector (P4) Mate-N-Lok	12-09351-12					
25	**Connector (P3, P7) Mate-N-Lok	12-09351-15					
26	**Connector (P1) Mate-N-Lok	12-09351-03					

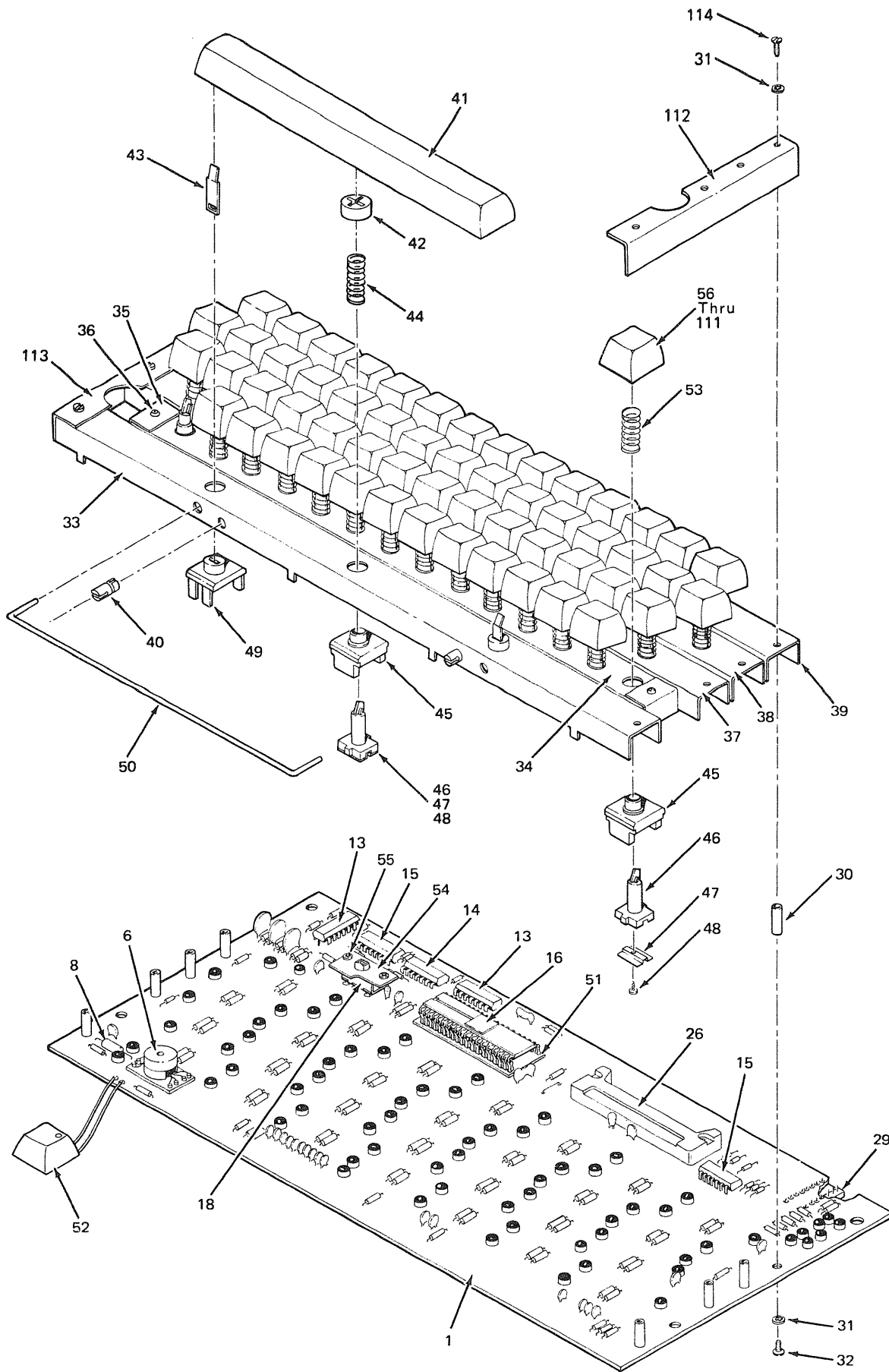
FIG & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN VT05 00015	USED ON CODE	VENDOR CODE	PART NO.	REF FIG NO.
3-	POT ASSEMBLY	70-07232-00					1
1	*Bracket, Pot Mounting	74-08564-00					
2	*Pot, (R3, R4) 10K 2W 10%	13-02205-00					
3	*Pot, (R2) 1K 2W 10%	13-00370-00					
4	*Pot, (R1) 250K 2W 10%	13-10311-00					
5	*Knob, 1 in. Dia.	12-10227-00					
6	*Screw, Soc Hd Set No. 6-32 x 1/4 Lg	90-06291-10					
7	*Connector, Mate-N-Lok	12-09351-12					
8	*Pin, Connector	12-09378-01					
9	*Wrap, Tie (Panduit)	90-07031-00					



VT05-02

Figure 3. Pot Assembly





VT05-03

Figure 4. LK01 Keyboard Assembly (Sheet 1 of 2)



FIG & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN	USED ON CODE	VENDOR		REF FIG NO.
			54-09945 00003		CODE	PART NO.	
4-	LK01 KEYBOARD ASSEMBLY	54-09945-00					1
1	*Keyboard, P.C. Board	50-09960-00					
2	*Resistor, 330 Ohms, 1/4W 5% (R8, R17, R15, R23, R18)	13-00295-00					
3	*Capacitor (Disc) .005 MFD 100V 20% (C2, C11, C4)	10-01765-00					
4	*Resistor, 68K Ohms 1/4W 5% (R2, R7)	13-01327-00					
5	*Transistor NPN (Q3)	15-10948-00					
6	*TRANSFORMER ASSEMBLY	70-08779-00					
7	*Transistor NPN (Q1, Q2)	15-09338-00					
8	*Choke 470 UH 5% (L1)	16-11317-00					
9	*Resistor 1.5K Ohms 1/4W 5% (R1)	13-00391-00					
10	*Capacitor (Disc Cerm) .033 MFD (C7)	10-10873-00					
11	*Diode DEC D664 (CR1,CR4,CR6,CR3,CR7)	11-00114-00					
12	*Resistor, 3.3K Ohms 1/4W 5% (R19,R16,R9)	13-00439-00					
13	*I.C. DEC 7408 (W1, W3)	19-10155-00					
14	*I.C. DEC 7400 (W2)	19-05575-00					
15	*I.C. DEC 7404 (Y1, Y2)	19-09686-00					
16	*R.O.M. G10017	21-11047-00					
17	*Capacitor .001 MFD (Mica)(C1)	10-00042-00					
18	*Switch, Min. Slide Stack Pole (SW1)	12-10919-00					
19	*Resistor, 4.7K Ohms 1/4W 5% (R21)	13-00447-00					
20	*Capacitor 1 MFD, 25V (C9)	10-10866-01					
21	*Capacitor .001 MFD (Disc) (C5)	10-00043-00					
22	*Resistor 680K Ohms 1/4W 5% (R4)	13-10867-00					
23	*Resistor 220K Ohms 1/4W 5% (R22,R24)	13-02092-00					
24	*Capacitor 220 P.F. (C6)	10-00021-00					
25	*Resistor 100K Ohms 1/4W 5% (R6)	13-02466-00					
26	*Connector, Berg	12-09941-00					
27	*Capacitor 10 MFD, 25V (C10)	10-10866-02					
28	*Transistor PNP (Q5)	15-10949-00					
29	*Socket, I.C.	12-10025-00					
30	*Spacer, Channel	74-09538-00					
31	*Washer, Int Tooth No. 2	90-06631-00					
32	*Screw, SI Binder Hd No. 2-56 x 1/4 Lg	90-06001-04					
33	*Channel (Row No. 1)	74-09555-02					
34	*Channel (Row No. 2)	74-09535-00					
35	*Cover, Dust	74-09540-00					
36	*Rivet, Pop	90-06505-00					
37	*Channel (Row No. 3)	74-09556-00					
38	*Channel (Row No. 4)	74-09557-00					
39	*Channel (Row No. 5)	74-09558-00					
40	*Hinge, Torsion Bar	74-09524-00					
41	*Bar, 9 Key Space	74-09523-00					
42	*Cap, Shaft	74-09518-00					
43	*Shaft, 13° Space Bar Insert	74-09517-00					
44	*Spring(Heavy)	90-09160-00					
45	*Guides, Key	74-09525-00					
46	*Shaft, Stepped	74-09528-00					
47	*Plate, Coupling	74-09516-00					
48	*Screw, Drive	90-09162-00					
49	*Guide, Space Bar	74-09522-00					
50	*Bar, Torsion	74-09519-00					
51	*Socket, LSI/R.O.M.	12-10947-00					
52	*LED CAP ASSEMBLY (SHIFT LOCK)	70-08780-00					
53	*Spring, (Light)	90-09161-00					
54	*Selector, Switch (Fixed)	74-09532-00					
55	*Screw, Self Tap Ph Hd No. 4-40 x 3/16 Lg Type F	90-09159-00					
56	*KEYCAP, SINGLE Complete Set (Includes Caps Item 57 thru Item 111 and Space Bar Item 41) (DOES NOT INCLUDE SHIFT LOCK ITEM 52. MUST BE ORDERED SEPARATELY)	90-09148-57					

FIG & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 54-09945 00003	USED ON CODE	VENDOR		REF FIG NO.
					CODE	PART NO.	
4-							
57	**Key Cap, Single A	90-09148-01					
58	**Key Cap, Single B	90-09148-02					
59	**Key Cap, Single C	90-09148-03					
60	**Key Cap, Single D	90-09148-04					
61	**Key Cap, Single E	90-09148-05					
62	**Key Cap, Single F	90-09148-06					
63	**Key Cap, Single G	90-09148-07					
64	**Key Cap, Single H	90-09148-08					
65	**Key Cap, Single I	90-09148-09					
66	**Key Cap, Single J	90-09148-10					
67	**Key Cap, Single K	90-09148-11					
68	**Key Cap, Single L	90-09148-12					
69	**Key Cap, Single M	90-09148-13					
70	**Key Cap, Single N	90-09148-14					
71	**Key Cap, Single O	90-09148-15					
72	**Key Cap, Single P	90-09148-16					
73	**Key Cap, Single Q	90-09148-17					
74	**Key Cap, Single R	90-09148-18					
75	**Key Cap, Single S	90-09148-19					
76	**Key Cap, Single T	90-09148-20					
77	**Key Cap, Single U	90-09148-21					
78	**Key Cap, Single V	90-09148-22					
79	**Key Cap, Single W	90-09148-23					
80	**Key Cap, Single X	90-09148-24					
81	**Key Cap, Single Y	90-09148-25					
82	**Key Cap, Single Z	90-09148-26					
83	**Key Cap, Single { [	90-09148-27					
84	**Key Cap, Single ! 1	90-09148-28					
85	**Key Cap, Single " 2	90-09148-29					
86	**Key Cap, Single # 3	90-09148-30					
87	**Key Cap, Single \$ 4	90-09148-31					
88	**Key Cap, Single % 5	90-09148-32					
89	**Key Cap, Single & 6	90-09148-33					
90	**Key Cap, Single ' 7	90-09148-34					
91	**Key Cap, Single ( 8	90-09148-35					
92	**Key Cap, Single ) 9	90-09148-36					
93	**Key Cap, Single 0	90-09148-37					
94	**Key Cap, Single = -	90-09148-38					
95	**Key Cap, Single - -	90-09148-39					
96	**Key Cap, Single } ]	90-09148-40					
97	**Key Cap, Single CR	90-09148-41					
98	**Key Cap, Single LF	90-09148-42					
99	**Key Cap, Single \ @	90-09148-43					
100	**Key Cap, Single ALT	90-09148-44					
101	**Key Cap, Single TAB	90-09148-45					
102	**Key Cap, Single CTRL	90-09148-46					
103	**Key Cap, Single ~ ^	90-09148-47					
104	**Key Cap, Single + ;	90-09148-48					
105	**Key Cap, Single * :	90-09148-49					
106	**Key Cap, Single RUB OUT	90-09148-50					
107	**Key Cap, Single   \	90-09148-51					
108	**Key Cap, Single SHIFT	90-09148-52					
109	**Key Cap, Single ? /	90-09148-53					
110	**Key Cap, Single > .	90-09148-54					
111	**Key Cap, Single < ,	90-09148-55					
112	*Cover, Dust (R.H.)	74-09514-00					
113	*Cover, Dust (L.H.)	74-09514-00					
114	*Screw, SI Binder Hd No. 2-56 x 5/16 Lg	90-06002-04					

FIG & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN VT05 00015	USED ON CODE	VENDOR		REF FIG NO.
					CODE	PART NO.	
5-	<b>CURSOR KEYBOARD ASSEMBLY</b>	54-10224-00					1
1	*Board, P.C. Cursor	50-10223-00					
2	*Resistor, 68K 1/4W 5% (Carbon Comp)	13-01327-00					
3	*Capacitor, .005 UF	10-01765-00					
4	*Transistor, NPN	15-10948-00					
5	*Socket, 16 Pin IC	12-10025-00					
6	*Standoff, Channel	74-09538-00					
7	*Screw, No. 2-56 x 5/16 Lg	90-06002-04					
8	*Washer, No. 2	90-06631-00					
9	*Washer, Nylon	90-09263-00					
10	*Channel, Machining	74-10520-00					
11	*Guide, Key	74-09525-00					
12	*Shaft, Stepped 90° Turn Key	74-10549-00					
13	*Plate, Coupling	74-09516-00					
14	*Screw, Drive 3/16	90-09162-00					
15	*Spring, Light	90-09161-00					
16	*KEYCAP, SINGLE (Complete set -- 8 Keycaps)	90-09148-63					
17	**Keycap, Single HOME	90-09148-58					
18	**Keycap, Single EOS	90-09148-59					
19	**Keycap, Single EOL	90-09148-60					
20	**Keycap, Single LOCK	90-09148-61					
21	**Keycap, Single → ← ↑ ↓	90-09148-62					
22	*Cover, Dust	74-10521-00					
23	*Screw, No. 2-56 x 1/4 Lg	90-06001-04					

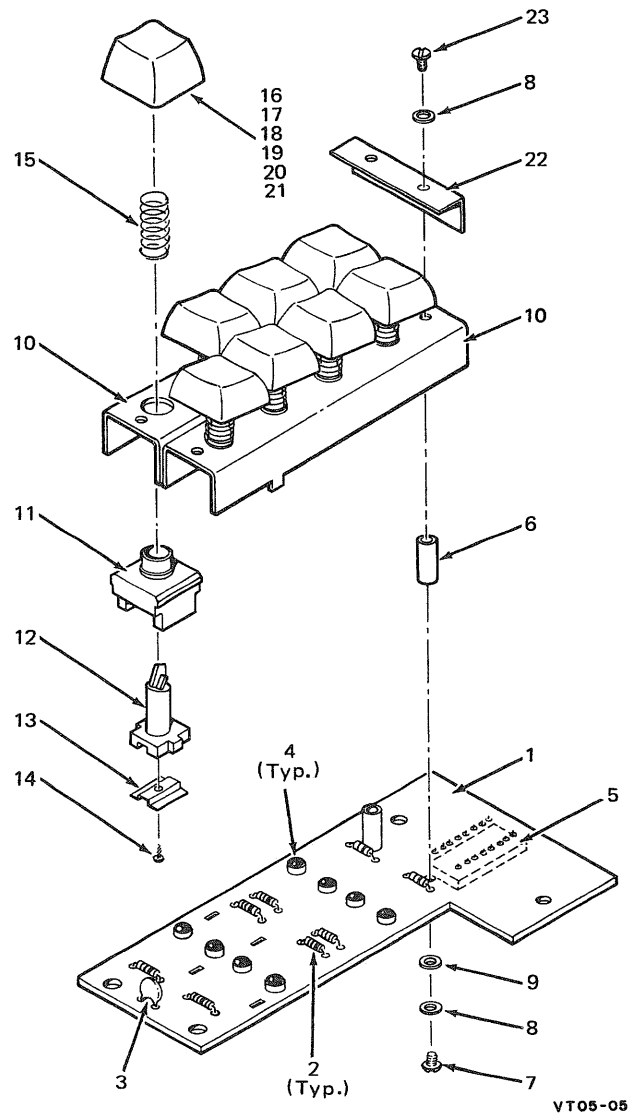
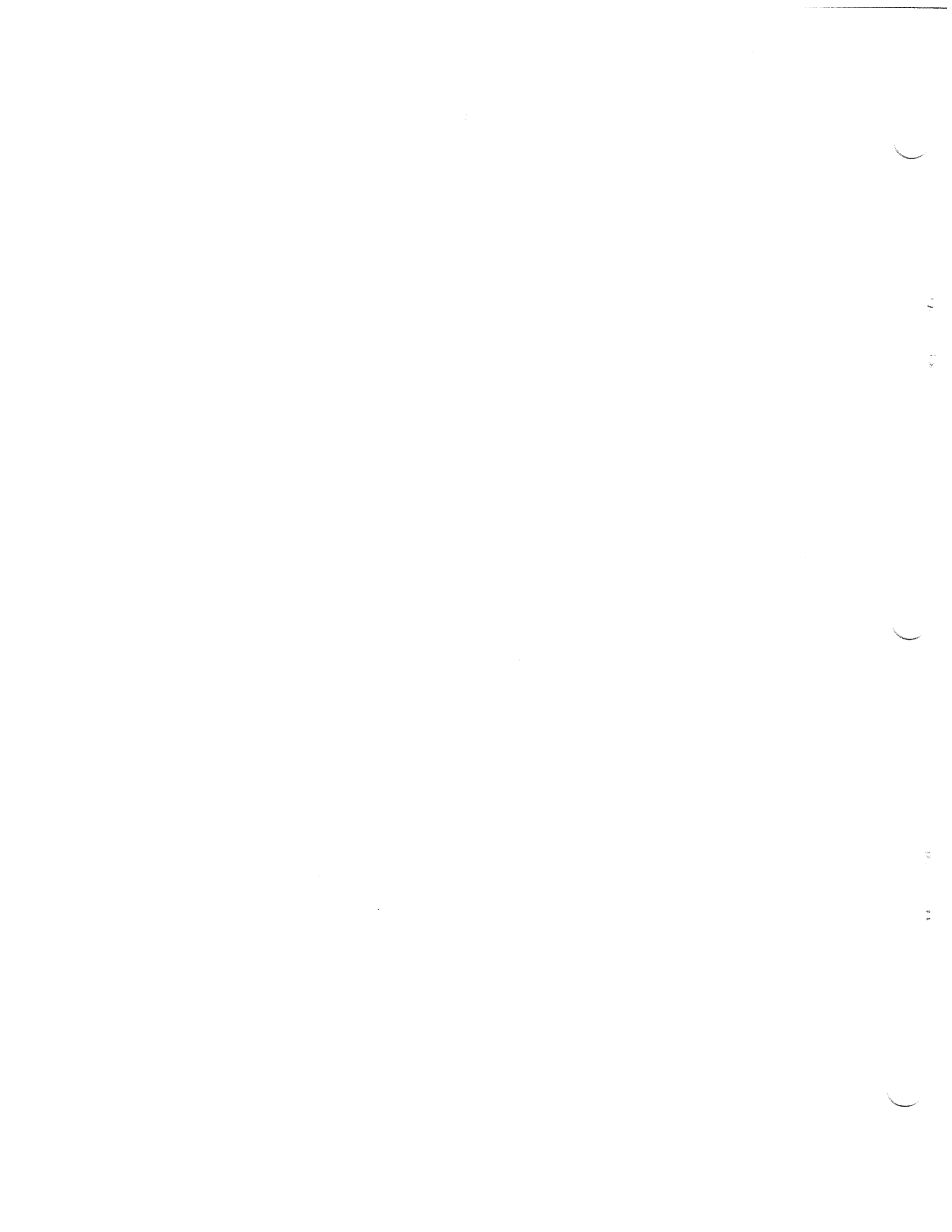


Figure 5. Cursor Keyboard Assembly



**ILLUSTRATED PARTS BREAKDOWN  
COMMENT SHEET**

Any and all comments and suggestions for correcting errors and/or additional information to improve this manual will be reviewed and researched for possible use when this manual is revised and/or reprinted. Enter your comments and suggestions in the form provided below and return to Technical Documentation.

**MODEL** \_\_\_\_\_

**PUBLICATION NO.** \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE TO \_\_\_\_\_

CHANGE TO \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE TO \_\_\_\_\_

CHANGE TO \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE TO \_\_\_\_\_

CHANGE TO \_\_\_\_\_

**ADDITIONAL COMMENT(S)**

Name \_\_\_\_\_

Cost Center \_\_\_\_\_

date: \_\_\_\_\_

Fold Here

Do Not Tear - Fold Here and Staple

FIRST CLASS  
PERMIT NO. 33  
MAYNARD, MASS.

BUSINESS REPLY MAIL  
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

Postage will be paid by:

Digital Equipment Corporation  
Technical Documentation Department  
146 Main Street  
Maynard, Massachusetts 01754